High Level Expert Group Report on Universal Health Coverage for India

Instituted by the Planning Commission of India

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by

Planning Commission of India

Submitted to the Planning Commission of India

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DEDICATION

"This report is dedicated to the people of India whose health is our most precious asset and whose care is our most sacred duty"

Terms of Reference

Universal Health Coverage for India

The terms of reference (ToRs) are as follows:

1. Develop a blue print for human resources in health, for India.
2. Rework the physical and financial norms needed to ensure quality, universal reach and access of health care services.
3. Suggest critical management reforms in order to improve efficiency, effectiveness and accountability of the health delivery system.
4. Identify pathways for constructive participation of communities and the private for-profit and not-for-profit sectors in the delivery of health care.
5. Develop systems which will ensure access to essential drugs, vaccines and medical technology by enhancing their availability and reducing cost to the Indian consumer.
6. Develop a framework for health financing and financial protection that offers universal access to health services.
7. It was also decided to develop a seventh chapter addressing the Social Determinants of Health, as this was seen as an important overlapping element to be covered by, and beyond, all ToRs.

High Level Expert Group for Universal Health Coverage

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PREFACE

The High Level Expert Group (HLEG) on Universal Health Coverage (UHC) was constituted by the Planning Commission of India in October 2010, with the mandate of developing a framework for providing easily accessible and affordable health care to all Indians. While financial protection was the principal objective of this initiative, it was recognised that the delivery of UHC also requires the availability of adequate healthcare infrastructure, skilled health workforce and access to affordable drugs and technologies to ensure the entitled level and quality of care given to every citizen. Further, the design and delivery of health programmes and services call for efficient management systems as well as active engagement of empowered communities. The original terms of reference directed the HLEG to address all of these needs of UHC. Since the social determinants of health have a profound influence not only on the health of populations but also on the ability of individuals to access healthcare, the HLEG decided to include a clear reference to them, though such determinants are conventionally regarded as falling in the domain of non-health sectors.

The HLEG undertook a situational analysis of each of the key elements of the existing health system and has developed recommendations for reconfiguring and strengthening the health system to align it with the objectives of UHC, bridging the presently identified gaps and meeting the projected healthneeds of the people of India over the next decade. In this exercise, it was greatly enabled by the expert advice provided by a number of Indian and international organizations and individuals who shared the varied perspectives of policymakers, health professionals, health system analysts and managers, civil society, private sector, development partners and academia. It drew upon the work and wisdom of several past expert committees and study groups which had provided valuable recommendations on strengthening different elements of the health system in India. The HLEG was provided valuable assistance by the energetic group of researchers who constituted its technical secretariat at the Public Health Foundation of India (PHFI). It also benefited immensely from the intermittent consultations with members of the Planning Commission while its work was in progress.

The HLEG is submitting its report at a time of historically unprecedented opportunity for advancing people's health through the introduction and effective implementation of UHC. The Prime Minister has declared, in his Independence Day Address on August 15, 2011, that health would be accorded the highest priority in the 12th Five Year Plan which would become operational in 2012. There is a clearly articulated governmental intent to increase

the public financing of health to 2.5% of India's GDP, during the course of the 12th Plan. The growth of India's economy permits this long overdue increase in public financing of health. The recognition of investment in health as both a developmental imperative and a pathway for winning popular political support has been evident in many recent initiatives ranging from the National Rural Health Mission (NRHM), the Rashtriya Swasthya Bima Yojana (RSBY) and a multitude of state sponsored health insurance schemes. The social objectives of all of these schemes would need to be merged and their scope considerably expanded to create a valued and viable model of UHC in India.

The adoption of programmes for promoting UHC, by many other countries, provides a stimulus not only to act in conformity with a globally progressive commitment to health equity but also to become a leader of the movement by creating the best contemporary model of UHC. The HLEG has studied the experience of other countries, especially of those in the low and middle income categories, while developing its recommendations for India.

The HLEG's vision of UHC transcends the narrow, inadequate and often inequitable view of UHC as merely a system of health insurance. UHC, in its understanding, moves beyond 'insurance' by providing an 'assurance' of health care for multiple needs and includes health beyond health care, going beyond a mere illness response. UHC should address health in all of its dimensions and emphasize prevention and primary health care, which are ignored, neglected or even undermined by the usual systems of health insurance. Such an assurance has to be provided by the government, which has to act as the guarantor of UHC and ensure its success and sustainability, by mobilizing all societal resources and advance multi-sectoral actions. In this perspective, the UHC is linked firmly to the Right to Health and converts an aspirational goal into an entitled provision.

The HLEG also recognizes that, for such a vision of the UHC to be realized, a tax based system of health financing is essential. This is also the global experience, wherein countries which have introduced UHC have mostly depended on general revenues rather than on unsteady streams of contributory health insurance which offerincomplete coverage and restricted services. For UHC to succeed in India, political and financial commitments are required from the central as well as state governments. We hope this report will catalyze those commitments and channelize their concerted actions for the early adoption and effective implementation of UHC.

The HLEG's report provides a framework for designing the UHC system. Even as that framework is discussed and debated in the public domain, delivery of UHC requires many implementation pathways to be identified and several operational processes to be detailed. Much work lies ahead but we hope this report provides a useful beginning.

K. Srinath Reddy

Chair, High Level Expert Group on Universal Health Coverage

Executive Summary

Defining Universal Health Coverage

We have, for purposes of our Report, adopted the following definition of Universal Health Coverage (UHC):

Ensuring equitable access for all Indian citizens, resident in any part of the country, regardless of income level, social status, gender, caste or religion, **to affordable, accountable, appropriate health services of assured quality** (promotive, preventive, curative and rehabilitative) **as well as public health services addressing the wider determinants of health** delivered to individuals and populations, with **the government being the guarantor and enabler,** although not necessarily the only provider, of health and related services.

Our definition incorporates the different dimensions of universal health assurance: health care,which includes ensuring access to a wide range promotive, preventive, curative, and rehabilitative health services at different levels of care; health coverage, that is inclusive of all sections of the population, and health protection, that promotes and protects health through its social determinants. These services should be delivered at an affordable cost, so that people do not suffer financial hardship in the pursuit of good health.

The foundation for UHC is a universal entitlement to comprehensive health security and an all-encompassing obligation on the part of the State to provide adequate food and nutrition, appropriate medical care, access to safe drinking water, proper sanitation, education, health-related information, and other contributors to good health. It is our belief that the State should be primarily and principally responsible for ensuring and guaranteeing UHC for its citizens. The State should not only provide health and related services, but should also address the wider determinants of health to effectively guarantee health security.

Ten principles have guided the formulation of our recommendations for introducing a system of UHC in India: (i) universality; (ii) equity; (iii) non-exclusion and non-discrimination; (iv) comprehensive care that is rational and of good quality; (v) financial protection; (vi) protection of patients' rights that guarantee appropriateness of care, patient choice, portability and continuity of care; (vii) consolidated and strengthened public health provisioning; (viii) accountability and transparency; (ix) community participation; and (x) putting health in people's hands.

Intrinsic to the notion of universality, non-discrimination, non-exclusion and equity is a fundamental commitment to health as a human right. Universality implies that no one (especially marginalised, remote and migrant communities as well as communities that have been historically discriminated against) is excluded from a system of UHC. At the same time, while society should pay special attention to the concerns of disadvantaged populations and the poor, a universal system should provide health coverage and care for everyone. This will ensure the creation of a robust and sustainable system of UHC in whose success every section of society has a vital interest. It will also protect both the poor and non-poor from the risk of impoverishment due to unaffordable health care expenditures. A system of UHC can succeed only if it is established on the strong foundations of common interest, social solidarity and cross-subsidisation.

Instituting a system of UHC for India requires a flexible architecture to deal with inequities in health outcomes, regional and sociocultural diversity, and the differential health care needs of populations in different locations. It should also take into account the challenges of rapid urbanisation, simultaneous demographic, epidemiological and nutritional transitions underway, as well as social and political changes occurring in the country.

Embedded in our understanding of UHC is recognition of two critical factors. First of all, it will be difficult, if not impossible, to achieve and sustain UHC without addressing the **social determinants of health.** Urgent and concrete actions addressing the social determinants of health are needed to move towards greater health equity, bridge gaps and reduce differentials in health by class, caste, gender and region across the country. In other words, UHC can be achieved only when sufficient and simultaneous attention is paid to at least the following health-related areas: nutrition and food security, water and sanitation, social inclusion to address concerns of gender, caste, religious and tribal minorities, decent housing, a clean environment, employment and work security, occupational safety and disaster management. Secondly, the very framework and principles of UHC for India will be severely undermined if **gender** insensitivity and gender discrimination remain unaddressed. An inclusive approach to health should attend to the needs and differentials between men, women and other genders, along with the interaction between social and biological markers of health. In making UHC truly gender-sensitive, we specifically recommend critical actions to improve access for women and girls to health services (going beyond maternal and child health), to recognise and strengthen women's central role in health care provision in both the formal health system and in the home, to build up the capacity of the health system to recognise, measure, monitor and address gender concerns, and to support and empower girls and women.

Finally, our review of the global experience with UHC leads us to make two comments. One, there doesn't appear to be a single 'universal method' of financing and financial protection that assures guaranteed UHC in any country. Two, what we are proposing for India is somewhat unique. It is a hybrid system that draws on the lessons learned from India as well as other developed and developing countries.

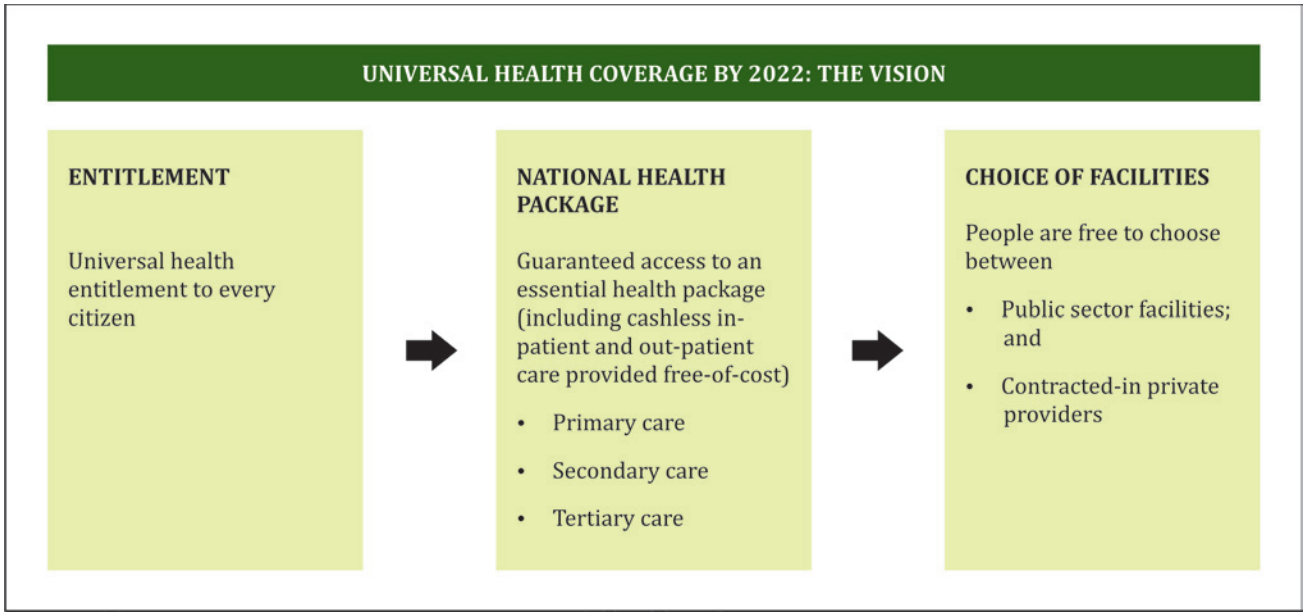
Our vision and recommendations that follow take cognizance of the extraordinary opportunities that India offers – and the possibility for India to take a lead in introducing a well-designed UHC system that is eminently suited to the needs and resources of countries at a similar level of development.

Our vision

We propose that every citizen should be entitled to essential primary, secondary and tertiary health care services that will be guaranteed by the Central government. The range of essential health care services offered as a National Health Package (NHP) will cover all common conditions and high-impact, cost-effective health care interventions for reducing health-related mortality and disability. A panel of experts should determine the package of services taking into account the resource availability as well as the health care needs of the country.

Health care services to all citizens covered under UHC will be made available through the public sector and contracted-in private facilities (including NGOs and non-profits). The High Level Expert Group examined the range of services t hat could be offered by the institutions participating in the UHC program. Two different options emerged:

1. In the first option, private providers opting for inclusion in the UHC system would have to ensure that at least 75 per cent of out-patient care and 50 per cent of in-patient services are offered to citizens under the NHP. For these services, they would be reimbursed at standard rates as per levels of services offered, and their activities would be appropriately regulated and monitored to ensure that services guaranteed under the NHP are delivered cashless with equity and quality. For



the remainder of the out-patient (up to 25%) and in-patient (up to 50%) coverage, service providers would be permitted to offer additional non-NHP services over and beyond the NHP package, for which they could accept additional payments from individuals or through privately purchased insurance policies.

2. The second alternative entails that institutions participating in UHC would commit to provide only the cashless services related to the NHP and not provide any other services which would require private insurance coverage or out of pocket payment.

There are strengths and limitations to each of these approaches. The first option would make it easier for the state and central governments to contract-in private service providers. There is, however, a concern that this could result in diversion of patients from the cashless NHP to the on-payment service provided by the same provider or differential quality of services provided to UHC beneficiaries and paying patients, which may compromise quality of care for the UHC patients. The second option avoids this pitfall but would render it difficult for many medical college hospitals, institutions of excellence (such as the All India Institute of Medical Sciences) and private hospitals which are accredited for post-graduate training by the National Board of Examinations to participate in the UHC system, because teaching and research at those levels would require them to go beyond the NHP package covered by UHC.

Central and State governments may examine these options and choose, based on their assessment of how best the access and equity objectives of UHC can be served. If the former option is chosen, a strong regulatory and monitoring mechanism must be established to ensure appropriate care for UHC beneficiaries even in institutions that provide mixed services. State governments are free to supplement the UHC National Health Package (NHP) through additional funding from their own budgets for services beyond the NHP.

Even with the two options, there will be some or several private hospitals which may not get themselves accredited under the UHC system given the conditionalities. Citizens are free to supplement free-of-cost services (both in-patient and out-patient care) offered under the UHC system by paying out-of-pocket or directly purchasing additional private

voluntary medical insurance from regulated insurance companies.

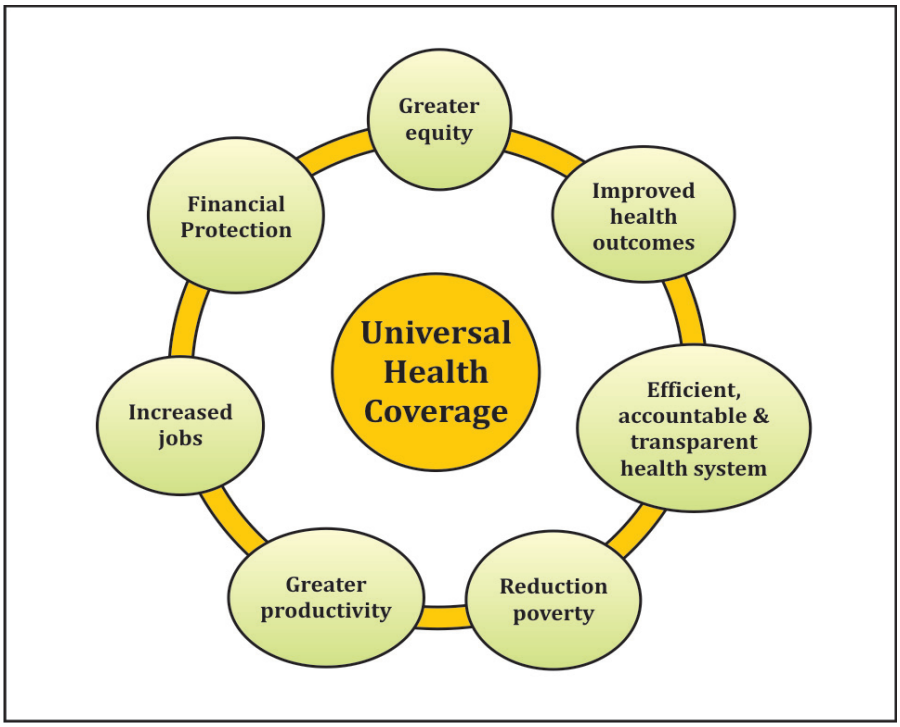
We recognise the need to distinguish between health-related clinical services and hospitality services especially in tertiary care institutions. Service providers registered with the UHC system will be allowed to charge additional amounts from those who seek additional hospitality services not covered under the NHP.

We envisage that over time, every citizen will be issued an IT-enabled National Health Entitlement Card (NHEC) that will ensure cashless transactions, allow for mobility across the country and contain personal health information. Such a card will also help the State to track patterns of disease burdens across the country and plan better for the public provision of health care.

Expected Outcomes from UHC

India can aspire to achieve greater equity by bridging health disparities and inequities. The creation of a strong and robust health policy platform through the proposed scaling up of public spending and expansion in health service provisioning is likely to improve health outcomes. Moreover, the adoption of an integrated primary health approach is expected to result in a gradual but significant reduction in overall disease burden across the country. A strengthened health system under UHC will result in better health literacy for Indians through improved health promotion, healthier behaviours and lifestyles. Greater emphasis on the use of information technology to link health care networks will improve health surveillance in the country with the establishment of a health information system that will generate valuable data on various health and disease trends and outcomes.

The expansion of the health workforce is also expected to generate almost seven million jobs for young people and women over the coming decade. The provision of free health care and medicines for both in-patient as well as out-patient care through financial protection, can be expected to significantly reduce or reverse the high private out of pocket spending. A healthy population in turn can contribute to economic growth through increased productivity and higher earnings. There are other benefits as well. Promoting health equity also contributes to increased



social cohesion and empowerment and by joining the global movement towards UHC India now has both the capacity and opportunity to emerge as leading force for equitable health care of all. And finally, through implementing UHC with its unique reach and scope of health care delivery, India stands to gain the political goodwill and support of 1.2 billion potential beneficiaries.

The new architecture for UHC

It is possible for India, even within the financial resources available to it, to devise an effective architecture of health financing and financial protection that can offer UHC to every citizen. We have developed specific recommendations in **six critical areas** that are essential to augment the capacity of India's health system to fulfil the vision of UHC. These areas listed below are the focus of the recommendations in this Report:

3.1 Health Financing and Financial Protection

3.2 Health Service Norms

3.3 Human Resources for Health

3.4 Community Participation and Citizen Engagement

3.5 Access to Medicines, Vaccines and Technology

3.6 Management and Institutional Reforms

3.1 Health Financing and Financial Protection

We have identified three principal objectives of the reforms in health financing and financial protection:

Objective 1: ensure adequacy of financial resources for the provision of essential health care to all

Objective 2: provide financial protection and health security against impoverishment for the entire population of the country

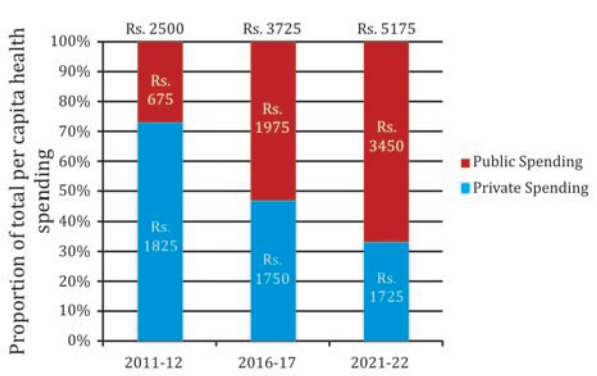
Objective 3: put in place financing mechanisms which are consistent in the long-run with both the improved wellbeing of the population as well as containment of health care cost inflation

Our key recommendations in this critical area are listed below.

Recommendation 3.1.1: Government (Central government and states combined) should increase public expenditures on health from the current level of 1.2% of GDP to at least 2.5% by the end of the 12th plan, and to at least 3% of GDP by 2022.

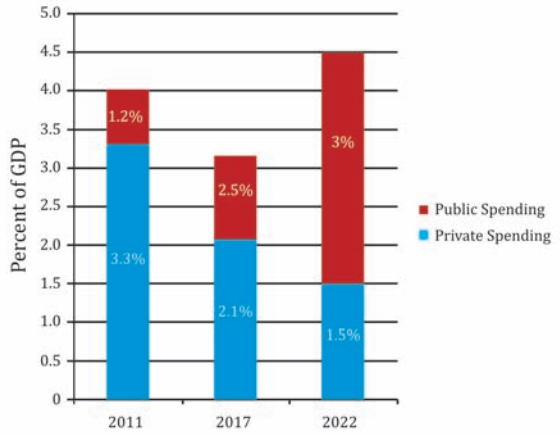
Financing the proposed UHC system will require public expenditures on health to be stepped up from around 1.2% of GDP today to at least 2.5% by 2017 and to 3% of GDP by 2022. The proposed increase is consistent with the estimates by government as well as our preliminary assessment of financial resources required to finance the NHP. Even if we assume that the combined public and private spending on health remains at the current level of around 4.5% of GDP, this will result in a five-fold increase in real per capita health expenditures by the government (from around Rs. 650-700 in 2011-12 to Rs. 3,400-3,500 by 2021-22). There will also be a corresponding decline in real private out-of-pocket expenditures from around Rs. 1,800-1,850 in 2011-12 to Rs. 1,700-1,750 by 2021-22 (Figure 1).

FIGURE 1: PROJECTED REAL PER CAPITA HEALTH SPENDING IN INDIA AT CURRENT PRICES (2009-2010)



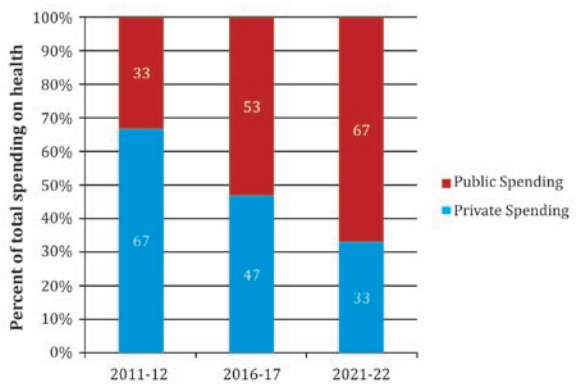
Such a planned expansion in public spending on health will change significantly the pattern of public and private spending on health in India (Figure 2).

FIGURE 2: PROJECTED SHARE OF PUBLIC AND PRIVATE HEALTH SPENDING IN INDIA



Increased public expenditures, in our estimate, will lead to a sharp decline in the proportion of private out-of-pocket spending on health - from around 67% today to around 33% by 2022 (Figure 3) if the increased public spending is implemented in a way that substitutes for much of current private spending.

FIGURE 3: PROJECTED PROPORTIONS OF PUBLIC AND PRIVATE OUT-OF-POCKET EXPENDITURES



Healthcare provisions offered through the UHC programme have several public and merit goods characteristics that justify the use of public resources to finance it. Enhancing public expenditures on health is likely to have a direct impact on poverty reduction, if this increase leads to a reduction in private out-of-pocket expenditures. Financial metrics show that there is a significant imbalance in private spending versus public spending and in fact private spending is almost three times the amount of public spending. Our proposed increase in spending on health will greatly alter the proportion of public and private spending on health and, hopefully, correct the imbalance that exists.

Cross-country data on health expenditures shows that, while broadly speaking, a higher level of government spending on health (whether as a percentage of GDP or in per capita terms) is often associated with a lower dependence of a country's health system on private out of pocket expenditures, much depends upon the specific way the additional public spending is pooled and spent.

Prepayment from compulsory sources (i.e. some form of taxation), and the pooling of these revenues for the purpose of purchasing healthcare services on behalf of the entire population is the cornerstone of the proposed UHC programme. Such an arrangement will provide a number of financial protection benefits. Both international experience and important concepts in health economics demonstrate that voluntary mechanisms of paying for health care cannot be a basis for a universal system. Prepaid funding that is pooled on behalf of a large population is essential for ensuring that the system is able to redistribute resources and thus services to those in greatest need, given that the risk of incurring high health expenditures is often quite unpredictable at the start of any budgetary period. And as noted above, both theory and evidence – no country that can be said to have attained universal coverage relies predominantly on voluntary funding sources – demonstrate that both compulsion (to avoid "opting out" as a result of the adverse selection phenomenon[1]) and subsidisation (to ensure that those too poor or too sick to contribute) are essential for universal coverage. Hence, increased government expenditure on health is essential to ensure a leading role for compulsory pooling as the means to progress towards universal coverage.

Recommendation 3.1.2: Ensure availability of free essential medicines by increasing public spending on drug procurement.

Low public spending on drugs and non-availability of free medicines in government health care facilities are major factors discouraging people from accessing public sector health facilities. Addressing this deficiency by ensuring adequate supplies of free essential drugs is vital to the success of the proposed

[1] The phenomenon known as adverse selection is a particular type of market failure common to health insurance. Effective risk protection requires that the prepaid pool includes a diverse mix of health risks. Left to purely individual choice, however, healthier individuals will tend not to prepay, while sicker individuals will join (assuming that they can afford it). This leaves the prepaid pool with a much costlier population than the average in the population, and as a result is not financially stable.

UHC system. We estimate that an increase in the public procurement of medicines from around 0.1% to 0.5% of GDP would ensure universal access to essential drugs, greatly reduce the burden on private out-of-pocket expenditures and increase the financial protection for households. Increased spending on drugs needs to be combined with a pooled public procurement system to ensure adequate supplies and rational prescription of quality generic drugs by the public health system. Distribution and availability of quality medicines across the country could be ensured by contracting-in of private chemists.

Recommendation 3.1.3: Use general taxation as the principal source of health care financing – complemented by additional mandatory deductions for health care from salaried individuals and tax payers, either as a proportion of taxable income or as a proportion of salary.

We recommend general taxation as the most viable option for mobilizing resources to achieve the target of increasing public spending on health and creating mechanisms for financial protection. There are few other options given the difficulties of collecting regular premiums from India's large informal sector workforce. At the same time, the potential for additional revenue mobilisation from taxation is high given the projected rates of economic growth, the anticipated improvements in the efficiency of tax collections, and expected increases in both the organised sector base and the tax-payer base. Special efforts should be made to increase revenues through tax administration reform and, in particular, improved information system for taxes at both central and state levels. The tax ratio in India, at a little over 15 per cent of GDP, is lower than the average for countries with less than USD 1000 (18%) and substantially lower than the average for middle income countries (22% for countries with per capita income between USD 1000 and USD 15000). The enactment of a direct taxes code (DTC) and the introduction of Goods and Services Tax (GST) could improve the revenue productivity of the tax system. Another important area for improving the tax productivity is to review all tax incentives and undertake measures to reduce arrears in taxes. It would, however, be appropriate to complement general taxation with a specific surcharge on salaries or taxable income to pay for UHC and offer cashless health care to all sections of the society. While improving the tax-to-GDP ratio is necessary, it is equally important to increase the share of overall public spending devoted to health. As noted, India devotes among the lowest proportion of total public spending to health – at or below 4.4% of total government spending between 1999 and 2009 according to WHO data, and in 2009. Only 9 countries (out of 191) devoted a smaller share of government spending to health than did India.

Recommendation 3.1.4: Do not levy sector-specific taxes for financing.

Revenues from specific sources could be potentially earmarked to finance health care. However, in our view, these options may not be appropriate for India. None of these options is likely to meet substantially the financial requirements of Universal Health Coverage. Moreover, the practice of earmarking financial resources distorts the overall fiscal prioritisation. Also, given that most public revenues are fungible, earmarking from a specific tax may not actually add to the health budget if the increased funds from the earmark are offset by reductions from discretionary revenues. Though earmarking is not desirable, higher taxes on tobacco and alcohol have the public health benefit of reducing consumption of these harmful products, while adding to the general revenue pool. Those products should, therefore, be taxed at higher levels. However, depending upon revenue mobilisation from such sin and sumptuary taxes is fraught with perverse incentives. Securing more resources for health sector would, for instance, require increased consumption of alcohol and tobacco products both of which are undesirable. We, therefore, recommend that additional resources for increasing public investments in health (and other social services) should be generated by enhancing the overall tax-to-GDP ratio

by widening the tax base, improving the efficiency of tax collections, doing away with unnecessary tax incentives, and exploring possibilities of reallocating funds to health.

Recommendation 3.1.5: Do not levy fees of any kind for use of health care services under the UHC[2].

We recommend that user fees of all forms be dropped as a source of government revenue for health. User fees have not proven to be an effective source of resource mobilization. Global experience suggests that imposition of user fees in many low and middle income countries has increased inequalities in access to healthcare. Even modest levels of fees have led to sharply negative impacts on the usage of health services. Given that people in India already pay a substantial amount out-of-pocket, whether to private providers or in the form of informal payments in public facilities, a differential fees model which charges different fees to people in different economic levels in a society was considered as an approach for leveraging user fees as a financing mechanism and improving the fairness and transparency by which people contribute. However, our assessment is (i) there are practical challenges of means-testing and errors of inclusion and exclusion associated with identifying the economically weaker sections of society; (ii) as a result, it would be very difficult to provide equitable services to all economic sections of the society through a differential fee arrangement; and (iii) limiting corruption and administrative costs associated with receiving payments at the point of care, makes it difficult to implement a program based on differential fees. User fee can sometimes be employed as a means of limiting excessive consumption of unnecessary healthcare but there are other approaches such as effective triaging, providing preventive care etc. that are more effective in controlling this issue. Also as a practical and political issue, increasing official user fees, when they are so low and yet impose financial barriers to access, would be politically and practically difficult to justify. The benefits of such an effort are unlikely to be worth the (financial, administrative and political) costs. Therefore overall, user fees would not be desirable for the proposed vision of the UHC programme.

Recommendation 3.1.6: Introduce specific purpose transfers to equalize the levels of per capita public spending on health across different states as a way to offset the general impediments to resource mobilisation faced by many states and to ensure that all citizens have an entitlement to the same level of essential health care.

Ensuring basic health care services to the population, like poverty alleviation or universal elementary education, has nation-wide externalities and is also consistent with principles of equity. The fundamental rationales for the central transfers are to (i) ensure that all states devote sufficient resources to ensure the NHP for their entire population; and (ii) reduce inequalities in access and financial protection arising from the fact that poorer states have lower levels of government health spending than do richer states. Therefore, a substantial proportion of financing of these services can and should come from the Central government even though such health services have to be provided at sub-national (state) levels. The extent of Central and state contributions should depend on the perceived degree of nation-wide externality versus state-wide externality as well as the efforts to promote equity and fairness. An appropriate transfer scheme from the Central government to states must be designed to reduce the disparity in the levels of public spending on health across states and to ensure that a basic package of health care services is available to every citizen in every state across the country. It is however important, while designing such a transfer scheme, to ensure that states do not substantively substitute Central transfers for their own contribution

[2] One of the HLEG members differed with this recommendation, because he was of the considered view that persons who can afford to pay should be charged for tertiary care services.

to health. States should not only continue to contribute as much as they do now on health care, but also proportionately increase their budget allocations for health over the years. In other words, the transfers received from the Central government along with the matching contribution by the states should constitute additional public spending on health – and should not be used to substitute spending from own resources by the states. This is all the more important because, as noted earlier, the existing pattern of resource allocation by India's State and Central governments, collectively result in one of the lowest priorities given to health of any country in the world.

Recommendation 3.1.7: Accept flexible and differential norms for allocating finances so that states can respond better to the physical, socio-cultural and other differentials and diversities across districts.

A major factor accounting for the low efficiency of public spending has been the practice of the Central government to develop and enforce uniform national guidelines for similar transfers for health across all states. Such a practice fails to take into account India's diversity and contextual differences. It also fails to properly incentivize state governments to draw up their own health plans in keeping with the needs of communities. We, therefore, recommend that the Central government should adopt a fiscal transfer mechanism that allows for flexible and differential financing from the Central government to the states. This will also allow for Central transfers to better meet the diverse requirements of different states, and enable states to develop health plans that are consistent with the health care needs and requirements of their populations.

Recommendation 3.1.8: Expenditures on primary health care, including general health information and promotion, curative services at the primary level, screening for risk factors at the population level and cost effective treatment, targeted towards specific risk factors, should account for at least 70% of all health care expenditures.

We envisage a major role for primary health care in the UHC system. The coverage of essential primary care services for maternal and child health, vision, oral health and hearing remains inadequate. The infectious disease burden in several parts of the country continues to be very high. Early identification and treatment of these diseases coupled with prevention at the community level is the only way for us to reduce this burden. The widespread burden of malnutrition including easily treatable conditions such as iron-deficiency anaemia can only be dealt with at the primary care level. At the same time, the surge in chronic illnesses, along with unipolar depression, cardio-vascular disease and diabetes are rapidly becoming dominant burdens of disease. An ageing population is also increasingly likely to require home-based or community-based long-term care. We therefore recommend earmarking at least 70% of public expenditures, both in the short-run and over the medium term, for preventive, promotive and primary health care in order to reap the full benefits of UHC.

Recommendation 3.1.9: Do not use insurance companies or any other independent agents to purchase health care services on behalf of the government.

Having recommended that general taxation and other deductions from the non-poor should be pooled to provide UHC, this recommendation deals with how pooled funds can be used to provide and, if necessary, purchase health care. In the context of delivering UHC, we have examined three options: (i) direct provision; (ii) direct provision plus contracted-in services; and (iii) purchase by an independent agency.

We have made the case for complementing the direct provision of health services by the government with the purchase of additional services from contracted-in private providers by the government. This, we have argued, is more practical and desirable than relying exclusively on direct provision of health services by the public sector. Independent agencies in the private sector and insurance companies under schemes such as the Rashtriya Swasthya Bima Yojana (RSBY) have been able to achieve expected enrolment, utilisation levels and fraud control. However, we believe that for a number of reasons, this mechanism is not appropriate for the UHC system. Concerns regarding purchase by an independent agency do not stem from the anxiety that they may perform the assigned tasks poorly, but from more basic design flaws and difficulties in scaling up this approach to deliver UHC. The use of independent agents fragments the nature of care being provided, and over time, leads to high health care cost inflation and lower levels of wellness. It becomes necessary, therefore, to either explore a completely different approach towards the use of insurance companies and independent agents – more in the "managed care" framework, where they take on explicit population level health outcome responsibilities or invest further in the capacity of the Ministries and Departments of Health to directly provide and purchase services from contracted-in private providers wherever necessary. We favour the latter option.

Recommendation 3.1.10: Purchases of all health care services under the UHC system should be undertaken either directly by the Central and state governments through their Departments of Health or by quasi-governmental autonomous agencies established for the purpose.

We recommend that the central and state governments (Departments of Health or specific-purpose quasi-governmental autonomous agencies with requisite professional competencies created by them) should become the sole purchasers of health care for UHC delivered in their respective jurisdictions. Provisioning of health services at primary, secondary and tertiary levels should be integrated to ensure equitable and efficient procurement and allocations. We believe that it is possible to substantially reform the manner in which Ministries and Departments operate so that they can become effective purchasers of health care services. District-specific assessment of health care needs and provider availability, communicated by the Director of District Health services, should provide the basis for state level purchase of services. The example of the Tamil Nadu Medical Services Corporation, which has functioned as an efficient agency of the State in Tamil Nadu, could serve as a possible model.

We recognise the limited capacity within government and envisage that, to begin with, purchases may need to be centralized at the state level. However, over time, it is possible to foresee a system where the district health system managers may eventually be able to purchase and enhance quality of care by using a variety of methods and also keep costs as well under control. State governments should consider experimenting with arrangements where the state and district purchase care from an integrated network of combined primary, secondary and tertiary care providers. These provider networks should be regulated by the government so that they meet the rules and requirements for delivering cost effective, accountable and quality health care. Such an integrated provider entity should receive funds to achieve negotiated predetermined health outcomes for the population being covered. This entity would bear financial risks and rewards and be required to deliver on health care and wellness objectives. Ideally, the strengthened District Hospital should be the leader of this provider network.

Recommendation 3.1.11: All government funded insurance schemes should, over time, be integrated with the UHC system. All health insurance cards should, in due course, be replaced by National Health Entitlement Cards. The technical and other capacities developed by the Ministry of Labour for the RSBY should be leveraged as the core of UHC operations – and transferred to the Ministry of Health and Family Welfare.

Smoothly transforming over time, the RSBY into a universal system of health entitlements and building on its existing capacity and architecture to issue citizens with a National Health Entitlement Card with a minimum amount of disruption, would in our view be the best way forward to satisfy the social objectives of both NRHM and RSBY. A high level of capacity has been developed within the Ministry of Labour for the management of the RSBY. This capacity should be utilized for the roll out of the UHC system even if the functions performed by the insurance companies will now be performed by the Ministries and Departments of Health.

In addition, the proposed UHC system is a modified version of the traditional health insurance model with a few critical differences in terms of provider network and design which, in our view, are essential for realizing better health care access and cost outcomes. It has all the characteristics of traditional health insurance in terms of risk pooling and financial protection. The proposed UHC system focuses on reduction of the disease burden facing communities along with early disease detection and prevention. The emphasis is on investing in primary care networks and holding providers responsible for wellness outcomes at the population level. It places emphasis on an extensive and high quality primary care network, which in turn is likely to reduce the need for secondary and tertiary facilities.

Moreover, effective triaging and management of patients can ensure quick treatment times. Traditional insurance schemes, including those being funded by the government (such as RSBY and the Rajiv Aarogyasri Healthcare Insurance Scheme) are entirely focused on hospital networks rather than primary care services. The advantages of such a network design for consumers are a large supply of hospitals in the network and short waiting times for hospital admissions. However, since there is virtually no focus on primary level curative, preventive, and promotive services and on long-term wellness outcomes, these traditional insurance schemes often lead to inferior health outcomes and high health care cost inflation.

The transition to the UHC system resulting from the above recommendations is captured in Table 1:

Table 1: Transition in health financing and insurance to Universal Health Coverage			
	2011	**2017**	**2020**
Tax financing	Relatively low	Increasing	Relatively high
Private financing	Relatively high	Decreasing	Relatively low
Employer-employee contribution	Relatively low	Increasing	Relatively high
Coverage	Mostly rich and targeted poor	Expanded coverage to include poor and other targeted communities	Universal
User fees	Prevalent	Eliminated	Eliminated
Central Government insurance schemes	Large numbers catering to different groups	Reduced in numbers; merged with the UHC system	None – and integrated fully with the UHC system (including CGHS, ESIS and schemes for the railways and other public sector institutions)
State government insurance schemes	Option open subject to state government financing	Option open to top up Central Government's UHC-National Health Package (NHP) funding subject to state government financing	Option open to top up Central Government's UHC-NHP funding subject to state government financing
Private (including community-based) insurance schemes	Large variety with option to individuals to top up government coverage	Large variety with option to individuals to top up government coverage	Large variety with option to individuals to top up government coverage

3.2 Health Service Norms

The absence of a dedicated cadre of health care professionals at the village level, the inability of people to establish last-mile connectivity with the health system, and the poor responsiveness of public systems to community needs represent major challenges that India faces in the provision of primary health care. Service delivery at every level – from the village to district and beyond – needs to be strengthened by providing adequate infrastructure, equipment, drugs, human resources, and technology support at all facilities. Special attention needs to be paid to the health needs of the urban poor as well as tribal and remote populations. Norms of health care need to be reconfigured to ensure quality, universal reach, and accessibility of health care services.

In this section, we recommend norms for the physical provision of services at different levels.

Recommendation 3.2.1: Develop a National Health Package that offers, as part of the entitlement of every citizen, essential health services at different levels of the health care delivery system.

A panel of experts should determine the package of services taking into account the resource availability as well as the health care needs of the country. Timely preventive, promotive, diagnostic, curative and rehabilitative services should be provided at appropriate levels of health care delivery. Packages of health care services that cover common conditions and high impact, cost-effective care interventions for reducing health-related mortality and disability should be created at different levels and designed on the basis of recommended levels of care. The packages should correspond to disease burdens at different levels, such that appropriate services can be provided at different levels of care. We envisage five levels of care: Level 1 packages should correspond to services that are guaranteed at the village and at the community level in urban areas, Level 2 packages should be offered at the Sub-Health Centre (SHC), Level 3 packages should correspond to services guaranteed at the Primary Health Centre (PHC), Level 4 packages should be offered at the Community Health Centre (CHC), and Level 5 packages should cover services guaranteed at the district hospitals, medical college hospitals and other tertiary institutions. The Report contains an illustrative listing of essential health services offered as packages at Level 1 through Level 5. Level 1, Level 2 and Level 3 cover primary services; Level 4 covers some primary services and secondary services,while Level 5 includes secondary and tertiary services. Ensuring such an overlap at each of the facilities is intended to ensure much-needed continuum of care.

Recommendation 3.2.2: Develop effective contracting-in guidelines with adequate checks and balances for the provision of health care by the formal private sector.

We believe, that in addition to the public sector, the formal private sector can play an important role in delivering UHC-mandated health care. The contracting-in of private providers (including for-profit companies, NGOs and the non-profit sector) is needed to complement government-provided health services and fulfil the health care service guarantees of the UHC system. The private sector has the capacity for innovation and invention; it can supplement capital expenditure requirements for developing necessary health infrastructure, provide an element of choice to the customer and ensure that all the service providers have competitive quality benchmarks. However, in our view, the engagement model for leveraging the private sector would have to go well beyond the narrow understanding of the conventional public private partnership (PPP) model. We advocate a shift from a primary focus on garnering additional financial resources from the private sector or subsidizing it, to an approach in which there is a well-defined service delivery partnership between government as a purchaser and the private sector as a provider. This would, among other things, require (i) a strong regulation, accreditation, and supervisory framework based on state-level decision-making on the degree of UHC provision (complete at least 75 per cent of

out-patient and 50 per cent of in-patient services); (ii) control of the manner in which various inputs are deployed by the provider; (iii) careful tracking of both immediate as well as longer-term outcomes; and (iv) a specifically designated customer group to be served by the provider. We also recommend that all such PPP arrangements should be mandatorily brought under the purview of the Right to Information Act, and be subject to social audits as well as selective audit by the Comptroller and Auditor General of India.

Recommendation 3.2.3: Reorient health care provision to focus significantly on primary health care.

A strong primary health care approach, backed by the reallocation of sufficient resources, should guide the reorientation of health care service delivery. This is likely to assure citizens greater access to essential health services and better quality of care. The greater focus on prevention and the early management of health problems is likely to reduce the need for complicated specialist care and the costs of curative care treatment. Well-functioning primary health care teams can also potentially promote health equity by improving social cohesion, reducing discrimination, and empowering communities to improve their health conditions.

A village-level team should provide appropriate components of the National Health Package of services (Level 1) and have 24x7 telecom connectivity to facilities at higher levels. The focus on primary care will contribute to the cost-effectiveness of the UHC system by emphasizing preventive and basic care and linking individuals to secondary and tertiary levels of care only when needed. Sub-Health Centres (SHCs), Primary Health Centres (PHCs), Community Health Centres (CHCs), and district health institutions should have additional mandates, personnel, and facilities to provide more advanced services than presently provided.

Recommendation 3.2.4: Strengthen District Hospitals.

The District Hospital has a critical role to play inhealth care delivery and health professional training under the UHC system, both of which should be well attuned to the needs of the particular district, while conforming to national standards of health care provision. An adequately equipped and suitably staffed district hospital,backed by contracting-in of regulated private hospitals, should aim to meet the health care needs of at least 95% of the population within that district, so that only a small number would need referral to higher level tertiary care centres. This will require the upgrading of district hospitals as a high priority over the next five years.

Recommendation 3.2.5: Ensure equitable access to functional beds for guaranteeing secondary and tertiary care.

It is important to ensure that functional beds are available at appropriate levels to deliver health care services corresponding to the National Health Package proposed at that facility. This will require an increase in the bed capacity to at least 2 functional beds per 1000 population by 2022. We believe that when compared with the global average of 2.9 beds per 1000,this is an appropriate target for India since the emphasis on early interventions, prevention, and promotive health practices as well as an increased use of out-patient care under the UHC system are likely to progressively reduce the need for hospital beds. At the same time, it is necessary to ensure equitable distribution so that a sufficient number of functional beds are available in small towns and rural areas. Today, a majority of the beds in government facilities as well as in the private sector are located in urban areas, leaving a large capacity gap in rural and semi-urban areas. This imbalance has to be corrected to achieve UHC.

Recommendation 3.2.6: Ensure adherence to quality assurance standards in the provision of health care at all levels of service delivery.

We recommend adherence to Indian Public Health Standards (IPHS) by all public and contracted-in private health facilities responsible for delivering the NHP as the starting point of large scale commitment to quality assurance in health care service delivery. Such a move should include licensing, accreditation and public disclosure of the accreditation status of all public and private health facilities. All health facilities should be licensed by 2017 to ensure compliance with the latest IPHS standards. Accreditation should be linked to National Health Packages offered at a facility. All health care providers should prominently display their accreditation certificate to the public. The public should be educated on services available at facilities through appropriate health communication programmes. We recommend the creation of a National Health and Medical Facilities Accreditation Unit (NHMFAU)– discussed later under section 3.6 on management and institutional reforms - to serve as the regulatory and accreditation body that defines the standards of health care offered at different levels, oversee efficient use of resources by facilities and provide supportive services to populations and facilities.

Recommendation 3.2.7: Ensure equitable access to health facilities in urban areas by rationalizing services and focusing particularly on the health needs of the urban poor.

We recommend a new urban UHC system that offers the defined package of services at each level through clearly designated primary, secondary and tertiary health care facilities. Cities and towns should have the flexibility to design such a system that includes community-based urban nurse practitioners, appropriate service delivery channels and provider partnerships. The efficiency of public health systems in urban areas should be strengthened by improving primary urban health services, urban health care infrastructure, and designated referral facilities. Local urban governing bodies should promote enhanced community participation in the health care delivery system and inter-sectoral convergence of interventions in order to improve health outcomes.

3.3 Human Resources for Health

India's health care delivery system faces multiple shortages. The increased emphasis on primary health care as the core of the UHC system requires appropriately trained and adequately supported practitioners and providers with relevant expertise to be located close to people, particularly in marginalised communities. At the same time, the existing practice of loading managerial functions on to health care providers (who do not have the requisite management training) needs to be discontinued, and replaced by a professional public health managerial cadre to ensure a safe, effective and accountable health system.

Our recommendations have two implications. One, they will result in a more equitable distribution of human resources - two, we estimate that the UHC system can potentially generate around 4 million new jobs (including over a million community health workers) over the next ten years.

In this section, we offer recommendations for augmenting and strengthening the performance of professional and technical health workers. Section 3.6 that follows, deals with human resources needed for strengthening the management of health services.

Recommendation 3.3.1: Ensure adequate numbers of trained health care providers and technical health care workers at different levels by a) giving primacy to the provision of primary health care b) increasing HRH density to achieve WHO norms of at least 23 health workers per 10,000 population (doctors, nurses, and midwives).

More specifically, we propose the following:

- **Community health workers (CHWs):** We recommend doubling the number of community health workers (CHW's or Accredited Social Health Activists (ASHAs) as they are now called) from one per 1000 population to two per 1000 population in rural and tribal areas. At least one of them should be female and offered the opportunity to train as an auxiliary nurse midwife in future. We also recommend the appointment of a similarly trained CHW for every 1000 population among low-income vulnerable urban communities. The CHWs should provide preventive and basic curative care, promote healthy life-styles, serve on health and sanitation committees, and enable people to claim their health entitlements. CHWs should be paid a fixed compensation supplemented by performance-based incentives. We estimate that close to 1.9 million CHWs will be needed to meet the requirements of the proposed UHC system.

- **Rural health care practitioners:** We recommend the introduction of a new 3-year Bachelor of Rural Health Care (BRHC) degree programme that will produce a cadre of rural health care practitioners for recruitment and placement at SHCs. In the short term, health providers from recognised systems of medicine (eg. Ayurveda), dentists and nurses could be deployed upon completion of bridge courses to acquire appropriate competencies to follow standard management guidelines and provide the NHP. In the longer term, rural health practitioners should receive degree training in BRHC courses and be deployed locally at the SHC level. Appropriately trained nurse practitioners at urban health centres will ensure the provision of preventive, primary and curative care.

- **Nursing staff:** The core of the proposed UHC system is its increased reliance on a cadre of well-trained nurses, which will allow doctors to focus on complex clinical cases and enable routine care to be delivered by other cadres, especially at the CHC level. In our estimate, for instance, the service guarantees under UHC will require an increase in the availability of nurses from around 900,000 today to 1.7 million by 2017 and 2.7 million by 2022. The increased availability and absorption of nurses into the UHC system will ensure that the nurse and midwife (including Auxiliary Nurse/ Midwives [ANMs])per allopathic doctor ratio goes up from the present level of 1.5:1 to the preferred ratio of 3:1 by 2025.

- **Allopathic doctors:** Meeting the requirements of UHC will call for an improvement in the country's allopathic doctor-to-population ratio from around 0.5 per 1,000 population today to a well-measured provision approaching one doctor per 1,000 by the end of the year 2027. These additional doctors are essential for meeting the requirements of health facilities in both public and private sectors.
- **AYUSH doctors:** The proposed UHC system will require the active engagement and participation of appropriately trained AYUSH practitioners, especially in states where there are existing shortages of allopathic doctors. Selected AYUSH doctors may support the provision of primary care through bridge courses to upgrade skills and broaden access to care via the creation of designated posts at primary health centres, community health centres as well as district hospitals.
- **Allied health professionals:** Ensuring effective delivery of the National Health Package will require the recruitment of adequate numbers of dentists, pharmacists, physiotherapists, technicians, and other allied health professionals at appropriate levels of health care delivery. We find that while there are adequate pools of such health worker categories in India, their availability needs to be ensured equitably across all states.

Table 2 summarizes the profile of the nurses and allopathic doctors that is expected to evolve by 2022 as a result of our recommendations.

Table 2: Projected availability of allopathic doctors and nurses

	2011	2017	2022
Allopathic doctors, nurses and midwives per 1000 population	1.29	1.93	2.53
Population served per allopathic doctor	1,953	1,731	1,451
Ratio of nurses and midwives to an allopathic doctor	1.53	2.33	2.94
Ratio of nurses to an allopathic doctor	1.05	1.81	2.22

It is expected that a 3:1 ratio of nurses and midwives (including Auxiliary Nurse/Midwives) per doctor and coverage of one doctor per 1000 population will be achieved by 2025 and 2027 respectively to meet the requirements of both public and private sectors.

While a substantial scale-up of the health workforce is needed across several cadres, priority should be accorded to the development and deployment of non-physician health care providers, ranging from community health workers to mid-level health workers (including BRHC practitioners and nurse practitioners). Doctors are of great value in providing certain types of health care, yet primary health care services should not be doctor dependent. Even in secondary and tertiary care, skilled support services should be provided by suitably trained nurses and allied health professionals. Planning for health professional education should reflect this paradigm.

We believe that, for UHC, health care needs rather than population norms should guide the deployment of human resources at different levels of health care service provisioning. In this regard, State governments are best situated to plan for the human resource needs of different districts. Nevertheless, we suggest the following measures (subject to their appropriateness for the local context and conditions) to fill in some obvious gaps in the deployment of human resources at different levels:

- **Village and community level:** We recommend, on average, two community health workers (ASHA) who should work alongside and in partnership with Anganwadi Workers (AWW) and their sahayikas (helpers) in villages. There should also be one similarly trained CHW for every 1000 population among low-income vulnerable urban communities.
- **Sub-health centre level (SHC):** It would help to ensure that there are at least two ANMs and one male health worker in every SHC as per the existing 2010 IPHS norms. We recommend supplementing the existing staff at this level with the addition of one BRHC practitioner.
- **PHC level:** This is the first level where a team of doctors along with nurses and technicians will be available. In addition to the existing staff prescribed as per the 2010 Indian Public Health Standard (IPHS) norms, we recommend an AYUSH pharmacist, a full-time dentist, an additional allopathic doctor and a male health worker to ensure that primary health care needs are adequately met.
- **CHC level:** The CHC should serve as the access point for emergency services including caesarean section deliveries, new born care, cataract surgeries, sterilisation services, disease control programmes and dental care. For a 'standard' CHC, we recommend a substantial increase in the number of nurses (to around 19) and the addition of a head nurse, a physiotherapist and a male health worker.

Our Report contains similar suggestions relating to health and technical staff for sub-district, district and medical college hospitals.

Recommendation 3.3.2: Enhance the quality of HRH education and training by introducing competency-based, health system-connected curricula and continuous education.

Curricula in medical schools should keep pace with the changing dynamics of public health, health policy and health demographics. Medical education also requires greater orientation of providers to the social determinants of health as well as to gender and equity issues. Health professional education should be directed towards population-based primary and preventive health care instead of being driven by a curative-treatment paradigm. Medical and nursing graduates in the country should be well trained, prepared and motivated to practice in rural and urban environments. It is equally important to ensure that on-going training and advancement opportunities are offered to community health workers serving in villages and urban areas. These workers, who provide essential outreach to patients as well as feedback on emerging problems in the health system, need decentralized, intra-district training. Systems of continued medical education and continued skill improvements – linked to promotions and renewal of license to practice – should be introduced. We recommend the use of Information Communication Technology (ICT) for standardised teaching across institutions and the development of institutional networks to facilitate and disseminate e-learning packages and resource materials.

Recommendation 3.3.3: Invest in additional educational institutions to produce and train the requisite health workforce.

We propose the setting up of the following new institutions to meet the additional human resource requirements of the UHC system and to correct the imbalances in the distribution of nursing and medical colleges in the country.

Nursing schools and colleges: There have been some improvements since 2005, with the addition of new nursing schools in as many as 12 states. But these are still insufficient to meet the requirements of UHC due to the inequitable distribution of these schools. Some 149 districts in 14 high focus states do not have any nursing school or nursing college as of 2009. We propose setting up new nursing schools and new nursing colleges over the next decade focusing mainly on underserved states.

Schools for ANMs: Many Sub-Health Centres (SHCs) face shortages of ANMs. For instance, mostSHCs in Bihar and Uttar Pradesh do not have ANMs even though the mandate is to have two ANMs per SHC. We estimate that around 230 additional schools for ANMs would need to be established specifically in underserved the states of Assam, Bihar, Gujarat, Jammu and Kashmir, Jharkhand, Meghalaya, Mizoram, Sikkim, Rajasthan, Tripura, Uttar Pradesh and West Bengal.

Medical colleges: The highly uneven distribution of medical colleges has resulted in the skewed production and unequal availability of doctors across the country. There is, for instance, only one medical college for a population of 11.5 million in Bihar and 9.5 million in Uttar Pradesh, compared to Kerala and Karnataka who have one medical college for a population of 1.5 million. We therefore recommend selectively setting up (an estimated 187) new medical colleges over the next 10 years in currently underserved districts with a population of more than 1.5 million.

Concerns about 'over-medicalisation' must be considered along with the need to correct the severe imbalance in the distribution of medical colleges in the country. We do not view the medical colleges merely as production units for doctors. Instead, we see each medical college as an integral part of the health system, responsive to and partly responsible for the health needs of one or two districts. In addition, medical colleges also serve to train nurses and other allied health professionals. We believe this purpose can be served by functionally linking medical colleges to district hospitals and mandating a substantial proportion of local student enrolment. We recognise that the establishment of such a large number of new medical colleges would pose a logistical challenge due to shortage of faculty as well as the limited resources that state governments may be willing to commit for creating the required infrastructure. We believe, however, that once again, linking the new medical colleges to district hospitals will, to a large extent, help overcome these problems.

Table 3 presents illustrative estimates of new educational institutions that would be needed in different states to meet the human resource requirement for the proposed UHC system.

Table 3: Estimated need for new HRH educational institutions

States	Medical Colleges	Nursing Colleges	Nursing Schools	ANM Schools
Arunachal Pradesh	-	1	2	-
Assam	8	9	11	10
Bihar	27	16	102	46
Chhattisgarh	7	-	-	-
Gujarat	8	-	2	15
Haryana	5	-	2	-
Jammu and Kashmir	1	2	5	2
Jharkhand	10	4	14	2
Madhya Pradesh	18	-	21	-
Maharashtra	3	-	5	-
Meghalaya	1	-	-	1
Nagaland	-	1	3	1
Odisha	10	7	15	-
Punjab	3	-	-	-
Rajasthan	17	-	-	28
Sikkim	-	-	-	1
Tripura	-	1	2	2
Uttar Pradesh	49	9	162	99
Uttarakhand	-	2	4	-
West Bengal	20	6	32	25
TOTAL	**187**	**58**	**382**	**232**

Recommendation 3.3.4: Establish District Health Knowledge Institutes (DHKIs).

We propose the setting up of District Health Knowledge Institutes (DHKIs) in districts with a population of more than 500,000 in order to enhance the quality of health workers' education and training. These institutes should offer degree and diploma programmes, certificate courses, accreditation and standardized professional training. Their location, at the district level, should make them accessible to local candidates and facilitate uniformity in admissions, curricula and licensing.

The DHKIs should address the severe shortage of educational infrastructure and provide the appropriate level of decentralisation of health care education. They should also ensure competency-based training to meet the health needs of local communities. Our recommendation echoes the proposal by the Bajaj Committee that advocated the creation of a "District Institute of Education and Training" to offer "integrated training modules." The DHKIs shall deliver integrated training for all health, nutrition and family welfare programmes. The proposed BRHC degree as well as bridge courses in rural health care should be housed in the DHKIs so that locally recruited personnel have opportunities for practicum placements at Sub-Health Centres. Local candidates from various districts should be supported through the reimbursement of tuition-fees and free accommodation. The DHKIs should also be the centre for training allied health professionals.

Recommendation 3.3.5: Strengthen existing State and Regional Institutes of Family Welfare and selectively develop Regional Faculty Development Centres to enhance the availability of adequately trained faculty and faculty-sharing across institutions.

The need to upgrade skills of existing health workers as well as recruit new staff requires the rapid scaling up of HRH educational and skill development training institutions for faculty development and continuing education. To begin with, we recommend that the scope of the 44 State and Regional Institutes of Health and Family Welfare (SIHFWs and RIHFWs) should be expanded and strengthened to include support for management cadres and implementers of national health programmes. In addition, we recommend the setting up of 20 regional centres for faculty development and sharing of faculty across educational institutions. The RIHFWs and SIHFWs should become the nodal institutes for the coordination of all induction and in-service trainings and educational programmes, and for this purpose, work closely with DHKIs. This will facilitate the creation of competency-based curricula relevant to local needs for primary health care programmes.

Recommendation 3.3.6: Establish a dedicated training system for Community Health Workers

Training programmes at the time of induction as well as for continuous upgrading of knowledge and skills will be required for ensuring that the estimated 1.9 million CHWs in rural and urban areas are well-equipped to perform their functions. We recommend the establishment of a dedicated training system that consists of several teams in every district, under the aegis of District Health Knowledge Institutes. Each team should consist of three members and be responsible for training and evaluating around 300 CHWs on a continuous basis. An appropriate structure of support and supervision for these teams needs to be put in place at the district level. Non-governmental organisations should be actively sought out for providing training and support to CHWs.

Recommendation 3.3.7: Establish State Health Science Universities.

We endorse the recommendation of the Bajaj Committee that in 1987 had recommended the establishment of Health Science Universities in states and in groups of Union Territories to award degrees in health sciences and prospectively add faculties of health management, economics, social sciences and

information systems. We recommend the creation of Health Science Universities in every state (or a set of states) that will ensure uniformity in admissions, curricula, training and accreditation for all degrees in medical, nursing, pharmacy, public health and allied health professional fields.

Recommendation 3.3.8: Establish the National Council for Human Resources in Health (NCHRH).

We strongly recommend and endorse the setting up of the National Council for Human Resources in Health (NCHRH) to prescribe, monitor and promote standards of health professional education. We support the proposed legislation, awaiting parliamentary consideration, that envisages the establishment of a body to provide overarching regulation of competency based medical, dental, nursing, pharmacy, public health and allied health professional education and to serve as a platform for promoting inter-professional education.

3.4. Community Participation and Citizen Engagement

Communities are not just recipients of care. They have the capacities to create and promote health, by means of social and familial support networks, and the application of local health knowledge. Increased community participation in health care—its delivery, governance and accountability—represents the deepening of democracy. It can empower people, particularly women, the poor and other marginalised segments of society, and ensure that the delivery of health care services remains appropriate and accountable to them.

Our recommendations seek to strengthen institutional mechanisms for community participation and citizen engagement in order to make health planning, review and implementation more responsive to the voices and needs of communities. They are also intended to promote the involvement of communities and other stakeholders (including health providers and people's representatives) in decision-making on health, and to improve the processes of policy formulation and public decision-making. We believe that planning, review and oversight mechanisms should be decentralized and made participatory in order to ensure effective implementation as well as a high level of transparency and local accountability.

Recommendation 3.4.1: Transform existing Village Health Committees (or Health & Sanitation Committees) into participatory Health Councils.

We propose the transformation of existing Health Committees into Health Councils at all levels - from the village and urban settlement level to block, district, state and the national level. Representatives of civil society organisations (including NGOs, Community Based Organisations, membership organisations, women's groups, trade unions and health providers) should constitute at least 50 per cent of the Council's membership. Each Council should elect its own Chairperson. The composition of the reconstructed Councils will ensure representation of all members of the previously constituted Health Committees, including members of the Gram Panchayat or other elected representative for the concerned geographical unit and of frontline health workers (such as ANMs, AWWs, ASHAs and CHWs). The reconstitution of existing Committees into Health Councils will expand their roles without adversely affecting their existing functions. The enhanced role of the transformed Councils will include drawing upon the perspectives of the different member-groups and evolving recommendations, by consensus, on health plans and budgets for implementation by designated executive agencies. The Councils should also exercise oversight on performance of the health plan, with monitoring of selected health indicators every six months, and tracking budgeted expenditures. The Councils will thereby bring the strengths of broader representation as well as more frequent monitoring to the existing mechanisms of planning and review.

Recommendation 3.4.2: Organise regular Health Assemblies.

The Health Councils should organise annual Health Assemblies at different levels (district, state and nation) to enable community review of health plans and their performance as well as record ground level experiences that call for corrective responses at the systemic level. By organizing such Health Assemblies, the Health Councils will serve as a bridge between the executive agencies responsible for design and delivery of health services and the wider community, which is the intended beneficiary of such services. Recording the needs and priorities identified by the communities as well as taking note of grievances relating to sub-optimal or inequitable performance of health services would enable the Councils to provide constructive feedback to policymakers and health system managers. This will also provide an opportunity to health system managers to explain to the community and find solutions to the constraints that prevented a prompt response to the expressed needs or complaints. Data from the annual report, finance report, action plan and community monitoring should be presented to the Assemblies for review and feedback.

Recommendation 3.4.3: Enhance the role of elected representatives as well as Panchayati Raj institutions (in rural areas) and local bodies (in urban areas).

Involvement of local elected representatives and Panchayats in health governance can significantly increase the motivation, performance and accountability of community health workers. It can also contribute to much-needed convergence of social services at the community level. For this to happen, local health functions and finances should be devolved to PRIs and local bodies with clear directives and guidelines. The participation of PRIs and other elected representatives in health governance and community oversight through the (Village and Block) Health and Sanitation Committees has been generally inadequate due to operational deficits including low capacities and role ambiguity. These gaps should be addressed through better training, role definition, financial devolution, capacity strengthening, and the establishment of mechanisms through Health Assemblies for greater community oversight. NGOs should additionally be engaged to train PRI representatives in health administration.

Recommendation 3.4.4: Strengthen the role of civil society and non-governmental organisations.

Civil society organisations (CSOs) can contribute effectively to community mobilisation, information dissemination, community-based monitoring of health services and capacity building of community-based organisations and workers. They can energize community-level interventions and enhance popular participation in health governance and oversight. In addition to delivering information on health care entitlements, they can campaign for UHC and facilitate as well as coordinate community participation activities (via Health Assemblies for instance) at block, district, state and national levels. We, therefore, recommend that mechanisms should be developed by both Central and state governments to solicit the active engagement of CSOs and non-governmental organisations including Membership-Based Organisations of the Poor (MBPs), self-help groups, unions, cooperatives and other local community based organisations. Financing mechanisms must be specifically developed and financial resources earmarked for the engagement of CSOs. Also, CSOs with adequate capacities should be engaged for capacity strengthening (training, mentoring, follow-up support in local planning and review processes) of members of Health Councils, community health workers and elected representatives at all levels.

Recommendation 3.4.5: Institute a formal grievance redressal mechanism at the block level.

We recommend the introduction of a systematic and responsive grievance redressal and information mechanism for citizens to access knowledge of and claim their health entitlements. Such a mechanism is urgently required at the block headquarters to deal with confidential complaints and grievances about public and private health services in a particular block. Procedures for corrective measures should be clearly enunciated at each level, with defined parameters for grievance investigation, feedback loop, corrective process, no-fault compensation and grievance escalation. Responsibilities of health department officials should be defined in relation to Grievance Redressal Officers and vice versa, supported by sufficient and clear directives and guidelines or orders, as applicable. This should be linked, at the district level, with an Ombudsperson who functions under the aegis of a National Health Regulatory and Development Authority. Serious grievances and unresolved cases should be referred to the Ombuds person.We recommend the setting up of Jan Sahayata Kendras (People's Facilitation Centres) that should be co-located with the office for grievance redressal in order to locally provide people with information services. But the two should function independently. The Jan Sahayata Kendra should conduct periodic public hearings, and operate a telephone helpline. Wherever possible, these should be managed by local CBOs, MBPs or women's or farmers' groups, trade unions and cooperative societies.

3.5 Access to Medicines, Vaccines and Technology

Ensuring effective and affordable access to medicines, vaccines and appropriate technologies is critical for promoting health security. In making our recommendations, we note that:

- Almost 74% of private out-of-pocket expenditures today are on drugs;
- Millions of Indian households have no access to medicines because they cannot afford them and do not receive them free-of- cost at government health facilities;
- Drug prices have risen sharply in recent decades;
- India's dynamic domestic generic industry is at risk of takeover by multinational companies; and
- The market is flooded by irrational, nonessential, and even hazardous drugs that waste resources and compromise health.

Our recommendations address the existing inefficiencies in the supply chain and logistics management of drugs and vaccines as well as due to improper drug prescriptions.

Recommendation 3.5.1: Enforce price controls and price regulation especially on essential drugs.

We recommend the enforcement of price controls and price regulation on essential and commonly prescribed drugs. The current practice of using monopoly and market dominance measures for consideration of price control on drugs needs to be replaced by the criterion of 'essentiality,' which is likely to have maximum spill-over effects on the entire therapeutic category. We recommend the use of 'essentiality' as a criterion and applying price controls on formulations rather than basic drugs. Direct price control applied to formulations, rather than basic drugs, is likely to minimise intra-industry distortion in transactions and prevent a substantial rise in drug prices. It may also be necessary to consider caps on trade margins to rein in drug prices while ensuring reasonable returns to manufacturers and distributors. All therapeutic products should be covered and producers should be prevented from circumventing controls by creating non-standard combinations. This would also discourage producers from moving away from controlled to non-controlled drugs. At the same time, it is necessary to strengthen Central and State regulatory agencies to effectively perform quality and price control functions.

Recommendation 3.5.2: Revise and expand the Essential Drugs List.

We recommend the revision and expansion of the National Essential Drugs List (NEDL) to include appropriate and approved alternative medicines. Public procurement of NEDL drugs should include identified and approved chemical, biological and AYUSH medicines. This will also ensure that AYUSH drugs are available at health facilities, thereby greatly enhancing the contribution of AYUSH doctors. Including new drugs and vaccines into government drug procurement should, however, be based on scientific evidence and due consideration must be given to safety, efficacy and cost-effectiveness.

Recommendation 3.5.3: Strengthen the public sector to protect the capacity of domestic drug and vaccines industry to meet national needs.[3]

We recommend strengthening the capacity of the public sector for the manufacture of domestic drugs and vaccines. The public sector can play a crucial role in ensuring sufficient national capacity of essential drugs at affordable prices. This will greatly enhance drug and vaccine security and prevent disruptions, shortages, reductions and cessation of supply. Central and state governments should assist and

[3] This recommendation did not have unanimity within the HLEG. One member was of the view that reviving public sector capacity for pharmaceutical production, without examining the reasons for failure of previous public sector drug manufacturing units, would not be an appropriate use of resources.

revive public sector units (PSUs) that manufacture generic drugs and vaccines, limit the voting rights of foreign investors in Indian companies, and take other measures to retain and ensure self-sufficiency in drug production. It is also equally important to strengthen safeguards for intellectual property rights. The Central government must ensure that the patents regime does not compromise drug access and afford ability.

We also need to urgently revisit India's FDI regulations to amend the present rules of an automatic route of 100% share of foreign players in the Indian industry to less than 49%, so as to retain predominance of Indian pharmaceutical companies and preserve our self-sufficiency in drug production.

Recommendation 3.5.4: Ensure the rational use of drugs.

The extensive practice, in both public and private sectors, of prescribing hazardous, non-essential and irrational medicines should be eliminated. In addition to legislative and other regulatory measures, intensive efforts should be made to educate and encourage doctors and citizens to use generic drugs and avoid the use of irrational medicines. Critical for this is the introduction of an IT-enabled electronic system that tracks patient records – discussed later in the section on management reforms. Standard treatment guidelines should also become the basis for mandated and audited rational prescription practices.

Recommendation 3.5.5: Set up national and state drug supply logistics corporations.

We recommend the adoption of centralized national and state procurement systems in order to realize economies of scale and create the conditions necessary to drive down the prices of drugs, vaccines, and medical devices. Towards this end, we recommend the setting up of a national and state level Drug Supply Logistics Corporation for the bulk procurement of low-cost, generic essential drugs. This will enable all providers to access generic drugs with significant cost savings. The Government should also consider setting up at least one warehouse in each district to ensure availability of drugs to all providers.

Recommendation 3.5.6: Protect the safeguards provided by the Indian patents law and the TRIPS Agreement against the country's ability to produce essential drugs.

We recommend that the strict protection from any dilution of many safeguards in India's current amended patent law including restrictions on the patenting of insignificant or minor improvements of known medicines (under section 3[d]). Compulsory licenses (CL) should be issued to companies, as and when necessary, to make available at affordable prices all essential drugs relevant to India's disease profile. This provision, under India's own Patents Act and TRIPS as clarified by the Doha Declaration, shall allow countries to use such licenses in public interest and can be invoked in the interest of public health security. Also, the 'data exclusivity clause' must be removed from any Free Trade Agreement that India enters into, since such a clause extends patent life through 'evergreening' and adversely affects drug access and affordability.

Recommendation 3.5.7: Empower the Ministry of Health and Family Welfare to strengthen the drug regulatory system.

It is important to eliminate the multiplicity of responsibilities and jurisdictions of authority relating to pharmaceutical production and regulation by entrusting full responsibility to the Ministry of Health and Family Welfare. The Ministry of Health and Family Welfare must be empowered to introduce interventions for regulating the production of drugs as well as the operation of drug outlets. The functioning of State regulatory agencies should be strengthened by ensuring adequate workforce and testing facilities. Additional financial resources should be earmarked and allocated for setting up drug quality testing

facilities in states and for the employment of additional regulators to serve in these facilities and regulatory agencies.

We recommend in public interest the transfer of the functioning of the Department of Pharmaceuticals, which is now under the Ministry of Chemicals and Fertilizers to the Ministry of Health and Family Welfare. By bringing in both the manufacture of drugs as well as drug price control, the Ministry of Health and Family Welfare will not only be responsible for ensuring the quality, safety and efficacy of drugs but also accountable for the unhindered availability of all essential drugs under the UHC system. This will also help better align drug production and pricing policies to prioritized national health needs.

3.6 Management and Institutional Reforms

Effective management systems are crucial to the successful coordination of multiple resources, diverse communities and complex processes. Better management would also allow for effective coordination of public and private sector efforts to ensure universal health coverage. The public health sector needs to assume the roles of promoter, provider, contractor, regulator, and steward. The private sector's role also needs to be clearly defined and regulated. Systemic reforms must ensure effective functioning and delivery of health care services in both rural and urban areas. Good referral systems, better transportation, improved management of human resources, robust supply chains and data, and upgraded facilities are essential.

We recommend the following set of over-arching managerial and institutional reforms:

Managerial reforms: This sub-section deals with measures to augment and strengthen the management functions of the health care delivery system.

Recommendation 3.6.1: Introduce All India and state level Public Health Service Cadres and a specialized state level Health Systems Management Cadre in order to give greater attention to public health and also strengthen the management of the UHC system.

We recommend the creation of an All India Public Health Service Cadre, a new cadre comprising of public health professionals with multidisciplinary education. This cadre will be responsible for all public health functions, with an aim to improve the functioning of the health system by enhancing the efficacy, efficiency and effectiveness of health care delivery. This cadre should be supported by a state level public health cadre starting at the block level and going up to the state and national level. This would be akin to the civil services, which provide for both All-India and state level cadres. While the state-level cadre will provide the operational framework of public health services, the All-India cadre will not only help strengthen state services with a high level of professional expertise but also provide strong connectivity between state and central planning

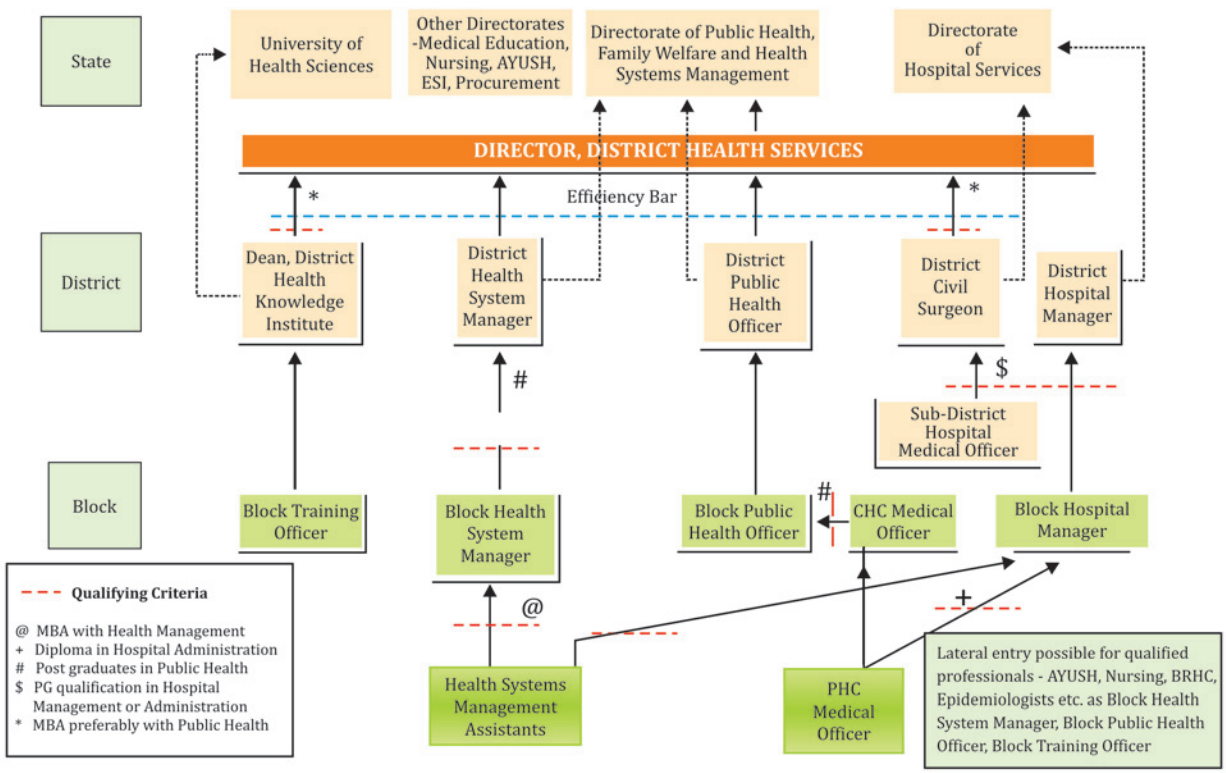
We also recommend the creation of a new Health Systems Management Cadre that should be made responsible for managing public sector service provision as well as the contracted-in private sector. Quality assessment and quality assurance for health facilities will be a major function for this cadre. These Health System managers should take over many of the administrative responsibilities in areas such as IT, finance, human resources, planning and communication that are currently performed by medical personnel.

We further recommend the appointment of appropriately trained hospital managers at sub-district, district hospitals and medical college hospitals so as to improve the managerial efficiency and also enable medical officers and specialists to concentrate on clinical activities. Appropriate training of these new cadres is likely to significantly enhance the management capacities at all levels and end the practice of untrained personnel being assigned to manage health institutions. These cadres should be well integrated with other departments and functionaries to address both the management and public health related inadequacies in the present system and to incorporate principles of professional management into decision-making in health institutions.

While health services systems in the states will always have medical professionals within their ambit, there is an urgent need for appropriately qualified and experienced professionals with public health degrees to fill gaps in critical areas of preventive and promotive services. This will involve broad health system strengthening efforts as well as the design and delivery of specific health programmes. State governments should consider the practice initiated by Tamil Nadu of creating a separate Directorate of Public Health with a dedicated public health workforce, and the practice adopted by states such as Andhra Pradesh, Gujarat, Madhya Pradesh and Odisha of deputing

in-service candidates to public health courses to develop public health cadres. Such courses should be made mandatory for all posts with public health responsibilities. There is, however, an urgent need to establish public health training institutions and strong partnerships with health management training institutions in both the public and private sectors. We present below in Figure 4, an illustrative management structure showing the different strands of health professionals that could evolve at different levels of the health care delivery system. The organogram also shows the career paths for different cadres of health professionals with options both for promotion as well as shifting streams for advancement of careers.

FIGURE 4. CAREER PATHWAYS UP TO STATE LEVEL



Recommendation 3.6.2: Adopt better human resource practices to improve recruitment, retention motivation and performance; rationalize pay and incentives; and assure career tracks for competency-based professional advancement.

We recommend that transparency in recruitment, clear paths for career progression and performance incentives should be introduced. Among the measures to consider would be the following:

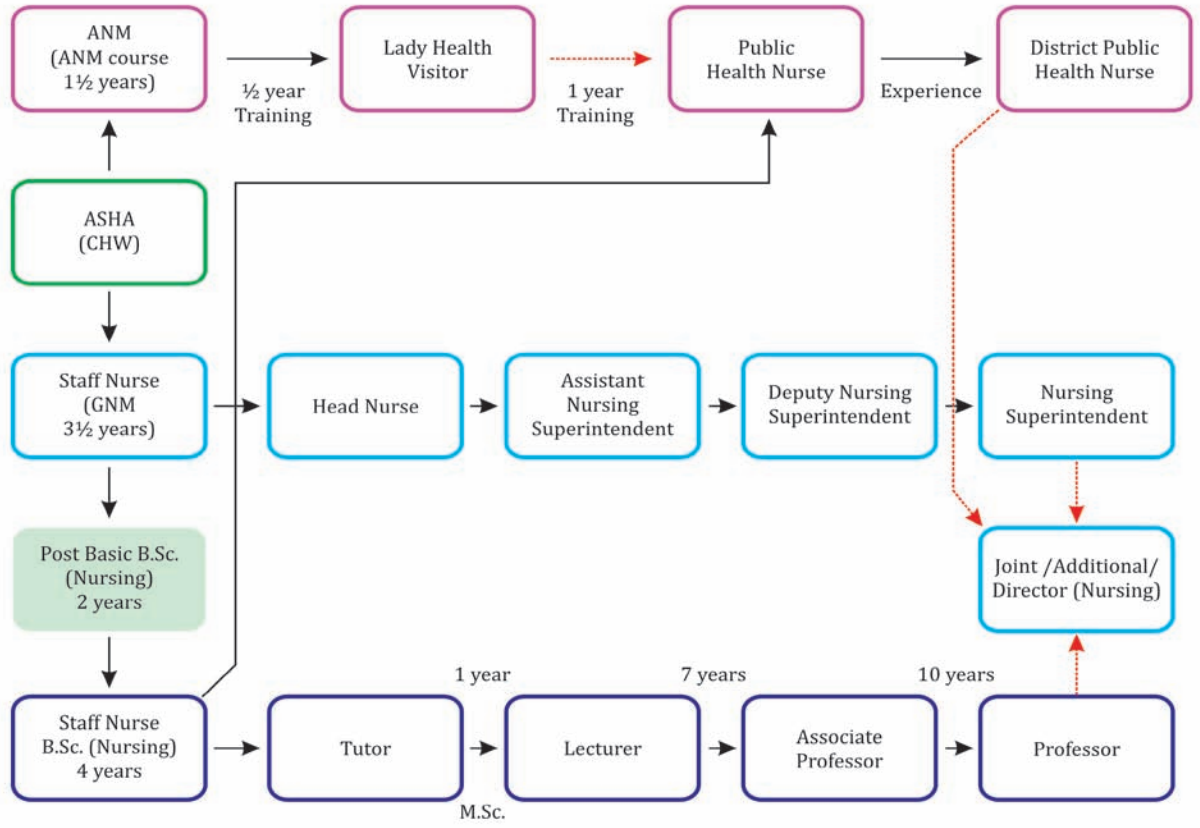
- Creation of requisite posts and filling up of all vacant posts regularly in a time bound manner;
- Implementation of transparent transfer policies;
- Fixed tenure especially in the hardship areas and provision of residential accommodation in hardship areas

- Career progression for doctors through reservation of Post-Graduate seats in medical colleges;
- Bridge courses and study leave, time bound promotions based on performance, contractual appointments based on equal pay which are regularized on satisfactory completion of two or three years of service;
- Monetary compensation and incentives such as rural area allowance, additional hardship area allowance, child education allowance and transport allowance;
- Appointment of doctors and nurses as full-time staff in the public sector, duly compensated and on parity with their colleagues in other sectors; and
- Revision of job responsibilities and duties as well as task shifting and task sharing to appropriate cadres (e.g. administrative tasks shifted to health systems managers, specific clinical functions of doctors and nurses to BRHC practitioners and nurse practitioners).

These steps are likely to improve the ability of the health system to attract, recruit, retain and motivate health personnel in under served areas, optimize their competencies and encourage team work for larger impacts on health outcomes.

Also, critical for improving the efficiency and motivation of health workers is to have well-defined career trajectories. For technical and clinical health workers, we propose the following (Figure 5):

FIGURE 5. ILLUSTRATIVE CAREER TRAJECTORIES FOR CLINICAL AND TECHNICAL HEALTH WORKERS



We recommend that ANMs, after promotion as LHVs, should be considered for the posts of Public Health Nurses (PHNs), advancing further to District Public Health Nurses (DPHNs) subject to their completion of a year-long DPHN course. The present lateral entry of clinical nurses to the posts of PHN could be retained subject to their completion of a PHN course and a minimum of 5 years working experience in PHCs. The ANM cadre should be provided with year-long courses in midwifery education (diploma in nursing education) so that they can pursue academic careers at ANM schools and LHV training schools. ANMs should be provided opportunities to become staff nurses facilitated through the reservation of seats in nursing schools. Similarly, CHWs (or ASHAs) who are outstanding performers should be provided with opportunities to advance their careers by reservation of seats in ANM and nursing schools.

Similarly, nurses should also have opportunities in the teaching cadre to become a Tutor, Lecturer, Associate Professor and Professor. We recommend that bridge courses be provided for clinical areas such as operation theatres, ICUs as well as clinical super specialty areas of cardiology and psychiatry for their professional development as nurse practitioners. The nursing cadres should also be provided bridge courses in nursing education, nursing administration, hospital management and health management to enable them to take up administrative posts at facility, block, district and state levels. Such career progression paths are also recommended for male health workers, laboratory assistants, technicians and other categories of health workers.

Effective systems of performance assessment should guide human resources in recruitment, training, mentoring, supervising, and motivating personnel. Managing for equitable results (to ensure equity) and value for money (to ensure efficiency and cost-effectiveness) should drive the performance of the proposed UHC system. Formal systems of performance appraisal should be applied to health workers at every level and used as a basis for awarding individual and group incentives – both monetary and non-monetary.

Recommendation 3.6.3: Develop a national health information technology network based on uniform standards to ensure inter-operability between all health care stakeholders.

Establishing a credible information technology (IT) system is necessary for ensuring effective implementation of the UHC system. A robust health IT network will help cater to the current and growing needs of over a billion people and navigate the complexities of governance structures, multiple health systems and a combination of public and private providers. Such a system cannot be introduced in one go, and will have to grow as the UHC system itself evolves. It is, therefore, important to ensure an effective IT infrastructure, allocate special funds to build IT infrastructure, and link all facilities and not only public hospitals with a system-wide integrated information network. We propose the adoption of system-wide Electronic Medical Records; this is critical for the health IT network to track and monitor diseases, expenditures and performance to deliver both favourable health and financial outcomes.

A national health IT network should help build an epidemiological database to determine district-wise disease burden, and also monitor outcomes including, for example, mortality rates, hospital admission rates, disease profiles at PHCs and hospital bed occupancy ratios. Process re-engineering should be part of building the IT system to ensure standardized reporting formats from all institutions to track health expenditures accurately at different levels of care. Such information is critical for effective and efficient allocation of financial resources from the Central government. The network should connect all public and private health care facilities and governing departments through information exchanges. Common national regulations should govern the IT system.

We recommend the establishment of a health system portal that uses information technology to track services and finances. Electronically linked NHECs should track patients and ensure the portability of medical histories while ensuring full confidentiality

of data and preventing misuse and abuse of data by for profit-making purposes. Medical and health service usage should be tracked to create a central database that provides the necessary information to manage the system effectively. The larger IT system should include portals for patients that assist in scheduling visits, sharing of test results, delivering personalized health promotion and communication and interact with communities, support networks, and health care providers.

A considerable amount of work has been done in this regard within the Ministry of Labour as a part of its efforts on RSBY. There is also a proposal with the Ministry of Health and Family Welfare on the Indian Health Information Network Development (iHIND), submitted in March 2010 by the National Knowledge Commission, that proposes to identify a technology and network infrastructure that will create the desired integration, define standards for data sharing, protection of data, and business practices to ensure patient protection while facilitating greater information sharing, define educational and business strategies that ensure appropriate use of greater health information technology and the sustainability of the effort, and identify other technical and non-technical strategies to create health information exchanges.

In our view, the government should examine these proposals and plan for their implementation and roll-out. Given the magnitude and complexity of the information technology challenge, it would be advisable for the Ministries and Departments of Health to collaborate with the Ministry of Communication and Information Technology to explore the creation of a dedicated or shared National Information Utility for this task.

Recommendation 3.6.4: Ensure strong linkages and synergies between management and regulatory reforms and ensure accountability to patients and communities.

This recommendation is intended to strengthen community participation in planning and monitoring health services - by linking citizen voice and redressal mechanisms to the regulatory authorities' accountability mechanisms. Effective systems should be put in place to guarantee patients' privacy. Ethical considerations in data collection and analysis should be built in and enforced. Links and synergies in management and regulatory reforms and accountability to patients and communities must be established.

Recommendation 3.6.5: Establish financing and budgeting systems to streamline fund flow.

We recommend the establishment of a transparent, performance-based system of budgeting and financial management with accountability structures backed by appropriate information technology and qualified financial professionals. This system will ensure smooth and transparent functioning of the administrative workflow at low costs and allow for more resources for clinical care and enhanced citizen satisfaction.

Institutional reforms: Regulation of the public and the private sectors to ensure provision of assured quality and rational pricing of health care services are essential for the implementation of the UHC system. A structured regulatory framework is needed to monitor and enforce essential health care regulations in order to control entry, quality, quantity and price.

Recommendation 3.6.6: We recommend the establishment of the following agencies:

1. National Health Regulatory and Development Authority (NHRDA): The main functions of the NHRDA will be to regulate and monitor public and private health care providers, with powers of enforcement and redressal. This regulator will oversee contracts, accredit health care providers, develop ethical standards for care delivery, enforce patient's charter of rights and take other measures to provide UHC system support by formulation of Legal and Regulatory norms and standard treatment guidelines and management protocols for the National Health Package so as to control entry, quality, quantity, and

price. The National Authority will be linked to similar state-level institutions and to the Ombudsperson at the district level especially to handle grievance redressal.

We recommend three Units under the NHRDA:

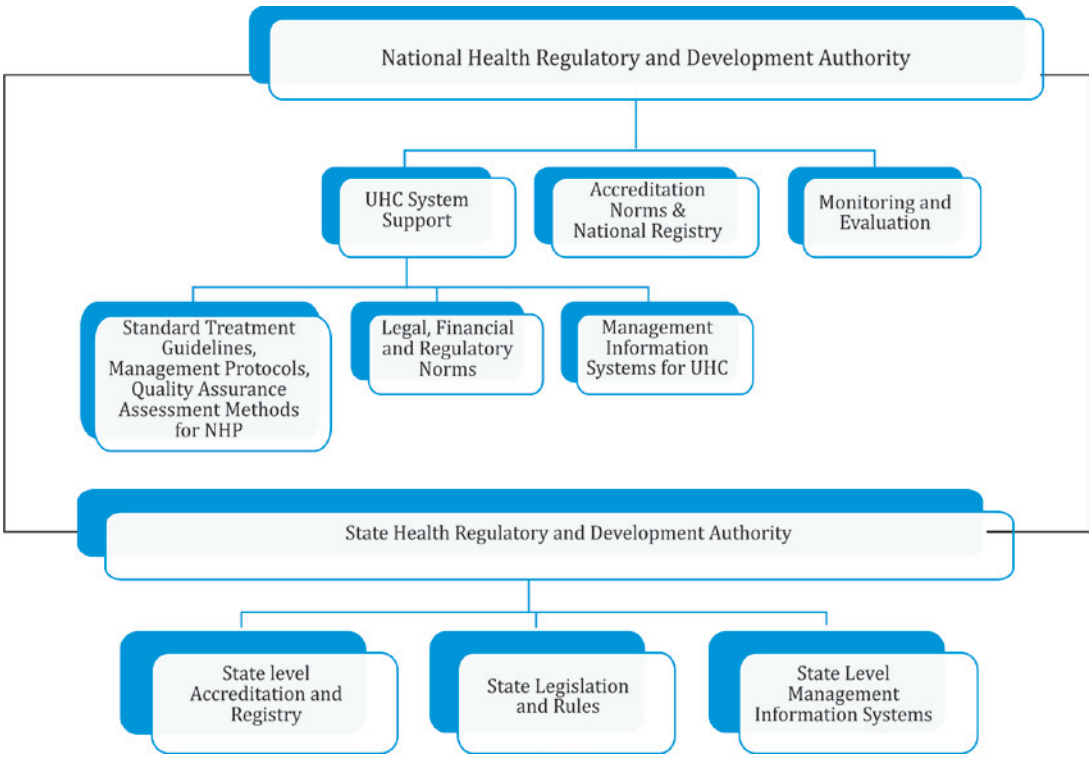
a) **The System Support Unit (SSU):** This Unit should be made responsible for developing standard treatment guidelines, management protocols, and quality assurance methods for the UHC system. It should also be responsible for developing the legal, financial and regulatory norms as well as the Management Information System (MIS) for the UHC system.

b) **The National Health and Medical Facilities Accreditation Unit (NHMFAU):** This Unit should be responsible for the mandatory accreditation of all allopathic and AYUSH health care providers in both public and private sectors as well as for all health and medical facilities. This accreditation facility housed within the NHRDA will define standards for health care facilities and help them adopt and use management technologies. A key function of this Unit will be to ensure meani ngful use of allocated resources and special focus should be given to information technology resources. There should be corresponding state-level data consortium and accreditation agencies (State Facilities Accreditation Unit) under the National FAU to oversee the operations and administrative protocols of health care facilities.

c) **The Health System Evaluation Unit (HSEU):** This monitoring and evaluation unit should be responsible for independently evaluating the performance of both public and private health services at all levels – after establishing systemsto get real time data for performance monitoring of inputs, outputs and outcomes.

The diagram on the next page (Figure 6) illustrates the division of functions and responsibilities of the three Units under the NHRDA.

FIGURE 6. ORGANOGRAM OF NATIONAL HEALTH REGULATORY AUTHORITY

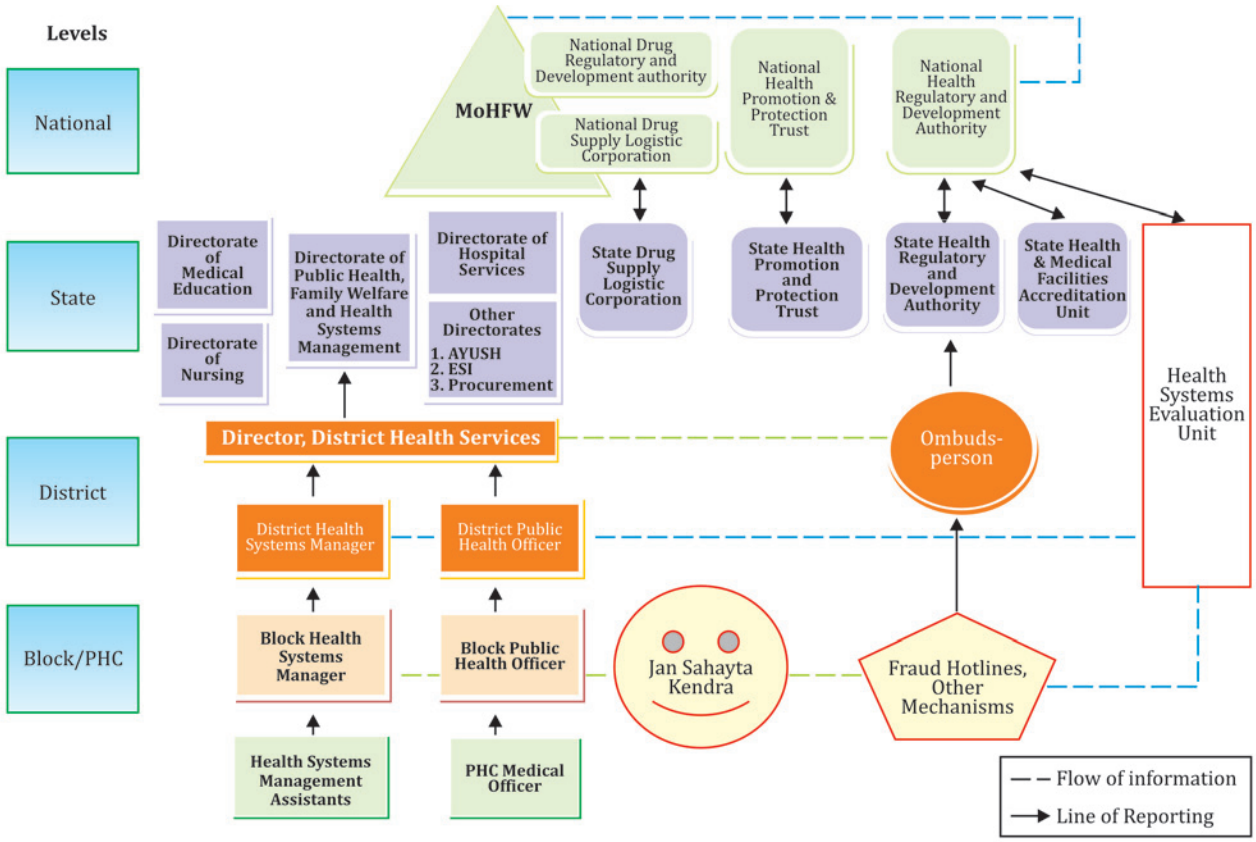


2. National Drug Regulatory Authority (NDRDA): The main aim of NDRDA should be to regulate pharmaceuticals and medical devices and provide patients access to safe and cost effective products.

3. National Health Promotion and Protection Trust (NHPPT): The NHPPT shall play a catalytic role in facilitating the promotion of better health culture amongst people, health providers and policy-makers. The Trust should be an autonomous entity at the national level with chapters in the states. It should promote public awareness about key health issues, track progress and impact on the social determinants of health, and provide technical expert advice to the Ministry of Health. The Trust should also conduct key assessments and disseminate knowledge about the impacts of non-health sectors and policies on the health of people, through linkages with the NHRDA, Health Assemblies, and Jan Sahayata Kendras.

The following organogram (Figure 7) gives a snapshot view of the recommended organisational framework and the placement of the National Health Regulatory and Development Authority, HSEU along with other bodies.

FIGURE 7. ORGANOGRAM OF PROPOSED ORGANISATIONAL FRAMEWORK FOR UHC



Recommendation 3.6.6: Invest in health sciences research and innovation to inform policy, programmes and to develop feasible solutions.

We recommend increasing the research budget in public health and biomedical sciences across all national funding agencies. It is critical for India to augment the research budget and capacity for health sciences research and innovation to inform health policy and to discover affordable, relevant treatments, products and solutions for universal health care coverage. State governments should be encouraged to allocate suitable funds for locally relevant research particularly in public health. Investments should be made in centres of excellence, Health Sciences Universities and independent research organisations.

4. The Path Forward

Our Report provides the vision and a blue-print that shows how it is indeed feasible for India to establish a UHC system within the next ten years. Follow-up work by experts is needed for spelling out the modalities of how various proposals may best be implemented. We are conscious that merely calling for additional finances, more health workers, better technology, and new policy and regulatory institutions cannot provide the full solution to the deficiencies in India's health care delivery system. It is imperative to pay attention to the social determinants of health by sufficiently investing in non-health related sectors that have a direct bearing on health outcomes. It is equally important to focus on the cross-cutting issues of gender and health that we have articulated upfront in the Report. A new political, ethical and management ethos is needed to guide both the public and private sectors in health. There has to be much greater political commitment to UHC, as well as an end to corruption, fraud and poor quality of service provisioning in both the public and private sectors.

The transformation of India's health system to become an effective platform for UHC is an evolutionary process that will span several years. The architecture of the existing health system has to be accommodated in some parts and altered in others, as we advance UHC from an aspirational goal to an operational reality. The design and delivery of the UHC system requires the active engagement of multiple stakeholders and calls for constructive contributions from diverse sectors. Central and state governments, civil society, private sector and health professional associations have to deliberate on the blueprint of the UHC system, debate on choices between different models, move from convergence to consensus and collectively commit to the effective implementation of the agreed action plan. While our report provides the basis for initiating a broad societal discussion on the desirability and directions of UHC for India, we are not being prescriptive in our recommendations. Given the diversity and dynamic heterogeneity of the country, we recognise that the real power to change lies with state governments. We therefore call upon our state governments who have the power, autonomy and flexibility to swiftly initiate, incorporate and implement the composite recommendations detailed in this report and begin the steps towards UHC through approaches that are innovative, effective and accountable in their scope and action.

We recognise the challenges posed by a multifaceted process that has to contend with the carryover effects of the past and complexities of the present even as it creates a mould for the future. However, the need to create an efficient and equitable health system is so urgent that the task cannot be deferred any longer. We must rise to this challenge and use the next decade to usher in UHC, which the Indian people deserve, desire and demand.

The Vision for Universal Health Coverage

Universal Health Coverage: An Overview

Universal Health Coverage (UHC) as it is conceptualised today, ensures promotive, preventive, diagnostic, curative and rehabilitative health services without financial hardship.[1,2] UHC is one mechanism of ensuring balanced development, where the economic growth of a nation is accompanied by an increase in the health and well being of all persons. The terms 'universal health coverage', 'universal health care', 'universal health access' and 'universal health protection' are sometimes used interchangeably, but also often used to distinctively demarcate the nature of services provided as well as the range of health determinants addressed under the rubric of universality. Since the World Health Assembly adopted the term 'Universal Health Coverage' in 2005, this report consequently uses that term, but defines it in a manner that encompasses a wider range of services and determinants while emphasising access and equity as the cardinal tenets of such a system.

Globally, the agenda of UHC is currently taking centre stage in health policy. Governments as well as civil society, in developed and developing countries, are engaged in active debates over how best to achieve it.[3] The concept of UHC, however, has a long history. Article 25.1 of the 1948 Universal Declaration of Human Rights states, "Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services."[4] In 1966, member states of the International Covenant on Economic, Social and Cultural Rights recognised "the right of everyone to the enjoyment of the highest attainable standard of physical and mental health."[5] The 1978 Alma-Ata declaration stands out as a landmark in the modern history of public health by promoting the vision of "health for all."[6]

State-led implementation of UHC dates back even further. With the 1883 Health Insurance Bill, Germany became the first country to make nationwide health insurance mandatory. The Bill laid the foundations for Germany's generous social health insurance scheme, which covers 88% of its population today.[7] Great Britain followed Germany in 1911 with the enactment of the National Insurance Act and the National Health Service (NHS) in 1948, which caters to all legal residents of Great Britain with supplementation from private insurance providers.[8] Today, most high income countries (HICs) have some system of UHC, with the glaring exception of the United States, where over 45 million people have no health coverage.[8,9]

Public demand, economic feasibility and political leadership have combined to encourage many low and middle-income countries (LMICs) to adopt UHC as a realistic goal. "Other countries like Kenya are in the process of introducing nation-wide social insurance schemes that widen population access to comprehensive health care services,[9] joining the ranks of Brazil,[10] Thailand, Sri Lanka, and Taiwan,[11] countries with two to three decades of experience on the path to UHC.[9] Clearly India is not alone in its move towards UHC, and has much to learn from the experiences of other nations (refer to Annexure I, which profiles 16 international cases of UHC).

1. Current Scenario: A Global Movement towards UHC

According to the International Labour Organisation, nearly 50 countries have attained universal or near-universal coverage.[12] Conspicuous gaps still exist, however, particularly in Asia, Africa and the Middle East.[12]

Escalating health care costs, inadequate public spending, and weak health care delivery systems in low and middle income countries have been barriers to UHC in the past. Today there is greater international recognition of the need for health systems to adopt sustainable financing mechanisms that permit population-wide coverage and the efficient delivery of a wide range of health services.[13] The 2005 World Health Assembly (WHA) urged member states to pursue UHC, ensuring equitable distribution of quality health care infrastructure and human resources, to protect individuals seeking care against catastrophic health-care expenditure and possible impoverishment.[14] It also highlighted the importance of taking advantage, where appropriate, of opportunities that exist for collaboration between public and private providers and health-financing organizations, under strong overall government stewardship.

The 2010 World Health Report builds upon the 2005 WHA recommendations and aims at assisting countries in quickly moving towards Universal Health Coverage.[15] The report highlights three basic requirements of UHC: raising sufficient resources for health, reducing financial risks and barriers to care, and increasing efficient use of resources.[15] To generate adequate funds, the Report spurs high-income countries to "honour their commitments" to international aid and suggests that low-income countries "increase the efficiency of revenue collection, reprioritize government budgets, [and introduce] innovative financing" to increase domestically available funds.[15,16] To develop a system of financing that makes health care accessible to all, the Report makes three recommendations. First, the very poor "will need to be subsidized from pooled funds, generally government revenues." Second, contributions to the fund pool "need to be compulsory, otherwise the rich and healthy will opt out and there will be insufficient funding to cover the needs of the poor and sick." Third, "pools that protect the health needs of a small number of people are not viable [because]…a few episodes of expensive illness will wipe them out."[15] Finally, to achieve efficiency, the Report recommends alternatives to fee-for-service financing, such as capitation at the primary-care level or case-based payments at the hospital level, and new approaches to purchasing services, such as strategic purchasing.

However governments ultimately go about funding and structuring UHC, the World Health Report assumes they have a fundamental responsibility to ensure that all citizens have equitable access to cost-effective and efficient health care. The Report's very existence signals the increased worldwide recognition of the importance of UHC, supported by growing political commitment which adds impetus to India's aspiration to attain UHC in the near future.

2. The Indian Perspective: Contextualising UHC

India has made considerable progress in public health since independence. Recent reforms and innovations under the National Rural Health Mission have resulted in many States reporting significant improvements in key health indicators like institutional deliveries out-patient cases, full immunization, availability of diagnostic and family welfare services and disease control programmes, to name a few.[16] However, the country's health system continues to faces many challenges, with several planned health goals failing to keep pace with rapid economic growth.[17] Despite considerable declines in child malnutrition rates over the past few decades,[18] India continues to have the highest number of malnourished children in the world today.[19] In addition, while the maternal mortality rate has declined over the past 30 years from 460 to 212 per100,000 live births, it still remains high relative to the targets set by the 11th Five Year Plan.[20]

According to several analysts, the onus for the sluggish progress on key health indicators and outcomes lies, to a great extent, on the country's health system, which has been plagued with decades of inadequacy in financing, governance and management.[21,22] Although several forms of health financing exist in India, most of the country's health expenditure is supported by private spending, primarily Out of Pocket (OOP), with public funds constituting an insufficient amount. Despite several government initiatives in social protection, such as the Employees' State Insurance Scheme and the Central Government Health Scheme, only about one fourth of the population is covered by some form of health insurance.[12] Though several efforts, such as the National Rural Health Mission, the Janani Suraksha Yojana, and the Rashtriya Swasthya Bima Yojana, have been made in the past few years to provide equitable health care to Indians, these programs by themselves cannot accomplish UHC.[23] The lack of an efficient and accountable public health sector has led to the burgeoning of a highly variable private sector which, while providing a major share of the country's health services, has also driven up catastrophic health expenditure and pushed millions of Indians into poverty. India's unregulated private sector and deficient public sector, which suffers from management shortfalls, human resource shortages, and poor accountability, has resulted in a health system that is unable, at present, to cater to the needs of the entire population.[21,22]

This situation, however, is not uniform across India: some states, such as Tamil Nadu and Kerala, have model health systems, while others, in particular the "Empowered Action Group" states (EAG) of Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha, Rajasthan, Uttarakhand and Uttar Pradesh, are not performing relatively as well.[22] The differences are stark. For instance, for a girl born in rural Madhya Pradesh, the risk of dying before age 1 is around 6 times higher than that for a girl born in rural Tamil Nadu,[22] There is an 18 year difference in life expectancy between Madhya Pradesh (56 years) and Kerala (74 years).[24] These disparities suggest that active steps towards addressing the social determinants of health can begin to reverse the chronic underdevelopment that characterises the poor health performance of EAG states.

Universal Health Coverage in India must have a flexible architecture to deal with the country's regional diversity and the differences in health care needs of rural and urban areas. There are considerable gaps between rural and urban areas with respect to disease morbidity and mortality. While the combined problems of undernutrition and inappropriate nutrition account for almost equal population proportions in rural (48%) as well as urban areas (49%), undernutrition is a dominant problem in the former while overweight-obesity accounts for half the burden of 'malnutrition' in the latter.[25] Urban areas have 4 times more health workers per 10,000 population than rural areas, and 42% of health workers identifying themselves as 'allopathic doctors' in rural areas have no medical training relative to 15% in urban areas.[26]

Compounding these disparities is an urban bias in health financing. For example, almost 30% of public health expenditure (both from the centre and states) is allocated to urban allopathic services while rural centres receive less than 12%.[24] Any UHC system in India must be able to deal with the different conditions and contexts of rural and urban areas respectively.

3. Definition

The High Level Expert Group on Universal Health Coverage in India, after great deliberation, has identified the following as a working definition of UHC:

Ensuring equitable access for all Indian citizens, resident in any part of the country, regardless of income level, social status, gender, caste or religion, **to affordable, accountable, appropriate health services of assured quality** (promotive, preventive, curative and rehabilitative) **as well as public health services addressing the wider determinants of health** delivered to individuals and populations, with **the government being the guarantor and enabler,** although not necessarily the only provider, of health and related services.

4. Principles

While discussing the principles of adopting and achieving UHC, it is imperative to consider the right to health as the key underlying theme. Right to health will enable health professionals to devise equitable policies and programmes that strengthen systems and place UHC high on national and international public policy agendas. In General Comment 14, the UN Committee on Economic, Social and Cultural Rights interprets the right to the highest attainable standard of health as encompassing an obligation by governments to provide medical care, access to safe drinking water, adequate sanitation, education, health related information, and other underlying determinants of health.[27] It includes the right to be free from discrimination and involuntary medical treatment, and has special concern for disadvantaged populations, like those living in poverty. Thus, it builds a strong foundation for UHC.

Taking a rights based approach to UHC would require India to ensure recognition of the right to health[28] in national law, set standards, establish institutional arrangements for the active and informed participation of stakeholders in policy making and implementation, ensure transparency, equity, equality, non discrimination and respect for cultural differences.[2]

Following from the above, Universal Health Coverage in India should be based on the following core principles:

i) Universality

The system for UHC must be genuinely universal in its scope, covering all socio-economic classes and sections of the Indian population including the marginalised and hard-to-reach. Given that much of the population, including the middle class, currently lacks access to quality affordable health care, universality is an urgent social necessity. Achieving universality will entail cross-subsidisation, social solidarity, and effective public voice for all individuals seeking healthcare. The ambit of universal health coverage will include not only the poor, but also includes those that relatively better off, so that they have an interest in building and benefiting from an efficient and equitable health system. Universality also implies that no one, including marginalised, hard-to-reach, mobile or traditionally discriminated groups would be excluded, while acknowledging that the relationship between health, income and social class not a threshold relationship but a continuous one that requires social protection across the board.

ii) Equity

The envisaged UHC system must have the following dimensions of equity:

Equity in access to services and benefits: The same set of health services, of comparable quality should be made available to all persons with similar health needs, irrespective of socio-economic status, ability to pay, social or personal background, on the basis of the principle of 'horizontal equity' (equal resources for equal needs). There are marked disparities in exposure and vulnerability to diseases and access to health services, with the poorest and most disadvantaged being most affected. The latter include urban and rural poor, women, children, and the traditionally marginalised and excluded like Adivasis (Scheduled Tribes, ST), Dalits (Scheduled Castes, SC) as well as ethnic and religious minorities. UHC will reduce such stratification by increasing reach, removing barriers, and including supportive services. Urban-rural and geographic inequities need to be overcome to the maximum extent possible, first by ensuring more equitable spread of health care facilities and services, and second, by offering effective and timely transport services, especially for remote and underserved areas.

Equity ensured by special measures to ensure coverage of sections with special needs: In any UHC system, basic provisions must be supplemented with special provisions for sections of the population with additional health demands. For example, Adivasi populations will have unique health care needs and specific health-seeking contexts, which must be accommodated in a UHC framework. Additional

programmes or measures will be needed to ensure 'vertical equity' (more resources for additional needs).

iii) Empowerment

Health is often influenced by social circumstances, individual behaviours and protection offered by the state. The democratisation of healthcare through UHC should enable individuals, groups and communities to improved access to healthcare services and empower them to make better health choices. Empowerment could take various forms and can be at multiple levels e.g., behaviour change to avoid risk, training of community health workers, community monitoring of health services, and demand generation for attention to local health concerns.

iv) Comprehensiveness of care

A UHC scheme should offer comprehensive promotive, preventive, curative and rehabilitative care at primary, secondary and tertiary levels that covers the broadest range of health conditions possible. Health care providers must be competent, and infrastructure, equipment, essential medicines, laboratory investigations, medical supplies and patient transport must be sufficiently and equitably available. Even though some types of tertiary treatment may not be included in the initial scheme, attempts will need to be made in the medium term to include the maximum range of medically necessary services.

v) Non-exclusion and non-discrimination

Universality implies that no person should be excluded from services or benefits on grounds of current or pre-existing illnesses and health conditions (e.g. congenital disorders, HIV/AIDS), or because they require a special category of health service (e.g. maternity care, care for occupational illness or injury, mental health care). No person may be excluded or discriminated against in the provision of services or benefits under the scheme on grounds of occupation, age, class, caste, gender, religion, language, region, sexual orientation or other social or personal background.

vi) Financial Protection

Equity in financing: A large proportion of the Indian population contributes substantially to the economy but receives incomes that are at or near, subsistence levels. This fact must be recognized while deciding on contributions by various social sections. The scheme must be designed in a manner that no person should be excluded from services or benefits of the scheme due to his/her financial status/ability to pay. In other words, the scheme should be designed, funded and operated in a manner such that no person who needs essential or emergency health care is denied that service because of inability to make a personal payment.

Another principle of financial protection is cashless service: there should be no payment at the point of provision for any services under the scheme.

vii) Quality and rationality of care

Quality and rationality of care under the scheme will have to be ensured through regulation of all providers and their expected adherence to specified infrastructure, human power and process standards. Health services provided under the scheme should be delivered according to standard treatment guidelines, and be periodically audited. Along with quality of medical care, non-medical aspects of care and expectations of users should also be addressed (e.g. staff behaviour, hospital cleanliness, etc.).

viii) Protection of patients' rights, appropriate care, patient choice

All services made available under UHC will have to be delivered in accordance with universally accepted standards for patient and user rights, including the right to information, the right to emergency medical care, the right to confidentiality and privacy, the right to informed consent, the right to second opinion, the right to choose between treatment options, including right to refuse treatment.

ix) Portability and continuity of care

The benefits and continuity of coverage under UHC should be available to any person or family moving across the country. Migrant workers, those changing place of residence across states, districts or cities, beneficiaries of any health insurance programme, and those who change employers or become unemployed should be assured continuity of care. Seamless care during referral from one agency to another, including patient transport, will have to be ensured.

x) Pivotal role of public financing, substantial contribution of tax based funds, single payer system

Global experience demonstrates that UHC has not been possible to achieve through individual, voluntary, or small group insurance. UHC has generally been achieved on the basis of tax-based public financing, combined with some components of social health insurance in certain countries. In the Indian context, a substantial increase in tax-based public financing is required to finance UHC, given the relatively small proportion of the population employed in the formal sector.

xi) Consolidated and strengthened public health provisioning as a key component of UHC

Public services for the provision of health care should be consolidated and significantly expanded, along with regulation and involvement of private providers. Under-utilised public facilities such as Employees' State Insurance Scheme (ESIS) hospitals, or currently segregated facilities associated with public agencies like the Railways could be appropriately linked with the UHC system, expanding the range of public providers available under UHC. Provision of promotive and preventive services will need to occur through an expansion of outreach of primary health care in rural areas and the introduction of primary health services especially in urban areas. With increased financial resources and a significant expansion of public provision, audit mechanisms are required to ensure transparency and quality of care according to defined standards.

xii) Accountability, transparency and participation

The UHC-system including its authorities and various levels of providers, must be accountable to individual users, the general public, and community representatives. General information concerning the functioning of the system should be available in the public domain, and all specific information relating to public and non-public providers should be accessible under RTI provisions. Appropriate complaint and grievance redressal mechanisms should be operationalised to enable any person aggrieved under the system to seek redressal.

UHC should empower both public authorities and multi-stakeholder civilian bodies, allowing for participatory regulation. Participatory bodies (analogous to various levels of Health Councils in Brazil) should include representatives of relevant stakeholders including public health officials, public and non- public health care providers, elected representatives, civil society organisations, trade unions, consumer and health rights groups, and organisations / associations of health care employees. This regulation should be combined with participatory or community based monitoring and periodic reviews of the system to ensure its accountability, effectiveness and responsiveness.

xiii) Supplementary Operational Tenets

In conjunction with the core principles outlined above, the following operational tenets ought to guide the development of a UHC system for India:

- A continuously evolving framework that makes use of structured growth trajectories to respond to increasing utilization of health services and gradually incorporates additional services that may not have been feasible at the initial stage of a UHC system.

- The sharing of finances between national, state and local governments with appropriate degree of flexibility for state specific models.

5. Envisioning the Future: Seeking Stability and Health Protection in the Midst of Multiple Transitions

UHC has to be grounded not only in the above principles, but also in the truths of today and the trajectories of tomorrow. The India of today is characterised by dynamism, change and flux in every domain, with transitions underway that have ramifications at the individual, community, regional, and national levels.

Demographic transition is at the core of this change, and refers to a shift from high to low mortality and fertility rates. This process is characterised by changes in population growth rates and age structure.[29] While most of the developed world is experiencing declining population growth rates and an ageing population base, most developing countries are still grappling with high fertility rates. India is in a period of transition as birth and death rates decrease and the average age of the population consistently increases.[29] In the near future, India will continue to have a large reproductively active population and the current boom, despite decreasing birth rates, will likely last for several more decades because of the sheer size of the population.[30]

At the same time, India's ageing population is also expected to increase substantially in absolute terms.[30] Thus, while striving to promote and protect the health of a young, productive population, the health system must also care for a substantial ageing population as well.

India's demographic transition is accompanied by epidemiological and nutritional transitions as well. As mortality declines and life expectancy increases, diseases related to an extended lifespan also increase in prevalence, resulting in a shift in the county from being affected predominantly by infectious diseases and under-nutrition to chronic and degenerative diseases.[31] This shift is, in part, the result of the 'nutrition transition'[32] brought about by the forces of globalisation, urbanisation, economic growth and technological change. It is characterised by increased processed food consumption and decreased physical activity.[32] In addition to unhealthy eating and sedentary habits, other life-style related determinants of chronic disease including tobacco consumption, alcohol abuse and stressful living remain a concern, while increasing automobile use and the lack of road safety contribute to an increase in the number of injuries and untimely deaths. While India is witnessing an increase in chronic disease related morbidity and mortality, it still hasn't overcome the health challenges posed by infectious disease and under-nutrition. India is currently engaged in battling this dual burden of disease simultaneously, which developed countries have had to deal with only sequentially.

Transitions are being seen on several other fronts as well. Over the past few decades, India has experienced a swiftly accelerating technology revolution with tremendous implications for healthcare in the future. On the one hand, the accompanying lifestyle changes have the potential to increase the risk of chronic disease[32] and hasten the epidemiological transition. On the other hand, technological innovation may introduce new health services and improved surveillance systems. Managerial transitions are evident both in the growing number of public private partnerships (PPPs) and in the induction of managerial competencies in national health programmes such as the National Rural Health Mission (NRHM). Normative and regulatory frameworks for PPPs are still evolving and the planning process for UHC offers a good opportunity to define their scope and governance. India is also in political transition. From decades of single-party dominance, the country has now shifted to an era of coalition governments, during which the need for consensus on strategic health initiatives is paramount. Moreover, revitalised village Panchayats and increased participation of women in healthcare access and delivery have been critical in reshaping India's health priorities and policy plans. Given the federal nature of India's polity and the constitutional division of responsibilities, consensus building is not

only needed within coalition governments but also between Central and State governments, which now represent a wide spectrum of political viewpoints.

These transitions are bound to change India's future healthcare needs, which ought to influence the way healthcare is delivered in India. In conceptualising a UHC system, a focus on India's future will be crucial to ensure the implemented system is able to exist in, make the best of and respond to the country's changing demographic, health, political and economic scenario.

6. Health Beyond Health Care: Addressing the Broader Determinants of Health

The call for universal health coverage has always been part of a broader movement for health equity and social change.[33-36] The 2008 Report of the Commission on Social Determinants of Health (CSDH),[37] marks a watershed in the global movement for health equity. The Commission's Report defines Social Determinants of Health (SDH) as "the conditions in which people are born, grow, live, work and age, including the health system" and states boldly that we should aim to close unjust and avoidable health inequities in a generation, or between 30 to 40 years. In naming the health system as a SDH, the report encourages member states to ensure that health care is available, accessible (without barriers related to discrimination, reach, affordability, and information), acceptable, and high quality. The Report advocates a right to health framework; identifies the health system itself as one of the social determinants of health and proposes a continuum of care across four pillars: health, nutrition, education and environment.

Social Determinants of Health (SDH) form the starting point of reform for universal health coverage in India. SDH are recognized in the very definition of universal health coverage, and are directly declared in the guarantee of the Indian Constitution of the right to health.[38] An expressed commitment has been made to ensure that income level, social status, gender, caste, religion, urban/rural orgeographic residency and social or personal background do not affect access to range and quality of health services for the entire population. Recognizing that the wide health inequities presently evident in India represent an erosion of the promise of social justice enshrined in our constitution, the framework of UHC should reflect an implicit appreciation of the social determinants of health. Through UHC, our societal commitment to social justice must be invoked to respect, protect and fulfil the right to health of the Indian people.

The UHC approach should draw upon the social determinants perspective, first recognized in the Bhore report (1946) [39] at the cusp of Indian independence, and several reports there after.[40,41] Issues consistently highlighted in all three of the above reports include nutrition, access to safe drinking water, education, poverty, and marginalisation. Other key determinants that need urgent and sustained attention are infrastructure, sanitation, transport, communication, and the education and empowerment of women. Given the diversity of health determinants, cross-sectoral cooperation will be necessary to achieve India's considerable health goals. Policy formulation and programme implementation must go beyond the health sector to include the social and political sectors (ranging from education to marginalization), the economic sector (related to poverty, as well as trade, food and agriculture), and various sectors related to occupation and the environment (related to water, sanitation, as well as working conditions).

7. Gender as a Determinant of Health

While gender figures prominently among the social determinants of health, it requires particular emphasis and attention because gender discrimination and insensitivity, if left unaddressed, will threaten the very framework and guiding principles of UHC. Oppressively hierarchical and patriarchal family norms allow women very little decision-making power even in personal matters related to health, and limited access to education, jobs, and social mobility make women especially susceptible to illness. At the same time, general societal neglect, which often starts with

the family and continues to the health care provider, reduces access to health services for mothers, girls, as well as other vulnerable genders. Gender equity, particularly regarding maternal and child health, has not been able to capture the attention of policy makers in India. Child marriage and inadequate access to and control over use of family planning, contraceptives, and abortion services are directly attributable to the low status of women and girls in society. Indian women and girls continue to be unnecessarily affected by gender-based violence and inequities in health-care access and use.[42] Unless UHC makes a conscious effort to remove social barriers to health care across genders, throughout the life-cycle, and creates suitable mechanisms to increase their access to the full range of health services, the goal of universal coverage will not be attained.

8. Positive Externalities of Health and Universal Health Coverage

Improvements in the health of the Indian population will likely yield a range of social and economic benefits, including increased productivity, improved performance in competitive sports, greater social solidarity and inter-sectoral convergence, and gains in human security overall. By protecting health, Universal Health Coverage can promote such positive externalities.

By strengthening primary health care in rural and urban areas, UHC can over time reduce or delay the occurrence of many diseases and also decrease the referral load of secondary and tertiary care for complications that arise from delayed detection or absence of early care. Thus the economic benefits of UHC, which would establish a robust system of primary health care in both rural and urban settings, are likely to extend to the reduction of expensive tertiary care costs, which are likely to spiral higher otherwise. A UHC policy which prioritizes primary health care would also require an expansion of the health workforce, especially at the levels of frontline and mid-level health workers, sanitary workers, transportation workers, community health workers, nurses, clinical assistants, laboratory technicians and paramedics. This greater demand for human resources will create employment for the many young people who will seek jobs in increasing numbers in the upcoming years of India's demographic transition. By enrolling and employing more women in many of these positions, UHC can also facilitate gender empowerment.

9. Charting India's Path to Universal Health Coverage - Areas of Convergence and Consensus

iven the complex disease burdens, economic challenges and geographic diversity of the country, it must be recognized that there is no single path to achieve UHC in India. While ensuring our population equitable access to health services and protecting the poor and vulnerable against catastrophic health care costs, our nation needs to determine and maintain an appropriate balance between extending coverage to more people, offering more services, and covering more of the cost of care.

In charting her course to universal health coverage, India will encounter technical, managerial and political barriers. Even as the country establishes a vision for UHC and develops the mechanisms for financing and effectively implementing it, the initiative will require adequate and timely political momentum and relevant buy-in from political actors at both the state and central levels. It is important for India to push for UHC at a time when policy makers are receptive to healthcare as a responsibility of the state.[43] Several initiatives, ranging from major national programmes to state pilot projects, show an increasing commitment towards a strengthened public health sector. Noteworthy among these is the National Rural Health Mission (NRHM), which was launched in 2005 to strengthen the public health-care system. This scheme brought with it an influx of government funds aimed at increasing the outlays for public health from 0.9% of gross domestic product in 2005 to 2-3% by 2012.

The NRHM aims to revitalise the public sector in health by increasing funding, integrating vertical health and family welfare programmes, employing female Accredited Social Health Activists (ASHAs) in every village, decentralising health planning, involving the community in health services, strengthening rural hospitals, providing untied funds to health facilities, and mainstreaming traditional systems of medicine into the public health system. The NRHM covers the entire country, with special focus on 18 states that have relatively poorer infrastructure and health indicators. The NRHM and the recently proposed National Urban Health Mission (NUHM) are crucial steps to ensuring universal access and health equity in the country. Other noteworthy efforts that also speak to ensuring equity and affordability of health coverage include the Jan Aushadhi programme, a public-private partnership that aims to set up pharmacies in every district to sell affordable, high-quality generic drugs and surgical products, and the Janani Suraksha Yojana, which was launched in 2005 and uses financial incentives to encourage women to deliver in government health facilities or accredited private facilities. A conditional cash transfer scheme, the Janani Suraksha Yojana had an estimated 9.5 million female beneficiaries in 2010. In 2007 the Ministry of Labour and Employment established the Rashtriya Swasthya Bima Yojna (RSBY) scheme, which provides insurance coverage for in-patient treatment to families below the poverty line.

10. Conclusion

Constitutionally, the Indian state is committed to improving the state of public health of the population (Directive principles section 47), and several Supreme Court judgements in India have established the Right to Health as an extension of the fundamental Right to Life. The Government of India is signatory to various international conventions that obligate it to ensure the Right to Health.[a]

Within this broader context, the report of the WHO Commission on Social Determinants of Health (2008) has specifically emphasised the need for developing systems for universal access to healthcare as the core direction for health system change.[b]

Further, considering the current lack of access to quality, rational and affordable health care for the majority of the Indian population - the rural and urban poor and unorganised sector workers, as well as organised sector workers and sections of middle class - organising and operationalising Universal Health Coverage in India is an urgent necessity. Such a system would offer particular advantages to the poor by improving their access to health care, protecting them from financial impoverishment, and ensuring that the rich pay a higher proportion of their incomes to support health care provision, while in turn benefitting from a health system which has assured outreach and predictable quality.

[a] The Constitution of India places obligations on the Government to ensure protection and fulfillment of right to health for all, without any discrimination, as a Fundamental Right under Articles 14, 15 and 21 (rights to life, equality and non- discrimination), and also urges the State, under the Directive Principles of State Policy, to eliminate inequalities in status, facilities and opportunities (Article 38); to strive to provide to everyone certain vital public health conditions such as health of workers, men, women and children (Article 39); right to work, education and public assistance in certain cases (Article 41); just and humane conditions of work and maternity relief (Article 42); raised level of nutrition and the standard of living and improvement of public health (Article 47); and protect and improve environment (Article 48A).The Union of India has signed various international treaties, agreements and declarations specifically undertaking to provide right to health including but not limited to: Universal Declaration of Human Rights (UDHR): Article 25 (1); International Covenant on Economic, Social and Cultural Rights (ICESCR): Article 12; Convention on the Rights of the Child (CRC): Article 24; Convention on the Elimination of All Forms of Discrimination against Women (CEDAW): Article 12; UN Convention on Rights of persons with dis-abilities (UNCRPD): Article 25; Declaration of Alma Ata (1978); Principles for the Protection of Persons with Mental Illness and the Improvement of Mental Health Care (1991); Declaration on the Elimination of Violence against Women (1993), Programme for Action of the International Conference on Population and Development, Cairo (1994); Platform of Action for the Fourth World Women's Conference, Beijing (1995) and the Millennium Development Goals (2000); Declaration of Commitment on HIV/AIDS, 'Global Crisis-Global Action' (2001), WTO Doha Declaration on TRIPS Agreement & Public Health (2001), International Health Regulations, 58th World Health Assembly (2005); and several other declarations and conventions on health. It is necessary to give effect to these international treaties and declarations under Article 253 of the Constitution of India. *(Excerpted from Draft National Health Bill, Ministry of Health and Family Welfare, 2009)*

Parallel bodies of cross-national epidemiological and economic evidence demonstrate that health care systems with universal coverage address economic inequality by re-distributing resources from the rich to the poor. Such systems tend to generate funding from public sources, charge no or very low fees for public services, offer a comprehensive set of services (with a clear role for primary level care in helping patients navigate the use of referral services), and regulate the private sector (including commercial providers and insurers and, in low-income contexts, informal providers) to protect equity gains. Additional strategies are also likely to be necessary to fully address the particular barriers to accessing care that disadvantaged and marginalized groups face. The effective functioning of such a UHC system would be an important step towards fulfilling the peoples' right to health in India. This fundamental right that can be eventually achieved only by strengthening health services and addressing the social determinants of health, including food security and nutrition, water supply, sanitation and living conditions.

[b] The Commission recommends that:

9.1 National governments, with civil society and donors, build health-care services on the principle of universal coverage of quality services, focusing on Primary Health Care

9.2 National governments ensure public sector leadership in health-care systems financing, focusing on tax-/insurance-based funding, ensuring universal coverage of health care regardless of ability to pay, and minimizing out of-pocket health spending

9.3 National governments and donors increase investment in medical and health personnel, balancing health-worker density in rural and urban areas

9.4 International agencies, donors and national governments address the health human resources brain-drain, focusing on investment in increased health human resources and training, and bilateral agreements to regulate gains and losses.[36]

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Annexure to Chapter 1

Universal Health Care Systems Worldwide:

16 International Case Studies

Public Health Foundation of India

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Introduction

The India Vision document compiled by the Planning Commission in 2002 envisions that "by 2020, the people of India will be more numerous, better educated, healthier and more prosperous than at any time in our long history."[1] Although the country has made measurable progress in public health since independence, the achievements so far have been too few and too slow when compared to the country's planned goals and pace of economic growth. India needs an actionable plan to implement a health system with universal health coverage (UHC) in order to realize its health goals. In its 2003 report, the Institute of Medicine described a public health system as "a complex network of individuals and organizations that…work together towards a health goal." The health systems of other Asian and European countries with universal or near-universal health coverage provide useful models as India works to achieve its own system of UHC.

Many developing nations have experienced sustained economic growth of late, which made UHC financially feasible for the first time. Spurred by economic success, the citizenry of many low- and middle- income countries increasingly made strong demands for an improved health system. Governments, in an effort to meet those demands, made political commitments to achieving universal coverage and have, in some cases, formalized UHC legislation in their respective constitutions. The experiences of Brazil, Taiwan and Thailand highlight the importance of political leadership and of making the most of economic and political windows of opportunity. India today finds itself in a promising economic and political position to achieve UHC. The government has committed itself to improving India's public health care system and is refreshingly open to the mounting health advocacy campaigns of various civil society organizations. In addition to social pressure for UHC, India's rapid economic growth over the past 20 years makes financing UHC a real possibility.

In charting their respective paths towards universal health, many developing countries placed special emphasis on reaching the rural and urban poor as part of their larger effort to ensure that coverage is truly universal for all population sectors. Brazil's Family Health Programme is a central part of its Unified Health System and sends teams of community health workers into the country's most isolated regions to dispense health care to the poor. Today more than 97 million Brazilians receive care through the Family Health Programme. Another helpful example is Sri Lanka, which managed to achieve universal health coverage when its annual per capita GDP was still below US$500—less than half of India's per capita GDP today. Sri Lanka's method prioritized reaching the rural poor by removing financial and social barriers to care as well as improving health infrastructure in rural communities. In fact, the Sri Lankan government aimed to ensure that all citizens had a health clinic within two kilometers of their place of residence. Today roughly 96% of Sri Lankans are born in hospitals and immunization rates are close to 100%. Whereas many developing and developed countries alike face health capacity shortages in rural areas, Sri Lanka's example serves to show that adequate health infrastructure and access throughout a country are important precursors to achieving truly universal care. The argument that Sri Lanka is a much smaller country than India and, therefore does not brook comparison will not hold if we develop models of decentralized district level planning and delivery of health services.

Though the rural poor can be a difficult group to enroll, the experiences of Kenya and the Philippines provide important insight about the additional

[1] Gupta, S.P. 2004. India Vision 2020. Report of the Committee on India 2020. Planning Commission, Government of India, Delhi.

difficulties of incorporating a large informal sector into a UHC scheme. In a country such as India, where individuals working in the informal sector make up a significant portion of the population, the government will need to develop an effective strategy for collecting adequate contributions from this group. Even if India adopts a tax-based rather than a premium-based health care system, accounting for a large informal sector is crucial for any government-run universal health care scheme to be sustainable in the long term.

These 16 international country case studies additionally show that a well-functioning UHC system must align the economic incentives of health care providers with the goals of the system. Both China and Taiwan demonstrate how misaligned economic incentives can encourage behaviors that threaten a high quality of care. In China, government block grants often do not fully cover the actual operating costs of local health institutions. Because those institutions are encouraged to make up the marginal difference, physician-induced demand for unnecessary services and other profit-seeking behaviors have became huge concerns. In Taiwan and the Philippines, fee-for-service mechanisms also encourage supplier-induced demand for services that may not be medically needed. Because Taiwan permits hospitals to sell drugs for prices beyond their acquisition cost, the profitability of prescribing drugs gives providers yet another economic incentive to over-medicate patients. It is crucial for any UHC scheme to incorporate economic incentives and provider payment mechanisms that encourage principles of quality, efficiency, cost-effectiveness and safety.

Within the developed a world a wide variety of health care systems are currently in place, which, though largely successful, reveal that developed countries are also struggling to achieve universal access to health care. Although health indicators in Canada, Norway, Sweden, the UK, and Germany are generally very good, these countries face challenges with their government-run health insurance programs going forward. With high rates of coverage, many health systems in developed countries are experiencing rising costs as their respective populations age. To deal with this increasing health burden on government budgets, countries like Canada and Sweden have introduced health care rationing and waiting lists for certain procedures and treatments. As patient satisfaction with the government health system drops, citizens increasingly elect to obtain private health insurance for expensive but timely care or, in the case of Norway, look abroad for faster treatment. In the UK where waiting times are long and a shortage of providers has introduced new concerns about care quality, disparities in health outcomes are wider today than they were during the Great Depression. To protect against the sky-rocketing demand and overuse of subsidized health services that many developed countries are currently experiencing, India ought to emphasize preventive and primary care services in its UHC plan.

What follows is a series of profiles of health systems in a range of different countries around the world. Lists of potential lessons and challenges for these systems provide important insight as India considers its own plan to achieve UHC. The countries reflected here have been arranged according to the World Bank classification of countries by income. (low income economies, lower-middle income economies, upper-middle income economies, and high-income economies).

Bangladesh

The government of Bangladesh aspires to achieve "health for all" through its Revitalized Primary Health Care initiative but it does not have a full-fledged UHC system as yet.[2] Currently health care services are available from both the public and private sectors, although the public sector mainly handles in-patient and preventive care while the private sector is largely used for out-patient care. In answer to the growing demands of its population, the government is using pilot projects to explore the possibility of a comprehensive health insurance system. While public coverage is high for a few essential public health interventions, particularly immunizations, financial protection is very limited for secondary and tertiary care.[3] Today less than 1% of the population is covered by formal insurance, and high out-of-pocket costs push countless citizens into poverty annually.[4] In part due to 90% vaccine coverage since 1995,[5] however, Bangladesh has seen steadily improving health indicators over the last few decades, including a marked increase in life expectancy at birth and a decline in infant, maternal, and child mortality rates.[6] These averages hide the inequalities that nevertheless persist between different social groups and geographical regions.

Potential Lessons[7]

- The government appears increasingly committed to improving health outcomes.
- Life expectancy has improved from 40 years in 1960 to 64 years in 2005.
- Vastly improved immunization coverage, from less than 10% in the 1980s to 90% since 1995, has led to substantial gains in child health and a decline in total fertility rate from 6.3 in the 1970s to 2.7 in 2007.
- Bangladesh has burgeoning private for-profit and not-for-profit health sectors.

Challenges[8]

- A lack of skilled birth attendants has prevented any improvement in the percentage of underweight children in Bangladesh, which has stood at 45% since the mid-1990s.
- Bangladesh faces severe drug, facility, and physician shortages. There is a current shortfall of 60,000 physicians, which will only increase as the population grows. Shortages are particularly acute in rural areas.
- Because of resource shortages and poor care quality, only 25% of the population uses the publicly funded health care system.
- Disparities in access to health services, particularly antenatal care; treatment for acute respiratory infection, malnutrition, and anemia during pregnancy; and complete vaccinations for children are widening.

[2] World Health Organization, Health System in Bangladesh, 2008, http://www.whoban.org/health_system_bangladesh.html (accessed June 14, 2011).
[3] Ibid.
[4] Coordinator, Timothy G. Evans. Centre of Excellence Timothy G. Evans, "Centre of Excellence on Universal Health Coverage," James P. Grant School of Public Health, BRAC University, http://www.bracuniversity.net/I&S/sph/centres_initiatives/uhc.htm (accessed June 14, 2011).
[5] World Health Organization.
[6] Ibid.
[7] Anwar Islam, Bangladesh Health System in Transition: Selected Articles, Monograph Series (Dhaka, Bangladesh: James P. Grant School of Public Health, 2008).
[8] Ibid.

Kenya

Kenya is currently in the process of introducing a nation-wide social health insurance scheme that aims to achieve universal public health coverage after a transition period. Since 1994, reform of Kenya's health sector has been guided by the Kenya Health Policy Framework Paper (KHPFP), which envisions "quality health care that is acceptable, affordable and accessible to all," and the National Health Sector Strategic Plan (NHSSP).[9] The government has decentralized control of the public health sector as its strategy for implementation and management. Health care in Kenya is provided currently through both the public and private sectors, with the private sector contributing approximately 40% of health services. According to the 2001-2002 National Health Accounts, Kenya spends 5.1% of its GDP on health and only about US$6.2 per capita, which is far below the WHO recommended amount of US$34 per capita. The government contributes 30% of total health expenditure, households pay 51% in out-of-pocket costs, donors cover 16%, and the statutory National Hospital Insurance Fund (NHIF) and private sources contribute the rest.[10]

A new public health insurance scheme, the National Social Health Insurance Fund (NSHIF), was proposed in 2004 and will be financed through income-rated contributions with the government contributing on behalf of the poor. The government expects that enrolling formal sector employees will take roughly five years and the self-employed informal sector will take nearly ten. Contribution rates and the definition of "poor" have not yet been set, mostly because of the challenge of raising enough funds to cover the large population of objectively poor people. The government has said that contributions will be set high enough to allow a comprehensive benefit package in all public facilities and most private ones.[11] The NSHIF bill will cover in-patient and out-patient hospital care, including surgical, medical, and dental procedures; laboratory and diagnostic tests; drugs and medical equipment, physiotherapy; doctors' fees; and room and board.[12]

Potential Lessons[13]

- The NSHIF is expected to provide greater financial protection than Kenya's current system.
- The NSHIF will operate as a single risk pool to avoid fragmented, unequal risk pooling.
- Proposed provider payment mechanisms aim to incentivize high-quality care at low cost—a flat rate of remuneration per in-patient day and a flat fee per out-patient visit have both been suggested.
- A transition period for roughly a decade has been acknowledged as politically, economically and organizationally necessary before the program is fully implemented.

Challenges[14]

- Only 22% of the NHIF's money is used to pay for health coverage. 25% is lost to administrative costs and the remaining 53% is spent on arguably unnecessary investments, such as a lavish new headquarters. Earning the trust of the people it serves will be crucial for the new NSHIF; voluntary compliance rates will fall if contributors continue to sense their money is being siphoned away.[15]

[9] Richard G. Wamai, "The Kenya Health System--Analysis of the situation and enduring challenges," Japan Medical Association Journal, 2009: 134-140.

[10] Richard Muga, Paul Kizito, Michael Mbayah and Terry Gakuruh, "Overview of the Health System in Kenya," Demographic and Health Surveys, http://www.measuredhs.com/pubs/pdf/SPA8/02Chapter2.pdf (accessed June 16, 2011).

[11] Guy Carrin et al., "Health financing reform in Kenya--assessing the social health insurance proposal," South African Medical Journal, 2006: 130-135.

[12] William C. Hsiao, R. Paul Shaw, Andrew Fraker, and the World Bank. Social Health Insurance for Developing Nations. (Washington, D.C.: The World Bank, 2007), 43-59.

[13] Carrin, et al.

- After a coalition government was formed in 2008, the Ministry of Health was split into the Ministry of Public Health and the Ministry of Medical Services to allow for power sharing in the government coalition. Duplication of work and competition for resources, control, and influence will likely slow health system reforms and create management disagreements.
- Health facilities are unevenly distributed across Kenya's seven provinces and Nairobi.
- Cost remains a great barrier to health care. One survey showed that only 77.2% of Kenya's ill population actually sought health care in 2003.[16]
- Because poor people and informal sector workers make up a substantial percentage of Kenya's population, achieving a UHC system that is financially sustainable will be a difficult task. High contribution rates from the formal sector will likely be necessary to cross-subsidize the nonpaying informal sector and the poor.[17]

[14] Richard G. Wamai, "The Kenya Health System--Analysis of the situation and enduring challenges," *Japan Medical Association Journal,* 2009: 134-140.

[15] Hsaio, et al.

[16] Ministry of Health, "Kenya Household Health Expenditure and Utilization Survey," cited in Richard G. Wamai, "The Kenya Health System--Analysis of the situation and enduring challenges," *Japan Medical Association Journal,* 2009: 134-140.

[17] Hsiao, et al.

Indonesia

Indonesia has recently experienced several major health reforms, including the decentralization reform of 2001, and the National Social Security Law (SJSN) of 2004 that mandated social health insurance for the entire population.[18] Askeskin emerged as the mandatory public insurance system for the poor. Askeskin reimbursed providers in two ways: (i) a capitation payment provided to health centers based on the number of registered poor; and (ii) a fee-for-service payment through a state-owned insurer, called P.T. Askes, based on the number of third-class hospital beds used. In 2008, the Askeskin program expanded into Jamkesmas, a public insurance program for the poor run by the Ministry of Health. Many other district-based programs have tried to replicate the Jamkesmas design, but for other segments of the population. Today roughly 46% of the Indonesian population has health care coverage—up from 10% in 2004—either through Jamkesmas and other public programs for different sectors of the population, or through private schemes. Askes targets active civil servants and retired civil servants and veterans; Taspen targets military workers and police; Jamsostek targets the employees of private sector firms with ten or more employees; private insurance targets the private sector; and community-based health insurance targets students and the self-employed. Where beneficiaries obtain care and how providers are paid vary between schemes.[19]

Jamkesmas is financed entirely through general government revenues; there are no required contributions from beneficiaries. Jamkesmas covers a comprehensive package of care, including in-patient and out-patient care as well as maternal and preventive health services. Unlike Askeskin, Jamkesmas contracts with many private hospitals in addition to public providers. Though the government of Indonesia partially finances Jamkesmas, provincial and district governments are responsible for most of the program's operating decisions. As of January 2010, the Jamkesmas program is being implemented actively throughout the country as part of the Indonesian government's goal to achieve universal coverage by 2014.[20]

Potential Lessons

- The decentralization reform gives substantial funds and authority to local governments, many of which can reach urban and rural sectors more effectively than the central government.
- Government data suggests that the strategy to target the poor has reached 76 million poor and near-poor enrollees. The rates of service use between the most affluent and the poorest have nearly equalized.[21]
- Though Jamkesmas is intended specifically for the poor, it does not offer a substandard health insurance package. In fact, free access to many providers, both public and private, and a full package of benefits makes Jamkesmas the most attractive insurance scheme—more attractive even than Askes and Jamsostek.

Challenges[22]

- Contract mechanisms do not use reimbursement or payment policies strategically to drive improvements in quality or efficiency. In fact, Jamkesmas' current reimbursement system sets

[18] Indonesia Delegation, "Moving Toward Universal Health Coverage: Indonesia," *Joint Learning Workshop*, http://jlw.drupalgardens.com/sites/jlw.drupalgardens.com/files/Indonesia_case_study_2-24-10%20FINAL.pdf (accessed June 16, 2011).

[19] The Joint Learning Network for Universal Health Coverage, *Indonesia*, 2011, http://www.jointlearningnetwork.org/content/indonesia (accessed June 16, 2011).

[20] Ibid.

[21] Indonesia Delegation.

up harmful incentives—for example, a hospital receives full reimbursement for a referral, which discourages midwives from bringing patients with complications to the hospital because they lose income.

- Jamkesmas and other public programs could be useful tools for promoting certain care practices, but unfortunately payment mechanisms have not been used to drive forward public health priorities such as preventive medicine or long-term family planning methods.
- Concerns abound about the solvency of the Jamkesmas program because increasing utilization of services is going to increase the cost of health insurance.
- Though the central government provides some financing for public health programs, local governments are responsible for filling the gap between what it actually costs to insure their whole population and what the central government pays. This responsibility is particularly burdensome for the poorest states.
- Jamsostek and Askes beneficiaries pay high out-of-pocket costs if they select private care.

[22] Indonesia Delegation, "Moving Toward Universal Health Coverage: Indonesia," Joint Learning Workshop, http://jlw.drupalgardens.com/sites/jlw.drupalgardens.com/files/Indonesia_case_study_2-24-10%20FINAL.pdf (accessed June 16, 2011).

Philippines[23]

The Philippines initiated social health insurance nearly 35 years ago with the establishment of its Medicare program, which targeted workers in regular employment in both the public and private sectors. Though Medicare succeeded in enrolling a large portion of the country's employed population, it failed to reach many informal sector workers and the poor. As a result of these gaps, local health insurance schemes, operated by local governments and non-governmental organizations (NGOs), took hold in the 1980s and early 1990s, and a flourishing private health insurance market provided supplementary coverage to the middle class. In 1991, the ownership of rural health units was transferred to local chief executives as part of a decentralization process.

In 1995, the Philippine Health Corporation, or PhilHealth, was established to revitalize the push for universal health coverage. Since PhilHealth was created, some progress has been made in extending coverage to the informal sector and the poor. PhilHealth membership is broken down into four separate categories: the Employed Program, which is compulsory for all government and private sector employees, the Indigent Program, the Individual Program for those not eligible for the Employed or Indigent Programs, and the Nonpaying Program. Contributions for those in the Employed Program are income-based, although there is a salary cap beyond which contributions do not increase, and employers and employees share the cost of contributions equally. For the Indigent Program, local governments are responsible for identifying indigents, enrolling them in PhilHealth, and paying their premiums. Currently approximately 83% of the population is covered through PhilHealth.[24] In 2000 and 2005, the government introduced a series of reforms, which included the creation of local health delivery and planning units, an expanded government subsidy for the poor, and an expanded regulatory role for the Department of Health (DoH).

Today Filipinos receive care from a mix of public and private providers, who receive payment mostly on a fee-for-service basis. PhilHealth's benefit package is principally related to in-patient care, although this trend is slowly changing. The scope of benefits includes in-patient hospital care, some out-patient care, health education packages, emergency and transfer services, and other non-specific services that PhilHealth deems appropriate and cost-effective. Fifth and subsequent normal obstetrical deliveries, nonprescription drugs and devices, substance abuse treatment, cosmetic surgery, optometric services, and non cost-effective services are not included in the PhilHealth benefit package. Health expenditure in the Philippines makes up only 3.2% of GDP, an amount among the lowest levels in its region. In 2004, the government made up less than half of total health expenditure, and out-of-pocket payments accounted for 44.3%.

Potential Lessons

- PhilHealth introduced two new benefits in 2003: a maternity package for normal spontaneous delivery, and a directly observed treatment short-course (DOTS) package for tuberculosis. These two additions exemplify PhilHealth's gradual shift from only paying retrospectively for in-patient care towards increasingly investing in public health and preventive care to try to avoid expensive in-patient care altogether.

[23] William C. Hsiao, R. Paul Shaw, Andrew Fraker, and the World Bank. *Social Health Insurance for Developing Nations.* (Washington, D.C.: The World Bank, 2007), 81-104.

[24] The Joint Learning Network for Universal Health Coverage, *Philippines*, 2011, http://www.jointlearningnetwork.org/content/philippines (accessed June 20, 2011).

- To maintain financial stability, PhilHealth makes only low-risk investments and is required to keep two years of projected annual benefit payments on reserve. To contain costs, PhilHealth puts limits on levels of benefit payments.
- PhilHealth Regional Offices (PRO) can alter benefits packages to their local area, provided that the overall value to the patient does not change.

Challenges

- The move towards a public health function for PhilHealth has created an overlap with the duties of the Department of Health.
- The fee-for-service method for provider payment likely creates problems of supplier-induced demand.
- The Nonpaying Program, which targets those Filipinos who have reached the age of retirement and have paid at least 120 monthly premium contributions to PhilHealth, is a growing financial risk. Neither the government nor those enrolled in the program make any contributions on this high-risk group's behalf.
- Enrollment of the informal sector in the Individual Program has been particularly difficult, and the voluntary enrollment process for this group has led to problems with adverse selection. PhilHealth is currently experimenting with an initiative that would reward informal organizations if a minimum of 70% of their employees are enrolled.
- The Indigent Program was closely associated with President Gloria Macapagal Arroyo, who initially launched it in 2004, and has struggled to maintain funds ever since she came out of office. To deal with local governments who fail to make their full contributions to the program, PhilHealth has proposed deducting the contributions at source from internal revenue allotments to local governments. New legislation alternatively proposes earmarking 4% of recently increased value added tax receipts to make up the difference.
- Fraud, particularly in the form of claims for treatment that was never provided, poses a problem for the long-term sustainability of PhilHealth. The Office of the Actuary estimates that between 10 and 20 % of claims are fraudulent.

Sri Lanka[25]

By relying on tax-financed and government-operated health services, Sri Lanka achieved universal health coverage while its per capita GDP was still below US$500 annually.[26] In 2005, total expenditure on health in Sri Lanka accounted for 4.2 % of GDP and neared Rs. 100 billion (US$1 billion). Government spending accounts for 46% and private financing—mostly household out-of-pocket payments—covers the rest. All in-patient, out-patient, and community health services are free to all Sri Lankans, with very few exceptions. Today roughly 96% of all childbirths occur in hospitals, and the country has close to 100% immunization coverage.[27]

Sri Lanka realized universal coverage by ensuring that the rural poor had access to hospital services and by removing financial and social barriers to care. Sri Lanka's health system is public hospital-dominated, and the government budget has prioritized establishing rural hospitals since the 1950s. The government financed the construction of a high-density but low-cost network of rural facilities to make sure that almost all citizens live within one or two kilometers of a clinic. Sri Lanka's system successfully protects the poor from the catastrophic financial risk associated with illness—according to an EQUITAP study, only 0.3 % of households in Sri Lanka drop below the international poverty due to health expenditure.

In prioritizing access above all else, Sri Lanka's system encourages richer patients to choose private care, which opens up facilities for the poor and reduces the burden on the government. Because the wealthiest voluntarily opt out of the government health system, all public hospitals are able to accept all patients without restriction, and no referral system is enforced. Interestingly, however, most private doctors are typically government medical employees who are permitted to practice privately during their free time.

Potential Lessons

- Sri Lanka has strong health infrastructure in rural areas, which has encouraged usage of health services by the poor. Ever since 1951, when user charges were abolished, the poor have gradually become more familiar with health resources. Today utilization rates of government health facilities are actually higher among the poorest households than among the richest.[28]
- Though the system is hospital-based, an expensive definition of what constitutes a hospital means that the focus on hospitals does not come at the expense of primary care. Sri Lanka has found that well-run government hospitals are actually an efficient way of delivering primary care.
- Sri Lanka's rates of in-patient admission and out-patient visits are comparable to OECD countries.
- In offering a full range of services instead of a more restricted one, Sri Lanka's health system has prioritized risk protection over cost-effectiveness and has won public support and confidence.
- Sri Lanka's system is efficient in terms of high patient throughput—average bed-turnover rate is high and average length of stay is short—and high labor productivity.
- To contain costs, the health system bulk-purchases

[25] Ravi P. Rannan-Eliya and Lankani Sikurajapathy, Sri Lanka: "Good Practice" in Expanding Health Care Coverage, Research Studies Series 3 (Colombo: The Institute for Health Policy, 2009).

[26] United Nations Publications, "Chapter IV: Towards Universal Health Care Coverage in the Asia-Pacific Region," United Nations Economic and Social Commission for Asia and the Pacific, http://www.unescap.org/esid/hds/pubs/2449/2449_ch4.pdf (accessed June 17, 2011).

[27] Ibid.

[28] Ibid.

only generic drugs. A national formulary of drugs approves drugs for use in government hospitals.

Challenges

- The main challenge for the provision of health care services in Sri Lanka relates to the government's ability to continue to provide health services free at the point of delivery. The government cannot increase the budget without raising taxes substantially. Lack of funding prevents the adoption of certain modern medical methods, such as the management of chronic, non-communicable diseases.
- Through internal purchasing and investment decisions, the Ministry of Health implicitly rations care and deliberately restricts the availability of certain services it considers too expensive. For example, X-rays are not present in most lower-level facilities, and not every medicine is available in every hospital. Though patients can go to whatever hospital they choose and public transportation is cheap, most high-level facilities and services are available only in urban areas.
- As the rich increasingly turn to the private sector, this shift may undermine political support for a tax-financed government health system.

Brazil[29]

Two decades after Brazil's landmark health reform in 1988 established the country's Unified Health System, also known as Sistema Único de Saúde (SUS), more than 75% of Brazil's population relies exclusively on public health care for coverage. Covering some 97 million of Brazil's rural poor, the Family Health Programme is a central part of the Unified Health System, and employs teams of community health care workers to reach Brazil's especially isolated regions. The Unified Health System, which is financed through income and sales taxes, provides free primary health care, basic dental care, and a range of hospital services including diagnostics and surgeries through a network of public and private providers. Through the public health sector, Brazil also has a robust vaccination program and subsidizes 90% of the cost of many essential drugs. Despite such large network of public health services, however, private insurance still exists in Brazil, largely for Brazilians trying to avoid some of the delays and frustrations of what is, unfortunately, a vastly underfunded public system.

Potential Lessons

- Legislation in 1996 effectively decentralized much of the health financing and decision-making of the Unified Health System. Through health councils, communities are actively involved in developing budgetary priorities and initiatives.
- The Family Health Programme addresses health inequities directly by prioritizing the rural poor. In 2007, the difference in life expectancy at birth between the wealthier south and the poorer northeast narrowed from eight years in 1990 to only five.
- The Unified Health System emphasizes primary care but offers a full set of other benefits, including dental care, hospital care, and financial protection against costly drugs.
- Automatic transfers of federal funding to the municipalities keeps the system afloat.
- Brazil is a single national buyer of drugs so it can negotiate low drug prices with pharmaceutical companies.

Challenges

- Despite responsible accounting in many municipalities, more than half of the 26 states fail to meet the required 12% funding target.
- At the state level, a broad conception of health concerns causes overspending and the misdirection of funds. Some states have used money allocated specifically for the Unified Health System to improve sanitation or offer additional health insurance for civil servants. While these factors certainly affect the health of the population, there is need to define health expenditure more precisely.
- The federal government simply does not adequately support the public health sector. The 1988 constitutional reform committed the government to set aside 30% of the social security budget for health care, but in 1993, social security stopped providing resources to the health sector. The Unified Health System began to depend exclusively on the national budget and has suffered chronic funding shortages ever since.
- Under funding is linked to inadequacies in basic health infrastructure and shortages of hospital

[29] World Health Organization, "Brazil's March Towards Universal Coverage," *Bulletin of the World Health Organization,* September 2010, http://www.who.int/bulletin/volumes/88/9/10-020910/en/ (accessed June 15, 2011).

staff. Access to public hospitals varies widely between municipalities. A recent paper finds robust evidence of a positive relationship between income and doctor visits.[30]

- Many Brazilian taxpayers pay twice for their health care—once when they pay income and sales taxes, and once when they buy private health insurance.[31]

China

China's rapid economic growth over the past 25 years improved standards of living for millions of Chinese but was not coupled with better health or health care. China proclaimed its "open door policy" in 1978, which called for the country's transition from a social-planning economy to a market-based one. As part of this transition, the burden of health care shifted from largely successful state-owned enterprises, such as "barefoot" doctors and the Cooperate Medical Scheme that previously covered about 85% of China's rural population, to the private sector.[32,33] Health care reforms in the 1980s encouraged localities to raise their own tax revenues to offset decreased central government financing, instated price controls on a catalogue of essential health services to safeguard basic health care, and permitted local health institutes to generate additional revenue by pricing non-essential health services above cost recovery. With this new incentive structure, physician-induced demand for unnecessary healthcare has become a major problem in China. As the market responded to the inadequacies of the 1980s reforms with an increasing number of private health insurance schemes, the free-market response exacerbated the inequities in China's health system.[34] Market-based health services left more than 500 million Chinese unable to find affordable medical treatment.[35]

China is currently involved in a "second generation" of reforms, whose priorities include strengthening the government role, increasing government investment, increasing health insurance coverage, no longer rewarding doctors based on the revenue they generate, and strengthening primary care, community health care, and disease prevention. One of the reforms dictates an expansion in the list of price-capped essential health care services. Previously, catastrophic illness could impoverish families if the necessary treatment was not on the list of price-controlled essential services. Though this measure is projected to generate annual savings of 4.3 billion RMB, some experts explain that the cost-saving of those additional price caps will likely be offset by compensatory overprescribing, alteration of drug names by manufacturers, purposeful ignoring of the price caps, and simply turning down low cost drugs altogether.[36]

Potential Lessons

- China has a history of successful state-owned health facilities and state-funded doctors, particularly through barefoot doctors and the Cooperative Medical Scheme, from before the reforms of the 1980s.
- Improving health services has become a recent priority for the Chinese government. Over the past ten years, China has allocated more funds to improve public health and rural health services, emphasized controlling healthcare costs, implemented initiatives to improve hospital management to raise quality of patient care, and developed plans to establish and build a national health infrastructure.[37]

[32] Charles Tsai, Regulatory Reform in China's Health Sector, Policy Brief, Groupe d'Economie Mondiale (Sciences Po, 2010).

[33] Jin Ma, Mingshan Lu and Hude Quan, "From A National, Centrally Planned Health System to A System Based On The Market: Lessons from China," Health Affairs, 2008: 937-948.

[34] Ibid.

[35] Chee Hew, Healthcare in China: Toward greater access, efficiency, and quality, (Somers, NY: IBM Corporation, 2006).

[36] Ibid.

- China's government has acknowledged the failure of the series of reforms in the 1980s and has sought international expertise to assist in developing an improved system that focuses on "health for all" and the government's responsibility to public health and insurance coverage.

Challenges[38]

- A majority of the population no longer has access to health care because of financial barriers. High costs explain how an increase in national health expenditure was accompanied by a decline in the use of health services. Unless the economic incentives of providers are changed, a catalogue of subsidized drugs cannot be fully effective at restraining costs.
- Inequalities in health care access are increasing, and rural residents, children, seniors, and low-income families are particularly vulnerable.
- Pressured to make up funds from inadequate government block grants, hospitals compete for paying patients by recruiting well-known physicians, prescribing multiple comprehensive tests, and encouraging patients to stay at luxury facilities.
- A medical arms race has caused the centralization of physicians and an abundant supply of high-tech and expensive medical equipment and facilities in metropolitan areas to serve a small proportion of the population who can afford such expensive services. At the same time, health resources are lacking in rural areas, where more than half of the population resides.
- Economic incentives have driven profit-seeking motives and physician-induced demand. Preventive medicine, public education and infectious disease monitoring are unprofitable and therefore largely ignored.
- In 2003, some form of community-financed health care covered some 9.5% of the rural population, down from a peak of about 85 % in 1975. From 1993 to 2003, health insurance coverage in urban areas dropped from around 70 % to 55 %.[39]

[37] Chee Hew, Healthcare in China: Toward greater access, efficiency, and quality, (Somers, NY: IBM Corporation, 2006).

[38] Jin Ma, Mingshan Lu and Hude Quan, "From A National, Centrally Planned Health System to A System Based On The Market: Lessons from China," *Health Affairs,* 2008: 937-948.

[39] Center for Health Statistics and Information, *Ministry of Health of China*, cited in Jin Ma, Mingshan Lu and Hude Quan, "From A National, Centrally Planned Health System to A System Based On The Market: Lessons from China," *Health Affairs*, 2008: 937-948.

Malaysia

Malaysia has achieved close to universal health coverage through a predominantly tax-financed system that makes health services at all levels free for the entire population with some minimum co-payment. Though Malaysia has a high level of formal sector employment, it has not established a social health insurance scheme. The country reports 100% coverage through its tax-funded system, although high out-of-pocket payments, which make up 40.7% of total health expenditure and are mostly spent on secondary and tertiary private services, suggest actual coverage is below 100%.[40] Total health expenditure per capita is below the minimum US$49-54 recommended to achieve Millennium Development Goals. Malaysia is one of a few Southeast Asian countries with a private sector presence between 5.6 and 7.8 %, and such relatively low percentages suggest that private insurance plays a supplemental, mainly out-patient role. In the Malaysian arrangement, the presence of the private sector actually attracts richer patients to private facilities and gives poorer patients greater access to government facilities.[41]

Though the government has proposed to establish a National Health Financing Scheme that pools resources from public and private sources to provide universal financial risk protection based on principles of social health insurance, the proposal has been met with resistance. Formal sector workers oppose the change, which would require additional mandatory contributions from the formal sector on top of personal income taxes. Private health insurance operators and the Ministry of Health are both threatened by the proposed arrangement, which would likely delegate all budgetary decisions to a National Health Financing Authority.[42]

Potential Lessons

- Free healthcare facilities in rural areas have made equal access a reality for the poor.[43]
- In Malaysia women and men have equal access to preventive and curative care.[44] Primary care services focus on maternal and child health, which may further explain good health outcomes for women.
- Health services are free for all citizens at primary, secondary and tertiary levels with minimum co-payment, ranging from 1 RM (US$0.31) to 3 RM (US$0.94) per admission day.[45]

Challenges

- The fiscal cost of Malaysia's health system is the greatest concern. By international standards, Malaysia's public expenditure on health is low.[46]
- In 2001, 47% of the Ministry of Health's funds went towards curative medical care and only 18% went towards prevention and primary care. Reforms are needed to emphasize prevention and primary care, and to maximize the resources and skills of those delivering public health services.[47]

[40] Viroj Tangcharoensathien, et al., "Health-financing reforms in southeast Asia: challenges in achieving universal coverage," *The Lancet,* 2011: 863-873.
[41] United Nations Publications, "Chapter IV: Towards Universal Health Care Coverage in the Asia-Pacific Region," *United Nations Economic and Social Commission for Asia and the Pacific,* http://www.unescap.org/esid/hds/pubs/2449/2449_ch4.pdf (accessed June 17, 2011).
[42] Ibid.
[43] United Nations Publications.
[44] Ibid.
[45] Tangcharoensathien, et al.
[46] United Nations Publications.

- Malaysia's system needs to be reformed to encourage allocative and technical efficiency. Performance measurements should track the quality and quantity of results, and compensation should be adjusted to reward improvements.[48]
- Patients report long waiting times for procedures in public hospitals.[49]

[47] Ibid.

[48] Ibid.

[49] Tangcharoensathien, et al.

Thailand[50]

In 2001, Thailand introduced the National Health Security Act, which laid the groundwork for a new, robust Universal Coverage Scheme (UCS). Before 2001, Thailand had four voluntary public risk-protection schemes with widely differing benefits and contribution levels. These schemes protected roughly 75% of Thailand's population, but left 18.5 million people paying costly out-of-pocket fees for health care on a case-by-case basis. Today the UCS covers 74.6% of the population, according to estimates from 2007, and offers a comprehensive package of curative and preventive care, as well as universal access to antiretroviral drugs. Since 1975 the Thai government has experimented with financial incentives to bring doctors to rural areas. As of 2004 and 2005, a new medical graduate in a remote rural district can earn a salary equivalent to what a senior doctor in a central district makes after 25 years of work experience.[51]

The UCS used to require a 30-baht fee for each admission but is now completely free. The program is financed through government taxes and pays providers on a capitation basis. Public hospitals with primary care facilities are the main providers and serve more than 95% of UCS beneficiaries. 60 private hospitals serve around 4% of UCS beneficiaries.

The UCS works alongside two other public health insurance programs: the Compulsory Social Security Scheme (SSS), which was created for government employees and dependents and covers 13% of the population; and the Civil Servant Medical Benefit Scheme (CSMBS), which serves private employees and temporary public employees and covers 8% of the population. All together, the UCS, SSS and CSMBS represent a strong government-run health insurance system that covers nearly 100% of Thailand's population. Private health insurance companies remain only in a supplemental role for high-income groups.

Potential Lessons[52]

- Public health advocates are present in the senior levels of Thailand's bureaucracy; they are positioned to translate political imperative into action.
- UCS beneficiaries choose public or private hospitals, which receive annual capitation payments based on the number of UCS beneficiaries that choose them. Freedom of provider choice encourages the development of competing provider networks, and the capitation payment approach helps contains costs and promote efficiency.
- The capitation payment system incentivizes health care providers to reach out and enroll the uninsured—only 2% of the population was still uninsured in 2007. The more people who are registered, the more diverse the risk pool and the more income for each hospital.
- The UCS represents a marked shift towards primary care.
- More than 85% of respondents to a UCS satisfaction survey said they were happy with the quality of care they received.
- An effective administrative system registered 45 million previously uninsured citizens in only

[50] Thailand Delegation, "Moving Toward Universal Health Coverage: Thailand," *Joint Learning Workshop*, http://jlw.drupalgardens.com/sites/jlw.drupalgardens.com/files/Thailand_Case_Study_2-24-10%20FINAL.pdf (accessed June 16, 2011).

[51] Cha-Aim Pachanee and Suwit Wibulpolprasert, "Incoherent policies of universal coverage of health insurance and promotion of international trade in health services in Thailand," *Oxford Journal on Health Policy and Planning*, 2006: 310-318.

[52] Adrian Towse, Anne Mills and Viroj Tangcharoensathien, "Learning from Thailand's health reforms," *BMJ*, January 2004: 103-105.

four months, and infrastructure was developed in rural areas to reach the two-thirds of Thailand's population that lives there.

- The Thai government offers attractive salaries to new medical graduates who agree to work in isolated rural districts. Other non-financial incentives include more opportunities for continuing education and social recognition through annual awards for outstanding rural health personnel.[53]

Challenges

- The new emphasis on primary care caused a shortage of doctors to staff primary care units and left many hospitals with large deficits. The shortage of primary care providers necessitated using hospital doctors in the primary care rotation and also diverted attention away from health promotion services.[54]
- Thailand faces an imbalanced distribution of human resources in terms of both geographical location and speciality.[55]
- Thailand faces uncertainty about appropriate capitation rates because compliance—the extent to which patients use their registered provider rather than another, in which they pay out-of-pocket—is low. Experts speculate that compliance is low because UCS may not give people access to their preferred providers. Building greater confidence in primary care may be required to encourage higher rates of compliance.[56]
- Because the UCS depends on general revenue financing through the government's annual budget, it is vulnerable to budget cuts. Future budgets may not fully cover the UCS' actual operating costs, which may increase as the population ages.
- Rural residents have little provider choice simply because of low capacity and large distances between health care facilities.
- Thailand aggressively supports medical tourism and international trade in health services, which can divert resources from the poor and from rural areas.[57]

[53] Pachanee, et al.

[54] Adrian Towse, Anne Mills and Viroj Tangcharoensathien, "Learning from Thailand's health reforms," BMJ, January 2004: 103-105.

[55] Pachanee, et al.

[56] Towse, et al.

[57] Pachanee, et al.

Canada

Canada has a publicly financed and privately run health care system called Medicare that provides free universal coverage to all its citizens. The system is characterized by local control, doctor autonomy and consumer choice. The Canadian province of Saskatchewan first introduced universal hospital insurance in 1944, and in 1956, the federal government offered an open-ended 50-50 cost sharing arrangement for hospital insurance in all the provinces. By 1958, all provinces had adopted universal hospital coverage. In 1971, the federal government extended the 50-50 cost sharing arrangement to all essential medical services, and Canada's system of universal public health coverage was born. Low government compensation rates drove most doctors to opt out of the system and simply bill patients themselves at their old rates. The Canadian Health Act of 1984 forbids practitioners from billing beyond provincially mandated fee schedules and aims to ensure a one-tiered service.

Today Canada's system is based on private providers who receive payment from federal and provincial budgets. Physicians are remunerated on a fee-for-service basis (with an imposed cap to prevent excessive utilization and costs) by the provincial health plan. The system is primarily tax-funded through federal transfers to the provinces, but provinces may levy their own taxes to help defray costs. Canada's private health sector is limited to offering insurance and supplemental services not included in the essential public package. Dental care, eye care, prescription drugs, ambulance services, medical devices, upgraded hospital rooms and travel insurance are all outside the scope of Medicare.

Primary care physicians are the forefront of Canadian health care and provide basic medical treatments and preventative care. Typically primary care providers refer patients to specialists for services outside the scope of primary care. Today Canada's ten provincial governments are the constitutionally designated key providers of health care, and have responsibility for planning, financing, and evaluating the provision of hospital care, negotiating salaries of health professionals and negotiating fees for physician service.[58]

Potential Lessons

- Because primary care physicians are the main Medicare providers, Canada has a strong primary care base. More than 63% of all physicians in Canada are primary care providers.
- Consumer choice preserves competition and quality despite mandatory fee schedules.
- Mandatory fee schedules help contain costs.
- Coverage is "portable" so residents retain their health benefits wherever they move.
- The provincial governments are able to set and enforce overall budgetary limits.
- Prohibiting private insurance for care covered under Medicare ensures a broad-based risk pool. Risk sharing is effective.

[58] Benedict Irvine, Shannon Ferguson and Ben Cacket, "Background Briefing: The Canadian Health Care System," Civitas: The Institute for the Study of Civil Society, 2005, http://www.civitas.org.uk/pdf/Canada.pdf (accessed June 15, 2011).

Challenges

- As Canada struggles with limitless demand, an ageing population, and increasingly costly medical technology, the Canadian Coordinating Office for Health Technology Assessment is tasked with rationing the most expensive new treatments, pharmaceuticals and diagnostic tests.[59]
- Canada's system faces all the challenges of a government-run, single-payer monopoly: limited information, little transparency, poor accountability, politicized decision-making, and lack of innovation.[60]
- A survey of physicians in 2005 revealed that median waiting times in every queried category of care exceed what is 'clinically reasonable.'[61]
- Despite the Canadian Health Act of 1984, and probably as a result of long waiting times, the private health sector still operates illegally on the fringe and provides unregulated services that are also included in the public package.

[59] J. Frogue, D. Gratzer, T. Evans and R. Teske, "Buyer Beware: The Failure of Single-Payer Health Care," *The Heritage Foundation,* 2001.

[60] Ibid.

[61] D. Gratzer, *Better Medicine, Reforming Canadian Health Care* (Ontario: ECW Press, 2002).

Germany

Germany has a long-standing tradition of public social insurance, and universal health care is rooted in an 1883 parliament decision that made nationwide health insurance mandatory. Currently government-funded social health insurance (SHI) is compulsory for citizens with annual incomes up to €48,000. Those with incomes above the threshold can elect the SHI system, which covers about 88% of the population, or can choose to purchase private insurance. Less than 1% of the German population has no coverage at all. The SHI covers preventive services, in-patient and out-patient hospital care, physician services, mental health and dental care, medical aids, rehabilitation and sick leave compensation. Since 1995, long-term care has been provided as part of a separate mandatory insurance scheme. Out-of-pocket expenditure from co-payments accounted for 13.8% of total health expenditure in 2005. Cost sharing is generally limited to 2% of household income.

The SHI scheme is operated by more than 200 competing Sickness Funds (SFs), which are self-governing, nonprofit, non-governmental organizations, and funded by compulsory wage-based contributions, matched by employers, up to €43,000 per year. In 2005 public insurance accounted for 77.2% of total health expenditure. Private health insurance covers the two groups excluded from SHI—civil servants and the self-employed—and any wealthy citizens who opt out of the public scheme. Those with private insurance pay risk-related premiums for themselves and their dependents, and risk is assessed upon entry only. Private insurance also plays a minor supplemental role with SHI by adding certain benefits such as better amenities and coverage for some co-payments and dental care. Private insurance made up 9.1% of total health expenditure in 2005.[62]

Potential Lessons:[63]

- Primary care doctors have no formal gatekeeper function, but in 2004, SFs were required to provide bonuses to enrollees who complied with a "family physician care model."
- Out-patient physicians are paid in a mix of per time period and per procedure rates, and aggregate payments are negotiated annually to avoid runaway costs. Fees are pro-rated downward when budget ceilings are approached. Collective prescription caps for physicians on a regional basis further contain costs.
- Legislation in 2002, created Disease Management Programs (DMPs) for patients with chronic illnesses. To give SFs an incentive to care for the chronically ill, SFs receive higher per-capita allocations for DMP patients than they do for non-DMP participants. As a result, SFs with higher shares of DMP patients receive higher compensation.
- The German government delegates regulation and governance to the SFs and medical providers' associations. The Federal Joint Committee was created in 2004, to increase efficacy and compliance.
- Patients have freedom of choice between SFs and providers. Both providers and funds have an obligation to contract and treat a person who has chosen them.

[62] Reinhard Busse, "The German Health Care System," *The Commonwealth Fund*, http://www.commonwealthfund.org/~/media/Files/Resources/2008/Health%20Care%20System%20Profiles/Germany_Country_Profile_2008_2%20pdf.pdf (accessed June 16, 2011).

[63] Ibid.

- Beginning in 2007, all acute care hospitals began publishing 30 quality indicators in mandatory annual reports.
- The Institute for Quality and Efficiency enforces other quality control mechanisms such as mandatory continuous medical education for providers and required health technology assessments for drugs and certain procedures.
- The Institute also evaluates the cost-effectiveness of drugs, which are subject to reference prices unless they can demonstrate an added medical benefit beyond the reference price.
- In addition to price freezes, compulsory bulk discounts on drugs for health insurance funds was raised from 6% to 16% in 2009.[64]

Challenges[65]

- High levels of unemployment threaten the financial basis of the social insurance system.
- Some antiquated reimbursement mechanisms currently favor unnecessary or excessive treatments.
- Fragmentation of SHI and long-term care causes duplication of services and uncoordinated care, which is exacerbated by the fact that general practitioners do not currently act as formal gatekeepers.
- There is a need to increase the role of general practitioners vis-à-vis office-based specialists by improving their training and by educating patients to use general practitioners as gatekeepers who guide patients through the health care system.
- Ambulatory care and hospital care are structured separately, and there is no coordination between them. This results in long hospital stays because hospital physicians do all the follow up before patients are released. No incentives are in place in fee schedules to shorten lengths of stay.
- Physicians prescribe almost three times more drugs in Germany than they do in the US, and drug prices are higher in Germany than in other countries.
- While the 1993 Health Care Structure Act introduced free choice of SFs for enrollees, true market competition is not possible because SFs have to offer the same benefits for the same contribution rate. Most SFs also have the same range of providers because providers collectively contract with SFs. The "better" SFs are increasingly demanding greater flexibility and the selective contracting of providers to allow for differentiation between SFs.

[64] Rob Hyde, "German Health Reform Compromise Under Attack," The Lancet, 2010: 759-760.

[65] Reinhard Busse and Annette Riesberg, *Health Care Systems in Transition: Germany*, (European Observatory on Health Care Systems, 2000).

New Zealand

The New Zealand health system provides residents with access to a broad range of health services with substantial government funding. The system gives its beneficiaries the choice of their independent general practitioner, and covers preventive and promotional services, in-patient and out-patient hospital care, primary health care services, prescription drugs, mental health care, dental care for school children, and disability support services. Patient out-of-pocket co-payments for general practitioners, non-hospital prescription drugs, some private hospital or specialist care, and adult dental care account for 16% of total health expenditures.[66]

The system receives most of its funds from general taxation, which supports about 78.3% of health care expenditures. The government sets an annual global budget for health care and distributes funds to District Health Boards (DHBs). DHBs offer general health services at government-owned facilities and buy other services from private providers, such as general practitioners. General practitioners are generally grouped into Primary Health Organizations (PHOs), which have recently received additional government subsidies to increase access to primary care for low-income residents. As of 2005, 92% of the New Zealand population was linked to a PHO to receive a range of clinical and non-clinical care. PHOs are funded partly by capitation rates and partly by fee-for-service.[67]

About one-third of New Zealand's population has some form of private insurance to help cover co-payments, elective surgery and specialist consultations. Private insurance makes up 6% of health expenses. Recent cutbacks in public funding for the health care system have resulted in fairly long lines for elective procedures and have encouraged the emergence of a two-tier health care system.[68]

Potential Lessons

- New Zealanders report far shorter waiting times for appointments and far lower out-of-pocket costs than patients in the United States and Canada.[69]
- PHARMAC is a government agency that determines which prescription drugs will receive full or partial government subsidy. PHARMAC is a global pioneer in negotiating for low-cost prescription drugs, in part because it acts as a monopoly purchaser and has strong bargaining power. In negotiations, the drug company is responsible for establishing the clinical- and cost- effectiveness of the drug.[70]

Challenges

- Under-funding has led to increasingly long waiting lines for a variety of elective procedures.[71]
- Long waiting lists for some treatments in public facilities have led to growth in the private insurance market. The emergence of a two-tiered system may complicate care coordination for patients that use both public and private facilities.
- Independent general practitioners and PHOs often require some kind of co-payment, which represents a cost barrier to the most basic forms

[66] The Commonwealth Fund, "Descriptions of Health Care Systems: Australia, Canada, Germany, the Netherlands, New Zealand, the United Kingdom, and the United States," *Alliance for Health Reform*, 2005, http://www.allhealth.org/briefingmaterials/DescriptionsofHealthCareSystems_2005(2)-348.pdf (accessed June 17, 2011).

[67] Ibid.

[68] Stuart Bramhall, "The New Zealand Health Care System," *Physicians for a National Health Program*, January 9, 2003, http://www.pnhp.org/news/2003/january/the_new_zealand_heal.php (accessed June 17, 2011).

[69] Mary Mahon, "New Commonwealth Fund Survey Spotlights Strengths and Gaps of Health Systems in U.S., Canada, the U.K. and Other Nations," *The Commonwealth Fund*, October 28, 2004, http://www.commonwealthfund.org/Content/News/News-Releases/2004/Oct/New-Commonwealth-Fund-Survey-Spotlights-Strengths-and-Gaps-of-Health-Care-Systems-in-U-S---Canada--t.aspx (accessed June 17, 2011).

[70] Bramhall.

of care. Evidence suggests that the government's efforts to increase access to primary care have not equalized utilization rates among patients of all income levels.[72]

- New Zealanders have considerable anxiety about their ability to receive health care. In a recent survey by The Commonwealth Fund, 42% of residents were afraid they could not afford medical care, 38% were anxious about the possibility of wait times for non-emergent care, and 38% feared they would not get advanced care if they became very sick.[73]

[71] Bramhall.

[72] Ross Barnett and Pauline Barnett, "Primary Health Care in New Zealand: Problems and Policy Approaches," Ministry of Social Development, March 2004, http://www.msd.govt.nz/about-msd-and-our-work/publications-resources/journals-and-magazines/social-policy-journal/spj21/21-primary-health-care-in-new-zealand-pages49-66.html (accessed June 17, 2011).

[73] The Commonwealth Fund.

Norway

All Norwegian citizens and residents have health care coverage under the National Insurance Scheme (NIS). Norway's system is a tax-funded, single-payer arrangement. The system is financed through general revenue from taxes, and among industrialized countries, only Sweden has a higher tax burden than Norway. Benefits under the NIS are extensive, and include in-patient and out-patient care, diagnostic services, specialist care, maternity services, preventive medicine, palliative care, and prescription drugs. Most notably, the NIS provides sick pay and disability benefits. Small co-payments are due for out-patient treatment and for treatment by a general practitioner, psychologist, or psychiatrist. To limit overall health expenditures and capital investment, the government sets a global budget annually. Some Norwegians opt out of the government health system and pay out-of-pocket for care. Because of insufficient capacity to meet the strong demand for health services, Norwegians face long waiting times for many procedures. Many Norwegians who can afford to pay out-of-pocket travel abroad for medical treatment.[74]

The central government, through the Ministry of Health and Care Services, has overall authority over the system, although management and funding responsibilities have been delegated to regional and municipal governments. Municipal governments are additionally responsible for primary health care, regional governments are also responsible for specialist care, and the central government has full control over all public hospitals. Private facilities for plastic surgery, substance abuse, and dental care complement publicly funded services. Municipalities can levy proportional income taxes, but regional authorities rely on transfers from the national government. Public sector spending on health accounts for roughly 84% of the total. Most health care personnel are salaried government employees, although some specialists work on a contract basis and receive annual grants and fee-for-service payments.[75]

Potential Lessons

- The Norwegian health system achieves a reasonable balance of local and national governance. A centralized vision guides a decentralized network of regional and municipal governments, which encourage inhabitants to take part in local politics.
- Municipal and regional councils are all popularly elected, which increases accountability.[76]
- An annual global budget is set by the central government to restrain costs.
- Norway's public health providers are in the process of adopting electronic patient records to improve teamwork between municipal health and social services, specialist health care and general practitioner services.[77]
- In 1997, Norway introduced "activity-based funding" that tied provider payments to the number of patients each provider treated in a certain diagnosis group. This payment mechanism was followed by an increase in the number of cases treated and a reduction in waiting times.[78]

[74] Healthcare Economist, "Health Care Around the World: Norway," *Healthcare Economist,* April 18, 2008, http://healthcare-economist.com/2008/04/18/health-care-around-the-world-norway/ (accessed June 17, 2011).

[75] Michael Tanner, "The Grass Is Not Always Greener: A Look at National Health Care Systems Around the World," *The Cato Institute*, March 18, 2008, http://www.cato.org/pubs/pas/pa-613.pdf (accessed June 17, 2011).

[76] Jan Roth Johnson, "Health Systems in Transition: Norway," *World Health Organization on behalf of the European Observatory on Health Systems and Policies,* 2006, http://www.euro.who.int/__data/assets/pdf_file/0005/95144/E88821.pdf (accessed June 17, 2011).

[77] Ibid.

[78] Johnson.

Challenges

- Significant wait time for many procedures is the biggest problem Norway's health system faces. Norwegians who can afford to pay out-of-pocket fees look abroad for timely care, but low-income citizens are forced to wait months for non-emergent care.[79] In 2000, the Norwegian government committed NKr 1 billion to purchase medical treatment abroad.[80]
- Because of a scarcity of resources relative to demand, treatment can be denied to sick patients if it is not deemed to be cost-effective.[81]
- Patient choice of physicians is constrained to a government list of general practitioners. Patients may switch general practitioners, but only twice a year and only if their preferred general practitioner has no waiting list to be seen.[82]

[79] Healthcare Economist.
[80] Johnson.
[81] Tanner.
[82] Ibid.

Sweden

Sweden has a universal healthcare delivery system with decentralized decision-making and implementation under the stewardship of the national government. Although legislation and regulation of the national health system occurs at the national level, the financing and provision of health care is the responsibility of 21 county councils and 289 municipalities.[83] County councils raise tax revenue, determine fee schedules, and organize and dispense health care. While county councils cover most forms of health care, municipalities are responsible for nursing homes, long-term care for the elderly with somatic and psychiatric diseases, and institutional housing and care facilities for mentally retarded patients. Provider payment mechanisms vary among county councils, but global budgets and per-capita payments are the most common.[84]

In 2001, 85.2% of Sweden's total health expenditure came from public sources, while only 14.8% came from private sources. Because Sweden has a heavily socialized, single-payer system, Sweden has charged minimal user fees for primary physician (US$14) and specialist (US$35) visits to try to prevent overuse and abuse. These user fees accounted for only 2% of total health expenditure. Sweden sets a maximum annual co-payment at $US128, after which an individual receives a card that authorizes free care for a year. The government withholds unnecessary benefits such as vaccines for reign travel and flu shots for low-risk people to contain costs.[85]

In recent years Sweden has undertaken several health system reforms to increase competition, efficiency, marketization, and privatization. In a series of reforms collectively called the Stockholm Revolution, the Swedish health care system introduced patient choice of care providers and separated purchaser and provider functions.[86] This system has been shown to encourage competition for public contracts, decrease waiting times, increase efficiency, and cut costs.[87] A degree of privatization and market-based reform in Sweden's health system may threaten truly universal access in the future, however.

Potential Lessons

- A National Pharmaceutical Benefits Board performs analyses of the cost-effectiveness of certain drugs to determine which drugs should be included in the public benefit package, and at what price. The Swedish Council on Technology Assessment in Health Care performs similar cost-effective analyses for health care technologies.[88]
- The Swedish system provides for clear distinctions in the responsibilities of the government, the county councils, and the municipalities. Such decentralization allows for greater flexibility and encourages innovative practices to improve efficiency.

[83] D. Brad Wright, "Universal Access to Healthcare: Lessons from Sweden for the United States," *University of North Carolina School of Public Health,* November 17, 2004, http://www.unc.edu/~wedavid/web/Comparative%20HC%20Systems%20Paper.pdf (accessed June 17, 2011).

[84] Bengt Ahgren, "Competition and integration in Swedish health care," *Nordic School of Public Health,* 2010: 91-97.

[85] Wright.

[86] Sara M. Glasgow, "What Goes Up: The Genesis and Context of Health Reform in Sweden," *Global Health Governance,* 2009: 1-18.

[87] Johan Hjertqvist, "Meeting the Challenges to European Healthcare: Lessons Learned from the 'Stockholm Revolution'," *Pharmacoeconomics*, 2002: 47-53.

[88] Anna H. Glenngard, Frida Hjalte, Marianne Svensson, Anders Anell and Vaida Bankauskaite, *Health Systems in Transition: Sweden,* (Copenhagen, Denmark: WHO Regional Office for Europe on behalf of The European Observatory on Health Systems and Policies, 2005).

- Patient choice increases the responsiveness of the health care sector to needs and wishes of patients, and drives improvements by encouraging competition between providers. The Stockholm Revolution reforms also seem to address many of the common problems with a single-payer health system—inefficiency and increasing costs.

Challenges[89]

- Like other nations with a single-payer system and an aging population, Sweden has had to deal with the problem of ever-growing health care expenses. To deal with this burden, Sweden has begun rationing care, in part by instituting waiting lists for medical appointments and surgery. These long waiting lists are a problem, and may explain why Swedes are increasingly opting for voluntary private health insurance.
- Access to primary care can be difficult in Sweden. Opening hours are inconvenient, and getting an appointment is not easy. Consequently, half of all patients go straight to a hospital for their primary care.
- Future reforms should focus on improving coordination of care, particularly for the elderly and for patients with multiple diagnoses. Though the division of responsibility into three separate levels of governance allows for decentralization, it also permits fragmentation that makes care coordination, particularly for the elderly and the mentally retarded, very difficult.
- Budget-governed health care does not reward curious, innovative physicians. New knowledge and technologies are not welcomed as progress, but are considered disturbances that may increase costs. Budgetary surplus is the primary goal, rather than improving care quality.[90]
- The market-based reforms of the Stockholm Revolution may threaten the system's universality in the future.

[89] Ibid.

[90] Sven R. Larson, "Lessons from Sweden's Universal Health System: Tales from the Health-care Crypt," *Journal of American Physicians and Surgeons,* 2008: 21-22.

Taiwan[91]

Before 1995, a patchwork of ten different social health insurance schemes covered only 59% of Taiwan's population. The uninsured 41% were predominantly children under age 14 and adults older than 65, who need health care the most. In 1995, the National Health Insurance (NHI) program was established as a government-run, single-payer national health insurance scheme under the direction of the Bureau of National Health Insurance (BNHI). With mandatory enrollment to ensure a broad-based collection of funds and adequate risk pooling, the NHI increased health insurance coverage in Taiwan from 57% to more than 96%. The program is financed through a mix of premiums and taxes, which compensate a mix of public and private providers on a fee-for-service basis. Individual families, employers, and the government all pay a share of the premiums, and the share that each group owes differs within six categories of population subgroups. For military personnel and the poor, the government pays the entire premium. In 2000, 32.15 % of the NHI's total premium revenue came from employers, 38.08 % from individuals, and 29.77 % from government.

Though some health facilities in Taiwan are public, the majority is privately owned, and more than 90% of all hospital facilities contract with the BNHI. The NHI pays providers on a classic fee-for-service basis at uniform, national fee schedules. The NHI accounts for 55% of Taiwan's national health expenditure while 30% comes from out-of-pocket payments. The NHI health care package covers in-patient care, ambulatory care, laboratory tests, diagnostic imaging, prescription and certain over the counter drugs, dental care, traditional Chinese medicine, day care for the mentally ill, limited home health care, and certain preventive medicines. Most notably, HIV/AIDS treatment and organ transplants are covered. Households must pay out-of-pocket for services not covered by the NHI, such as orthodontics, prosthodontics, lab tests that are not medically necessary, extra charges for non-NHI beds, requests for nurses or physicians not assigned by the hospital, long-term care, and nursing home care. Out-of-pocket spending also includes "user fees" levied by certain providers and co-payments for NHI-covered ambulatory care, in-patient care, and pharmaceuticals.

Potential Lessons

- Introduced in 2002, Taiwan's IC-Card functions as a communication tool between the NHI and providers, and allows for the transferring of a patient's electronic medical records between providers. The IC-Card also helps protect against fraud.
- Implementation of the NHI significantly increased life expectancy for those most at risk, typically the uninsured, before the NHI scheme.[92]
- The capacity of Taiwan's health infrastructure has increased since the NHI's inception—the supply of health professionals, for example, increased by 39.6 %.
- Only 2.2% of the NHI's total budget is spent on administration because all claims are processed electronically.
- The NHI offers complete freedom of choice among providers, and there is no rationing of care, or lines for care.

[91] Tsung-Mei Cheng, "Taiwan's New National Health Insurance Program: Genesis and Experience So Far," *Health Affairs,* 2003: 61-76.

[92] K. Davis and A.T. Huang, "Learning from Taiwain: Experience with Universal Health Insurance," *Annals of Internal Medicine*, February 2008: 313-314.

- Under the NHI the utilization rate of services among the previously uninsured jumped to match the utilization rate of those who were insured prior to the NHI. Essentially, the NHI successfully removed financial barriers to care.
- Global budgets have succeeded somewhat in controlling costs.
- A series of quality monitoring programs using health information technology and payment incentives move physicians towards greater accountability for good health outcomes. The government is considering a fee-for-outcomes (FFO) approach to replace traditional fee-for-service.
- Hospital quality indicators have been introduced to aggregate data on re-hospitalizations and repeated visits to emergency rooms to help hospitals improve quality.

Challenges

- A primary weakness is uncertainty about the long-run sustainability of Taiwan's health insurance system, particularly because of budget cuts and a mounting national debt.[93]
- Inappropriate physician payment incentives affect how medical trainees choose their specialties. Trainees disproportionately choose specialties that have simpler payment processes under the NHI, such as dermatology, or that are not covered by the NHI at all. These specialties, such as cosmetic surgery, bring in higher, out-of-pocket payments. Specialties covered by the NHI with lower reimbursement rates, such as obstetrics and gynecology, are rarely chosen.[94]
- Critics claim that the fee-for-service payment mechanism encourages supplier-induced demand for services that may not be necessary. This tendency to overmedicate or overprescribe is made worse by excess capacity. Additionally, Taiwan permits hospitals to sell drugs for prices beyond their acquisition cost—the marginal profit is known as the "drug price black hole." The profitability of selling drugs creates an additional incentive for hospitals to overmedicate their patients.
- Fee-for-service payments also encourage doctors to increase their volume of services rendered, most often by decreasing the quality of each service. For example, Taiwan's fee schedule is thought to encourage the "three-minute patient visit."
- Health capacity is unevenly distributed, not only by specialty, but also geographically. In 2001, the overall ratio of physicians per 1,000 people was 1.37, but in the mountainous areas and offshore islands it was only 0.8.
- Excess health capacity in certain areas of Taiwan engenders fierce competition among hospitals for patients, who are increasingly being viewed merely as "biological structures yielding cash."[95]

[93] Davis and Huang.

[94] Ibid.

[95] Yeh, , quoted in Tsung-Mei Cheng, "Taiwan's New National Health Insurance Program: Genesis and Experience So Far," Health Affairs, 2003: 61-76.

United Kingdom

Since its launch in 1948, the National Health Service (NHS) has grown to become the world's largest publicly funded health service. With the exception of charges for some prescription drugs and optical and dental services, the NHS offers free primary care, preventive care, mental health care and hospital use for anyone who is a resident of the United Kingdom (UK). Children, the elderly, pregnant women, and people with disabilities or certain mental conditions are exempt from any co-payments. Roughly 11.5% of residents purchase supplemental private insurance to avoid wait times, have a higher standard of comfort, or choose their specialist. The NHS is funded largely by general taxation, and government health expenditures make up roughly 15.6% of total government expenditures in the UK. Notable features of the NHS are the combination of universal coverage and access, very little cost sharing, and tight cost containment. Providers are incentivized under the UK's system to promote preventive and curative care. Each country in the UK has a health department that is responsible for its own policy decisions and health budget, and the purchasing and provision of services are delegated further to regional bodies and local public providers, respectively.[96]

Potential Lessons

- The total expenditure of the NHS is relatively low and health outcomes are on par with other developed countries.
- England has had success in reducing wait times by increasing hospital capacity and staff, setting shorter maximum wait targets and strictly monitoring the performance of physicians.
- England introduced a quasi-market arrangement that rewards providers with greater patient satisfaction.
- The National Institute for Health and Clinical Excellence (NICE) was recently established to assess evidence for the clinical- and cost- effectiveness of certain drugs and medical procedures in an effort to improve the responsiveness of the system.
- The Commission for Health Improvement (CHI) is a regulatory body established to inspect the performance of NHS institutions and to ensure a high quality of care.

Challenges

- A shortage of both primary care providers and specialists has led to concerns with wait times and care quality, particularly for the elderly who require round-the-clock care.
- Reporting of serious failures in health care is patchy and incomplete; the NHS has very few mechanisms in place to identify and respond to those failures. Improvements in the organizational culture of the NHS and in its reporting systems as well as a new emphasis on evidence-based practices are necessary for the NHS to take an active role in addressing its weaknesses.
- The NHS suffers from a lack of local flexibility.
- The NHS has never consistently and systematically measured changes in its patients' health. It is difficult to measure the efficiency of the NHS as a health care system.

[96] The Kaiser Family Foundation, *United Kingdom Background Brief,* http://www.kaiseredu.org/Issue-Modules/International-Health-Systems/UK.aspx (accessed June 15, 2011).

[97] Dennis Campbell, "NHS Failing in Basic Care of Some Elderly Patients, Warns Watchdog," *The Guardian*, May 26, 2011.

[98] Department of Health, "An Organization with Memory," *Publications, Policy and Guidance,* 2000, http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/Browsable/DH_4098184 (accessed June 16, 2011).

- According to the British Medical Journal, health inequalities in Britain are greater currently than they were during the post-World War I slump and the Great Depression. Though health outcomes across all segments of the population have improved over the last decade, the disparity of health outcomes between the wealthiest and the poorest has widened over the past 20 years.[99]

[99] Nick Triggle, "Health gap 'wider than in Great Depression'," BBC News, July 24, 2010.

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High Level Expert Group Report on Universal Health Coverage for India

SECTION I

Chapter 1

Health Financing and Financial Protection

1. Introduction

India and other countries with relatively low per capita incomes can aspire to provide Universal Health Coverage (UHC) to their populations provided health financing arrangements are properly organized and managed. If not, health care costs can rise rapidly and make it very difficult to sustain UHC. It could even end up further exacerbating existing inequalities in access to health care.

Reforms of India's health financing and financial protection systems are critical for establishing UHC. In thinking of a new architecture, however, it is important to keep in mind that:

a) rising incomes and improved standards of living have been accompanied world over by increasing health care needs;

b) while advances in technology and medicine have improved health and enhanced life expectancy, costs of medical care have escalated sharply. Consequently, even in a high income country like the United States, cost escalations have put even basic healthcare out the reach of several segments of the population, especially where carefully thought through financing arrangements have not been put in place; and

c) there doesn't appear to be a 'successful model' and universal method of financing and financial protection that assures guaranteed UHC in any country. Most nations are still trying to evolve a workable solution to financing and organising UHC.[1] There are, however, certain common features of countries that have done well with respect to ensuring UHC. These include: (i) a predominant role for public financing; (ii) related to this, coverage is compulsory (where linked to contribution) or automatic (where based on certain characteristics such as residence or citizenship); and (iii) universal entitlement without exclusion. In other words, UHC requires both (a) compulsion (no opting out) and (b) subsidization (enabling coverage for those too poor or too sick to pay for their own coverage). Finally, it is desirable to have large and diverse risk pools (that minimize fragmentation, and promote equity by not having, for example, separate pools for the poor) in order to provide UHC at a lower cost than would be the case if a country were to achieve it with lots of small, fragmented pools.

What we are proposing for India is somewhat unique - a hybrid that draws on the best lessons from other countries - both developed and developing.

While drawing on lessons from other developing countries, we should not forget that India's per capita income (around Purchasing Power Parity Dollars [PPP$] 3,250 in 2009) remains relatively low compared to that of China (PPP$6,890), Thailand (PPP$7,640), South Africa (PPP$10,050), Brazil (PPP$10,200) and Mexico (PPP$14,100) - countries that report better health outcomes than India. In other words, India cannot quickly match China, Thailand or Brazil in terms of per capita overall or public spending on health not only because of lower incomes and the consequently lower capacity to mobilize financial resources, but also because of the limitations of the health system to absorb additional financial resources effectively and efficiently without bringing about significant reforms of the health system.[2]

Moreover, we should be conscious that India's low levels of income and human development impose

several limitations. The problem is particularly severe at a time when the country has adopted a roadmap for fiscal consolidation to ensure overall macro-economic stability based on the recommendations of the 13th Finance Commission. In other words, we need to recognize the budgetary constraints, be realistic, and plan judiciously so that essential health care is made available to all Indians.

We present a brief analysis of the current state of health financing in Section 2 and list our recommendations in Section 3.

2. A review of health financing in India

Deficiencies in India's health financing system, to a considerable extent, are a cause of and an aggravating factor in the challenges of health inequity and impoverishment, inadequate availability, poor reach, unequal access, poor quality and costly health-care services. Several well-known deficiencies characterise India's system of health financing and financial protection.

One, it would appear at first glance that India spends an adequate amount on health care. In 2009, India's total health expenditure as a percentage of the GDP was 4.2% - comparable to that of Sri Lanka (4%), Thailand (4.3%) and China (4.6%). The picture, however, changes dramatically when we examine levels of per capita health expenditures. At PPP$132 per capita, India's health expenditure is far less than that of Sri Lanka (PPP$193), China (PPP$309), and around a third of that of Thailand (PPP$345).[3]

Two, India's public spending on health as a proportion of the GDP - estimated at around 1.2% of the GDP in 2009 - is among the lowest in the world. The corresponding percentage is 1.8 in Sri Lanka, 2.3 in China and 3.3 in Thailand. The extremely low levels of public spending become even more evident when we examine per capita public spending on health. In 2009, the per capita government spending on health in India (PPP$43) was significantly lower than in Sri Lanka (PPP$87), China (PPP$155) and Thailand (PPP$261)[a].

The proportion of public spending on health by India is significantly low, not because India is poorer than these other countries, but principally due to the very low per cent of public spending that Indian governments devote to health – typically in a range of 3-4% - amongst the lowest of any country in the world. This reflects the very low priority that, historically, governments in India have accorded to the health sector.

Table 1 reveals that in 2009, total public spending in India was substantially higher as a share of GDP than in the other countries (33.6% as compared to about 22-24% in the others). So the government(s) of India had much greater capacity to spend, relative to GDP, than the other countries. But government spending on health as a share of GDP was much lower in India than these other countries. This was due to the dramatically lower allocation priority that Indian governments devoted to health.

[a] All data relating to 2009 are from World Health Organization database.

TABLE 1. LOW PRIORITY IN PUBLIC SPENDING ON HEALTH - INDIA AND COMPARATOR COUNTRIES, 2009			
	Total public spending as % GDP (fiscal capacity)	Public spending on health as % of total public spending	Public spending on health as % of GDP
India	33.6	4.1	1.4
Sri Lanka	24.5	7.3	1.8
China	22.3	10.3	2.3
Thailand	23.3	14.0	3.3

Source: WHO database, 2009[2]

Table 2 demonstrates what public spending on health as a per cent of GDP would have been with India's fiscal constraint held constant, but with each of the other country's allocation priorities. This demonstrates that public spending on health as a per cent of GDP is low in India because the state and central governments have chosen so, not because of fiscal constraints.

TABLE 2. PUBLIC SPENDING ON HEALTH - ACTUAL AND WITH COMPARATOR COUNTRIES' PRIORITIES			
	Total public spending as % GDP, India 2009	Public spending on health as % of total public spending	What public spending on health as % of GDP would have been, given India's fiscal capacity but the other countries' public resource allocation priorities
India	33.6	4.1	1.4
Sri Lanka's priority	33.6	7.3	2.5
China's priority	33.6	10.3	3.5
Thailand's priority	33.6	14.0	4.7

Source: WHO database, 2009[2]

Three, a consequence of the low public spending on health is the extremely high burden of private out-of-pocket expenditures. In 2009, private expenditure in India accounted for 67% of the total expenditure on health - comparatively higher than in Thailand (24%), China (50%) and Sri Lanka (56%).[2]

Two key features of private out-of-pocket spending are important to note:

- Out-patient treatment, and not hospital care, accounts for 74% of private out-of-pocket expenditures.[4]

- Medicines account for 72% of the total private out-of-pocket expenditure.[4] Largely contributing to the sharp increase in the costs of medical care has been the steep rise in the prices of drugs, which more than tripled between 1993-94 and 2006-07.

Four, there are wide variations in public health expenditure across states. In 2008-09, for instance, public expenditure on health was Rs. 498 in Kerala and Rs. 411 in Tamil Nadu as against Rs. 229 in Madhya Pradesh and Rs. 163 in Bihar. These differences in public spending explain, to a large extent, the differentials in the reach and capacity of the health infrastructure as well as in health outputs and outcomes across the states.

Five, state governments, primarily responsible for the funding and delivery of health services, bear close to two-thirds (64%) of the total government health expenditure. The Centre accounts for the remaining third. Though the Centre's financial contribution is relatively small, its influence is substantial. For instance, the mechanisms used via both the National rural health Mission and the Rashtriya Swasthya Bima Yojana (RSBY) strongly motivate increased contributions to health from State governments.

Six, states with low public expenditure on health typically find themselves fiscally constrained by two factors. The Centre's distribution of revenues across the states does not offset the fiscal disabilities of the poorer states. Further, there is less fiscal space for development spending in the poorer states, which incur a large share of obligatory expenditures (that include salaries, wages, pensions and interest payments).

Seven, many state governments do not accord high priority to health. Analyses of public expenditures show that: (i) levels of financial allocations by state governments to health are extremely low; and (ii) with the exception of Gujarat and Uttar Pradesh - and to a limited extent Bihar, the proportion of government development expenditures allocated to health in all other Indian states declined between 2001-02 and 2007-08.

Eight, financial protection against medical expenditures is far from universal. Expenditure on social insurance accounted for 1.13% of total health spending in 2004-05. According to the National Family Health Survey 2005-06, only 10% of households in India had at least one member covered by medical insurance.[4] India's medical insurance sector remains weak and fragmented even though there is a plethora of medical insurance schemes operated by the Central and state governments, public and private insurance companies and several community-based organisations. The benefits of traditional insurance coverage through Employees' State Insurance Scheme (ESIS) and the Central Government Health Scheme (CGHS) accrue only to a privileged few and mostly to those working in the organised sector. Despite the rapid expansion following the launch of Rashtriya Swasthya Bima Yojana (RSBY) and other state-sponsored insurance schemes over the past few years, coverage remains low with financial protection available only for hospitalization, and not for out-patient care.

3. Recommendations

As stated earlier, we envisage a Universal Health Coverage system that entitles every citizen guaranteed access to an essential National Health Package of primary, secondary and tertiary health care services (covering both in-patient and out-patient care that is available free-of-cost) provided by public sector facilities as well as contracted-in private providers.

For such a UHC system, we have identified three principal objectives of the reforms in health financing and financial protection:

- ensure an adequacy of financial resources for the provision of universal access to essential health care;
- provide financial protection and health security against impoverishment to the entire population of the country; and
- put in place financing mechanisms that are consistent in the long-run with both the improved wellbeing of the population as well as containment of health care cost inflation.

We believe that even within the financial resources available to India, it is indeed possible to devise an effective architecture of health financing and financial protection that can offer UHC to each and every Indian. Our key recommendations follow.

Recommendation 1: Government (Central government and states combined) should increase public expenditures on health from the current level of 1.2% of GDP to at least 2.5% by the end of the 12th plan, and to at least 3% of GDP by 2022.

Investing in health has both an intrinsic importance and an instrumental significance. Unless a person is healthy, he or she cannot enjoy the many opportunities and good things of life. At the same time, poor health conditions such as malnutrition and iron-deficiency anaemia directly impact labour productivity in the short-run.[b] In the longer-run, in inter-generational issues such as low-birth weight have been associated with a number of poor health conditions that are particularly characteristic of the Indian population.[c] Also, India needs to prioritize and invest in health, especially if it wants to capitalize on the potential contribution of its large proportion (close to 40%)[4] of its children and youth.

Enhancing public expenditures on health is likely to have a direct impact on poverty reduction, if this increase leads to a reduction in private out-of-pocket expenditures. Financial metrics show that there is a significant imbalance in private spending versus public spending and in fact private spending is almost three times the amount of public spending. Our proposed increase in spending on health will greatly alter the proportion of public and private spending on health and, hopefully, correct the imbalance that exists.

Whereas the total per capita health care expenditure incurred by India is reasonable (around 4.5% of GDP), it ranks very low in the proportion that is financed through public expenditure. This imbalance needs to be corrected urgently. Financing the proposed UHC system will require public expenditures on health to be stepped up from around 1.2% of GDP today to at least 2.5% by 2017 and to 3% of GDP by 2022.

Increasing public spending on health, in our view, is essential for a number of reasons:

a) Health care provision has a large number of public and merit good characteristics that justifies the use of public resources to finance it.

b) The financing for the provisioning of the proposed NHP (that offers essential services only) requires the level of public expenditures to increase to 2.5-3% of GDP.

c) Prepayment and pooling provide a number of financial protection benefits. International experience has shown that this is best done through increased government expenditure rather than through the use of voluntary insurance arrangements.[7] Prepayment from compulsory sources (i.e. some form of taxation), and the pooling of these revenues for the purpose of purchasing healthcare services on behalf of the entire population is the cornerstone of the proposed UHC programme. Such an arrangement will provide a number of financial protection benefits. Both international experience and important concepts[d] in health economics demonstrate that voluntary mechanisms of paying for health care cannot be a basis for a universal system. This makes it critical for the government to directly expend resources and invest specifically in the provision of primary health care and on a carefully designed health care

[b] Results of Weinberger (2004)[5], for instance, indicate that "productivity, measured in wages, is indeed affected by insufficient iron intake, and that wages would on average be 5 to 17.3% higher if households achieved recommended intake levels. The results demonstrate that enhancing micronutrient intake will contribute significantly to overall economic growth and development."

[c] According to Boo and Harding (2006),[6] for instance: "Many studies have provided evidence for the hypothesis that size at birth is related to the risk of developing disease in later life. In particular, links are well established between reduced birth-weight and increased risk of coronary heart disease, diabetes, hypertension and stroke in adulthood. These relationships are modified by patterns of postnatal growth. The most widely accepted mechanisms thought to underlie these relationships are those of fetal programming by nutritional stimuli or excess fetal glucocorticoid exposure. It is suggested that the fetus makes physiological adaptations in response to changes in its environment to prepare itself for postnatal life. These changes may include epigenetic modification of gene expression."

system - and not merely include access to health care as a part of overall cash- transfer programmes.

d) Prepaid funding that is pooled on behalf of a large population is essential for ensuring that the system is able to redistribute resources and thus services to those in greatest need, given that the risk of incurring high health expenditures is often quite unpredictable at the start of any budgetary period. And as noted above, in both theory and evidence – no country that can be said to have attained universal coverage relies predominantly on voluntary funding sources – demonstrates that both compulsion (to avoid "opting out" as a result of the adverse selection phenomenon) and subsidization (to ensure that those too poor or too sick to contribute) are essential for universal coverage. Hence, increased government expenditure on health is essential to ensure a leading role for compulsory pooling as the means to progress towards universal coverage.

Spent wisely, enhancing public expenditures on health is likely to have a direct impact on poverty reduction as it should reduce the extremely high current burden of private out-of-pocket expenditures. Out-of-pocket health care expenditure incurred by citizens at the point of care is an important source of financial catastrophe not merely for low-income households but also for those with higher incomes as well. Table 3 shows the indicative changes in the levels and shares of public and private expenditures that are likely to follow from the recommended increase in public spending on health.

TABLE 3. PROJECTED LEVELS AND SHARE OF PUBLIC AND PRIVATE HEALTH EXPENDITURES: 2011-2022

	2011-12	2016-17	2021-22
Total Health Expenditure as % of GDP*	4.5	4.5	4.5
Total public expenditure on health as % of GDP	1.2	2.5	3.0
Total private expenditure on health as % of GDP	3.3	2.1	1.5
Composition of Total Health Expenditure			
Private spending as % of total health expenditure	67	47	33
Public spending as % of total health expenditure	33	53	67
Per Capita Total Health Expenditure (Rs. 2009-10 prices)@	2,500	3,725	5,175
Per capita public spending	675	1,975	3,450
Per capita private spending	1,825	1,750	1,725

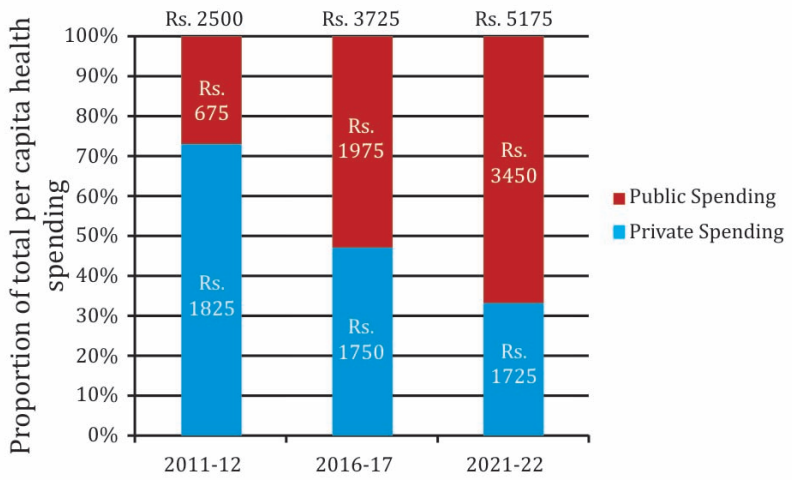
** Assuming that the total health expenditure in India (public and private together) will remain at 4.5% of GDP*

@ Assuming a real growth rate of GDP of 8% and projected population figures provided by the Registrar General of India.

[d] The phenomenon known as adverse selection is a particular type of market failure common to health insurance. Effective risk protection requires that the prepaid pool includes a diverse mix of health risks. Left to purely individual choice, however, healthier individuals will tend not to prepay, while sicker individuals will join (assuming that they can afford it). This leaves the prepaid pool with a much costlier population than the average in the population, and as a result is not financially stable.

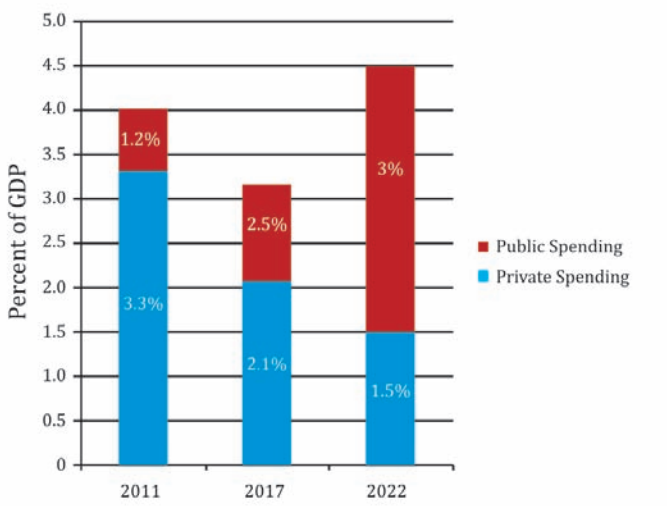
Even if we assume that the combined public and private spending on health remains at the current level of around 4.5% of GDP, this will result in a five-fold increase in real per capita health expenditures by the government (from around Rs. 650-700 in 2011-12 to Rs. 3,400-3,500 by 2021-22). There will also be a corresponding decline in real private out-of-pocket expenditures from around Rs. 1,800-1,850 in 2011-12 to Rs. 1,700-1,750 by 2021-22 (Figure 1).

FIGURE 1: PROJECTED REAL PER CAPITA HEALTH SPENDING IN INDIA AT CURRENT PRICES (2009-2010)



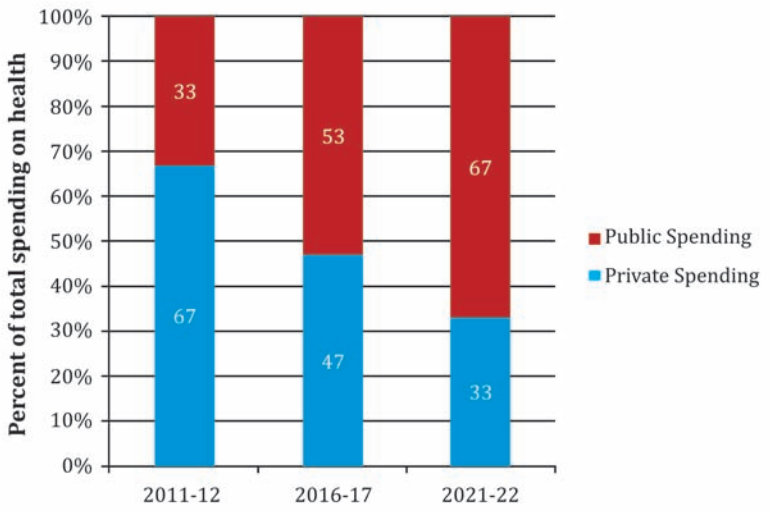
Such a planned expansion in public spending on health, if spent judiciously, could change significantly the patterns of public and private spending on health in India (Figure 2).

FIGURE 2: PROJECTED SHARE OF PUBLIC AND PRIVATE SPENDING IN INDIA



Increased public expenditures, in our estimate, could potentially lead to a sharp decline in the proportion of private out-of-pocket spending on health - from an estimated 67% in 2011-12 to around 33% by 2022 (Figure 3) if the increased public spending is implemented in a way that substitutes for much of current private spending.

FIGURE 3: PROJECTED PROPORTIONS OF PUBLIC AND PRIVATE OUT-OF POCKET EXPENDITURES



The resulting impact of increased public spending on human poverty - in terms of transforming quality, improving access to health care and reducing sharply the burden of private out-of-pocket expenditures - is likely to be sizeable and significant.

Recommendation 2: Ensure availability of free essential medicines by increasing public spending on drug procurement.

Availability of most essential drugs in India is not a serious concern. India is also a global leader in the production and supply of generic medicines at affordable prices. However, low public spending on drugs and the consequent non-availability of free medicines in government health care facilities are major factors discouraging people from accessing public sector health facilities. Addressing this deficiency by ensuring adequate supplies of free essential drugs is vital to the success of the proposed UHC system. We estimate that an increase in the public procurement of medicines from around 0.1% to 0.5% of GDP would ensure universal access to essential drugs, substantially reduce the burden of private out-of-pocket expenditures and provide much-needed financial risk protection for households. Increased spending on drugs needs to be combined with a pooled public procurement system to ensure adequate supplies and rational prescription of quality generic drugs by the public health system. Distribution and availability of quality medicines across the country could be ensured by contracting-in of private chemists.

Recommendation 3: Use general taxation as the principal source of health care financing – complemented by additional mandatory deductions for health care from salaried individuals and tax payers, either as a proportion of taxable income or as a proportion of salary.

For a lower & middle-income country like India, with millions of self-employed and under-employed people working predominantly in the unorganised sector, general taxation is the most viable option for mobilizing resources to achieve the target of increasing public spending on health and creating mechanisms for financial protection for all. The conditions necessary for other methods of financing, such as payroll or social security contributions to generate sufficient revenues on their own (large formal sector employment, significant payroll or social security contribution and strong tax collections) are not present in India, and will be slow to emerge over the coming decade. Given the significant social benefits from health care, it would be appropriate to finance it through general taxation.

Special efforts should be made to increase revenues through tax administration reform and, in particular, improved information system for taxes at both central and state levels. The tax ratio in India at a little over 15 per cent of GDP is lower than the average for countries with less than USD 1000 (18%) and substantially lower than the average for middle income countries (22% for countries with per capita income between USD 1000 and USD 15000). The enactment of a Direct Taxes Code (DTC) and the introduction of Goods and Services Tax (GST) could improve the revenue productivity of the tax system. Another important area for improving the tax productivity is to review all tax incentives and undertake measures to reduce arrears in taxes.

While improving the tax-to-GDP ratio is necessary, it is equally important to increase the share of overall public spending devoted to health. As noted, India devotes among the lowest proportion of total public spending to health – at or below 4.4% of total government spending between 1999 and 2009 according to WHO data, and in 2009. Only 9 countries (out of 191) devoted a smaller share of government spending to health than did India.

Moreover, looking into the future, given that (i) both the organised sector base and the tax-payer base are likely to grow; (ii) the efficiency of tax collections is improving; and (iii) the goal is to offer cashless health care to all sections of the society, it would be appropriate to complement general taxation with a specific surcharge on salaries or taxable income to pay for UHC. This will also obviate the need to levy user charges on the 'rich' at the point-of-care since they would have contributed to it through a pay roll or taxable income surcharge.[6]

This combines equity considerations with a feasible way of increasing the size of the prepaid pool, so that the final revenue mix would contain discretionary transfers from general budget revenues and also possibly earmarked funds for UHC coming from the payroll tax or surcharge.

Recommendation 4: Do not levy sector-specific taxes for financing.

Revenues from specific sources could be potentially earmarked to finance health care. These include, for instance, sector-specific taxes such as a yearly charge of 0.05% on the banks' balance sheets as in United Kingdom, a mineral resources rent tax as in Australia, a special VAT levy in Ghana, tobacco and alcohol taxes, or heavy taxes on petroleum products.

However, in our view, these options may not be appropriate for India for the following reasons:

a) None of these options is likely to meet substantially the financial requirements of Universal Health Coverage.
b) The practice of earmarking financial resources distorts the overall fiscal prioritisation.
c) Given that most public revenues are fungible, earmarking from a specific tax may not actually add to the health budget if the increased funds from the earmark are offset by reductions from discretionary revenues.

d) Though earmarking is not desirable, higher taxes on tobacco and alcohol have the public health benefit of reducing consumption of these harmful products, while adding to the general revenue pool. However, dependence upon revenue mobilisation from such sin and sumptuary taxes is fraught with perverse incentives. Securing more resources for health sector would, for instance, require increased consumption of alcohol and tobacco products both of which are undesirable.

We, therefore, recommend that additional resources for increasing public investments in health (and other social services) should be generated by enhancing the overall tax-to-GDP ratio by widening the tax base, improving the efficiency of tax collections, doing away with unnecessary tax incentives, and exploring possibilities of reallocating funds to health.

Recommendation 5: Do not levy fees of any kind for use of health care services under the UHC.[f]

We recommend that user fees of all forms be dropped as a source of government revenue for health.[g] This view is strongly endorsed by Jeffrey Sachs and others, including the authors of the Report of the Millennium Development Goals project who contend that ending user fees for basic health care in developing countries can guarantee a 'quick win'.[9] Recent global experience points to several drawbacks of user fees:

a) Imposition of user fees in many low and middle income countries has increased inequalities in access to healthcare.[10]

b) Modest levels of fees have led to sharply negative impacts on the usage of health services even from those that need them. For example, a full course of antibiotics may not be taken in order to save money, leading to avoidable illnesses and long-term drug resistance build-up.[11] User fees also deter consumption of medical care, without necessarily distinguishing between excessive and unnecessary medical care.

c) User fees have not proven to be an effective source of resource mobilization. The administrative costs of collecting user fees tend to be high relative to the revenues generated, especially when a significant share of users receive exemption due to poverty.[12]

d) There are practical challenges of means-testing and errors of inclusion and exclusion associated with identifying the economically weaker sections of society.

e) Given that people in India already pay a substantial amount out-of-pocket, whether to private providers or in the form of informal payments in public facilities, a differential fees model which charges different fees to people in different economic levels in a society was considered as an approach for leveraging user fees as a financing mechanism and improving the fairness and transparency by which people contribute. However, it would be very difficult to provide equitable services to all economic sections of the society through a differential fee arrangement

f) Limiting corruption and administrative costs associated with receiving payments at the point of care, makes it difficult to implement a program based on differential fees. That money may be charged from some people opens the room for rent-seeking (illegal under-the-table payments) at the point-of-care from the poor.

g) As a practical and political issue, increasing official user fees, when they are so low and yet impose

[e] Indian incomes are so low and so skewed that a large proportion of the population finds even routine health care expenditure "catastrophic" (defined by the WHO as more than 40% of net disposable income after meeting other essential needs).[7,8] It is not so much the absolute availability of financial resources itself, but the need to find money at the point-of-care that most often has catastrophic consequences.

[f] **One of the HLEG members differed with this recommendation, because he was of the considered view that persons who can afford to pay should be charged for tertiary care services.**

[g] This would include charges under the Rogi Kalyan Samiti scheme, voluntary donations directly made to hospitals and those levied for the use of improved facilities such as room and board.

financial barriers to access, would be politically and practically difficult to justify. The benefits of such an effort are unlikely to be worth the (financial, administrative and political) costs.

h) User fees can sometimes be employed as a means of limiting excessive consumption of unnecessary healthcare but there are other approaches such as effective triaging, providing preventive care etc. that are more effective in controlling this issue.

i) The implication of mandatory deductions to pay for health care from tax payers and salaried employees, over and above the general income taxes (which would be pooled along with the other tax resources) is that the non-poor will end up paying for these services in any case but will be insulated from the need to pay at the point-of-care.

j) Out-of-pocket payment at the point of care is the most important reason why healthcare expenses turn catastrophic for all healthcare users.[7, 8] As a result, user fees that tend to have an out-of-pocket character are not desirable even from even those that can afford to pay them.

Therefore overall, user fees would not be desirable for the proposed vision of the UHC programme.

Recommendation 6: Introduce specific purpose transfers to equalize the levels of per capita public spending on health across different states as a way to offset the general impediments to resource mobilization faced by many states and to ensure that all citizens have an entitlement to the same level of essential health care.

Improvements in health status depend critically upon augmenting public spending on health generally, and substantially in low income states. This is because analyses of public health expenditures and health outcomes reveal that:

a) health indicators are poor in low per capita income states implying that health expenditure needs in low income states are much larger than in states with higher per capita incomes; an

b) actual expenditures on health care in low income states are substantially lower than in high income states.

It has been the practice by the central government to augment the financial resources of state governments through the modality of the National Rural Health Mission and RSBY. The fundamental rationales for the central transfers are to (i) ensure that all states devote sufficient resources to ensure the NHP for their entire population; and (ii) reduce inequalities in access and financial protection arising from the fact that poorer states have lower levels of government health spending than do richer states.

There is a strong case for augmenting specific purpose transfers from the Centre to states and designing an appropriate transfer scheme to reduce the disparity in the levels of public spending on health across states. The specific purpose transfer scheme by augmenting health spending should ensure that a basic package of health care services is available to every citizen in every state across the country. Moreover, ensuring basic health care services to the population, like poverty alleviation or universalising elementary education, has nation-wide externalities, and is also consistent with principles of equity. Therefore, although implementation of the provision of basic health services has to be done at sub-national (state) levels, a substantial proportion of financing of these services can and should come from the Central government. In other words, the Central government should (as in the case of Sarva Shiksha Abhiyan) provide adequate funding for provision of basic primary and secondary health care services. The extent of Central and state contributions should depend on the perceived degree of nation-wide externality versus state-wide externality.

It is, however, important while designing such a transfer scheme to ensure that states do not substitute Central transfers for their own contribution to health and continue to assign priority to health even as they receive Central funds. It would be necessary to ensure that states not only continue to contribute as much as they do now, but also increase these proportions

consistently over the years. In other words, the transfers received from the Central government along with the matching contribution by the states should constitute additional public spending on health - and should not be used to substitute spending from own resources by the states.

With states sharing two-thirds of the overall public spending in the country, this would be a necessary condition for reaching the target level of public spending on health of 3% of GDP across the country by 2022. If sharing of public spending by the States and the Centre continue in the ratio of 2:1, expenditure by the States and the Centre in per capita terms (in 2009-10 prices) and as a share of GDP are likely to be as follows (see Table 4):

TABLE 4. PROJECTED SHARE OF CENTRE-STATE HEALTH EXPENDITURES: 2010-2022

	2011-12	2016-17	2021-22
As % share of GDP			
Total Public expenditure on health	1.2	2.4	3.0
- Of which share of Centre (1/3)	0.4	0.7	0.9
- Of which share of States (2/3)	0.8	1.7	2.1
As % share of total public spending	4.1 (2009)	6.9-7.1	8.3-8.9
Total per Capita public expenditure on health (Rs. In 2009-10 prices)	675	1,975	3,450
- Of which share of Centre (1/3) (Rs.)	225	658	1,150
- Of which share of States (2/3) (Rs.)	450	1,317	2,300

Source: HLEG Secretariat

An equalization scheme for transfer of funds from the Centre to the states should be equitable, should ensure full utilization of the funds allocated, and should result in additional spending and not substitution of spending from states' own revenues. This is all the more important because, as noted earlier, the existing pattern of resource allocation by India's State and Central governments, collectively result in one of the lowest priorities given to health of any country in the world.

Box 1 presents an illustrative transfer scheme that is consistent with the overall level of public spending envisaged for the country and the cost-sharing ratio of 2:1 between the states and the Centre.

Box 1: An illustrative transfer scheme

1. Classify states into two categories:

   Category A:
   Non-high focus states as classified under the National Rural Health Mission (list of states in Table 3)

   Category B:
   High focus states as classified under the National Rural Health Mission (list of states in Table 3)

2. Estimate the incremental expenditures required for providing the basic entitlement package (of selected primary, secondary and tertiary health care services) to every citizen.

3. Preliminary estimates by the Public Health Foundation of India for 2020 suggest that the cost of providing the entitlement package (at 2008-09 prices) will be around: Rs. 1,500 per capita for general category states; and Rs. 2,000 per capita in special category states.

4. Cost sharing formula:
   Category A states:
   The Centre shall meet 60% of the incremental expenditures required for ensuring the basic entitlement package.
   Category B states:
   The Centre shall meet 90% of the incremental expenditures required for ensuring the basic entitlement package.

5. To be eligible to receive Central funding:
   - states with health expenditures, as percentage of their GSDP, less than the all-state average (separately for general category and special category states) will have to incrementally increase it to the average level;
   - states with more than average proportions should continue to maintain these proportions. Additionally, all states will have to increase their health spending by 1% of GSDP by 2020.

Table 5 shows (on the next page) the State wise distribution of funds for different states using the formula for transfers outlined in Box 1.

TABLE 5. ILLUSTRATIVE SPECIFIC TRANSFER SCHEMES ACROSS DIFFERENT CATEGORIES OF INDIAN STATES

States	Per capita public spending health 2019-20** (Rs)	Required per capita normative expenditure (Rs.)	Additional per capita expenditure required to meet normative expenditure	Share of State (%)	Share of Centre (%)	Per capita States expenditure required for meeting the gap from the norm (Rs. per capita)	Per Capita Centre expenditure required for meeting the gap from the norm (Rs. per capita)
GENERAL CATEGORY STATES (as classified under the National Rural Health Mission)							
Bihar	356	1,500	1,144	10	90	114	1,029
Uttar Pradesh	450	1,500	1,050	10	90	105	945
Madhya Pradesh	352	1,500	1,148	10	90	115	1,033
Assam	482	1,500	1,018	10	90	102	916
Jharkhand	468	1,500	1,032	10	90	103	929
Rajasthan	563	1,500	937	10	90	94	844
Odisha	590	1,500	910	10	90	91	819
Chattisgarh	656	1,500	844	10	90	84	760
West Bengal	522	1,500	978	40	60	391	587
Andhra	822	1,500	678	40	60	271	407
Karnataka	795	1,500	705	40	60	282	423
Kerala	1,061	1,500	439	40	60	176	264
Tamil Nadu	1,063	1,500	437	40	60	175	262
Punjab	953	1,500	547	40	60	219	328
Gujarat	1,104	1,500	396	40	60	158	238
Maharashtra	1,355	1,500	145	40	60	58	87
Haryana	1,226	1,500	274	40	60	110	165
SPECIAL CATEGORY STATES (as classified under the National Rural Health Mission)							
Arunachal Pradesh	3,563	2,000	0	10	90	0	0
Goa	3,148	2,000	0	40	60	0	0
Himachal Pradesh	1,845	2,000	155	10	90	15	139

Contd...

TABLE 5. ILLUSTRATIVE SPECIFIC TRANSFER SCHEMES ACROSS DIFFERENT CATEGORIES OF INDIAN STATES

States	Per capita public spending health 2019-20** (Rs)	Required per capita normative expenditure (Rs.)	Additional per capita expenditure required to meet normative expenditure	Share of State (%)	Share of Centre (%)	Per capita States expenditure required for meeting the gap from the norm (Rs. per capita)	Per Capita Centre expenditure required for meeting the gap from the norm (Rs. per capita)
J&K	1,160	2,000	840	10	90	84	756
Manipur	571	2,000	1,429	10	90	143	1,286
Meghalaya	979	2,000	1,021	10	90	102	919
Mizoram	4,500	2,000	0	10	90	0	0
Nagaland	N.A.	2,000	N.A.	10	90	N.A.	N.A.
Sikkim	3,049	2,000	0	10	90	0	0
Tripura	1,108	2,000	892	10	90	89	803
Uttarakhand	2,292	2,000	0	10	90	0	0
A & N Islands	N.A.	2,000	N.A.	40	60	N.A.	N.A.
Chandigarh	N.A.	2,000	N.A.	40	60	N.A.	N.A.
Delhi	2,855	2,000	0	40	60	0	0
Pondicherry	2,549	2,000	0	40	60	0	0

*** Assuming that until 2020, Gross State Domestic Product (GSDP) will grow at average real compound growth rate in the period 2004-05 to 2009-2010 and states will continue to spend the same share of GSDP on health in 2020.*

Recommendation 7: Accept flexible and differential norms for allocating finances so that states can respond better to the physical, socio-cultural and other differentials and diversities across districts.

A major factor accounting for the low efficiency of public spending has been the practice of the Central government to develop and enforce uniform national guidelines for similar transfers for health across all states. Such a practice fails to take into account India's diversity and contextual differences. It also fails to properly incentivize state governments to draw up their own health plans in keeping with the needs of communities. We, therefore, recommend that the Central government should adopt a fiscal transfer mechanism that allows for flexible and differential financing from the Central government to the states. This will also allow for Central transfers to better meet the diverse requirements of different states, and enable states to develop health plans that are consistent with the health care needs and requirements of their populations.

Recommendation 8: Expenditures on primary health care, including general health information and promotion, curative services at the primary level, screening for risk factors at the population level and cost effective treatment, targeted towards specific risk factors, should account for at least 70% of all health care expenditures.

We envisage a major role for primary health care in the UHC system. There are therefore a number of reasons for recommending specific earmarking of resources for primary health care:

a) The coverage of essential primary care services for maternal and child health, vision, oral health and hearing continues to remain inadequate.

b) The infectious disease burden continues to be very high in several parts of the country. Early identification and treatment of these diseases coupled with prevention at the community level are the only ways to reduce this burden.

c) The widespread burden of malnutrition including easily treatable conditions such as iron deficiency and anaemia can only be dealt with at the primary care level.

d) The surge in chronic illnesses, along with unipolar depression, cardio-vascular disease and diabetes are rapidly becoming dominant burdens of disease.

e) An ageing population will require home-based or community-based long-term care.

We, therefore, recommend earmarking at least 70% of public expenditures, both in the short-term and over the medium term, for preventive, promotive and primary health care. This is absolutely essential - especially if we want to offer the UHC system with modest levels of allocations of government resources and, as a nation, reap the full benefits of UHC.

Recommendation 9: Do not use insurance companies or any other independent agents to purchase health care services on behalf of the government.

Having recommended that (i) general taxation and other deductions from the non-poor would be pooled to provide UHC; and that (ii) private voluntary contributions and out-of-pocket expenditures or user charges should not be the means to finance UHC, this recommendation deals with how pooled funds can be used to provide and, if necessary, purchase health care. This is perhaps the most important determinant of long-term health outcomes and has several long-term and short-term cost implications for the country.

Indian states have experimented with several ways of providing and purchasing health care. In the context of delivering UHC, we have examined three options:

a) Direct provision: All the resources mobilised for the UHC system are transferred to the relevant Ministries and Departments of Health for the direct provision of all services.

b) Direct provision plus contracted-in services: All the resources mobilised for the UHC system are transferred to the relevant Ministries and Departments of Health which in turn offer services through a judicious mix of direct provision and purchase of services from the private sector.

c) Purchase by an independent agency: All the resources mobilised for the UHC system are transferred to an independent agency (such as an insurance company); or a government department (such as the Ministry of Labour); or a specially constituted Trust, with its own management structure, which can then purchase health care services from either the Ministries and Departments of Health or the private sector.

We have made the case for complementing the direct provision of health services by the government with the purchase of additional services from contracted-in private providers by the government. This, we have argued, is more practical and desirable than relying exclusively on direct provision of health services by the public sector.

Concerns are often expressed about the capacity of the Ministries and Departments of Health to either directly provide health care services or purchase them from the private sector. The use of third parties such as insurance companies to purchase health care services from both the government and the private sector and to allow insured-customers to freely choose providers from whom to seek services, therefore, offers an alternative model. This is demonstrated by the rapid spread of insurance schemes such as the Rajiv Aarogyasri Community Health Insurance Scheme or the Rashtriya Swasthya Bima Yojana (RSBY) across several states. However, in formulating our recommendations, we have kept the following design principles in mind:

a) Universal and easy access: There should be universal and easy access to high quality curative services combined with a full roll out of highly cost-effective preventive and promotive interventions at the primary care level.

b) Adequate supply: There should be an adequate supply of secondary and tertiary care services of sufficient quality to meet the needs of the population under the UHC system.

c) Well integrated care: The secondary and tertiary care that is provided should be well integrated with primary care to ensure careful management of the long-term wellbeing of the patient.

d) Cost containment: Secondary and tertiary care costs should be kept tightly under control so that they do not crowd out the rest of government health spending, especially given the importance of investing in primary care.

The use of insurance companies to expend government resources is an unusual model and there are very few examples of this globally. The key benefit of insurance as a mechanism to pool risks is not operative in this case since the use of tax based financing, coupled with a mandatory surcharge on taxable income, already effectively ends up pooling the contributions from the entire country with the richest and potentially the healthiest cohorts contributing the largest amounts. Without the risk pooling role, the principal tasks performed by the insurance companies are as follows:

a) Contracting-in of private and government hospitals.

b) Control of costs, through carefully designed fraud control and, with where necessary, pre-approval mechanisms.

c) Enrolment of customers, issuance of insurance cards to them and ensuring provision of services to them at the network hospitals.

d) Management of customer complaints and tracking of the cost and the quality of services that are provided by network hospitals.

The experience of RSBY has been that insurance companies, particularly those in the private sector, have performed these roles well and have gradually been able to address several of the lacunae regarding enrolment, utilisation levels and fraud control.

However, in our view, even though the use of insurance companies to purchase health care services does offer the possibility of addressing several of the capacity constraints of the Ministries and Departments of Health in the short-run, a continuance and expansion of this approach would, in the medium-term, lead to very suboptimal outcomes for the country. Our concerns arise due to serious design flaws:

a) The independent purchaser (in the case of most of these schemes, the insurance company) does not have any accountability for wellness outcomes of the overall population or at the individual level both in the case of infectious and chronic diseases. This accountability continues to rest with the Ministries and Departments of Health, which often have no role in the design of these schemes.

b) There is a serious danger that the overall health system will become excessively focused on

curative services especially as utilisation levels creep upwards and the supply of secondary and tertiary care facilities respond to the availability of money with insured customers. Since there will be no attempt to control the disease burden at the primary level, this could lead to rapid upward revisions in the underlying insurance premiums to the point of entirely consuming or even exceeding the total health budget of the country.[h]

c) Health care is a long-term service that needs to track and be responsive to very long-term outcomes, sometimes intergenerational. A standard insurance type purchasing mechanism which relies entirely on the customer to make all the health care decisions, is not well suited to do this.

d) There are strong linkages between curative, preventive, promotive strategies and systematic behaviour change efforts to reduce, for example, tobacco use and salt consumption and promote improved breast feeding practices. Here, while insurance companies could be persuaded to invest in some behaviour change communication messages (since there are no immediate benefits to the insurer of these strategies), in practice, the insurer tends to reflect the gradual increases in costs which are the consequence of dysfunctional behaviours in the form of increased premiums.

e) Chronic illnesses need long-term home or community based care and not necessarily at specific facilities. Traditional insurance type mechanisms (as opposed to Managed Care) are not well suited to purchasing and managing this type of care. They tend to produce excessive hospitalisation.[i]

f) Purchasing of health care services would need to be done at the district level on account of the wide variations in the health care status of individuals and associated causal factors. Insurance schemes that run on a state-wide basis do not take into account these differences and do not allow the district level health systems manager a sufficient degree of flexibility in managing budgets to respond to specific needs at the district level.

g) Insurance companies, given the short-term nature of the contracts that are necessary to exploit the benefits of competition for contracts, would have limited interest in investing in preventive-promotive services. Even where they do, they would focus on those aspects that reduce costs of care and not necessarily on those that improve the conditions of health and well-being.[j]

h) Moreover, we regard the underlying fee-for-service approach behind these models as a very important design flaw of this approach. It becomes necessary, therefore, to either explore a completely different approach towards the use of insurance companies and independent agents - more in the Managed Care Framework, where they take on explicit population level health outcome responsibilities or invest further in the capacity of the Ministries and Departments of Health to directly provide and purchase services from contracted-in private providers wherever necessary.[k] We favour the latter option.

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[h] The HLEG's discussions with insurance companies participating in RSBY suggest that this is already starting to happen in states such as Kerala where utilisation levels are rapidly moving upwards.

[i] For example, Bachman et al (2008)[13] evaluate "a managed care model developed for use by community-based providers to improve health care outcomes for low-income Latinos with disabilities and chronic illnesses. Through this model, Medicaid enrolees with special health care needs were identified and received enhanced primary care, on-site mental health and addiction services, care coordination, and support services based on their levels of need. The goal of the demonstration was to determine whether capitation would be a catalyst to transform typical primary care delivery processes to provide enhanced, culturally competent care to patients with complex health care and psychosocial needs. Despite a significant investment in out-patient services, the intervention was cost effective due to a dramatic decline in in-patient care for a few enrolees. For most enrolees, care was slightly more expensive due to enhanced out-patient medical and mental health care. Enrolees expressed high satisfaction with the intervention."

[j] On this issue, Professor Anne Mills, in a discussion with the HLEG pointed, out that: "While one may expect the insurance industry to wish to control costs (since cost inflation would make insurance increasingly unaffordable), their record in doing this across the world is very poor, partly because the industry simply passes on the consequences to households, eg in co-payments, deductibles, etc."

Recommendation 10: Purchases of all health care services under the UHC system should be undertaken either directly by the Central and state governments through their Departments of Health or by quasi-governmental autonomous agencies established for the purpose.

We recommend that the central and state governments (Departments of Health or specific-purpose quasi-governmental autonomous agencies with requisite professional competencies created by them) should become the sole purchasers of all health care services for UHC delivered in their respective jurisdictions using pooled funds from general taxation and other contributions. Provisioning of health services at primary, secondary and tertiary levels should be integrated to ensure equitable and efficient procurement and allocations. We believe that it is possible to substantially reform the manner in which Ministries and Departments operate so that they can become effective purchasers of health care services. District-specific assessment of health care needs and provider availability, communicated by the Director of District Health Services, should provide the basis for state level purchase of services. The example of the Tamil Nadu Medical Services Corporation, which has functioned as an efficient agency of the State in Tamil Nadu, could serve as a possible model.

Given the high levels of variation in the nature of the disease burden, we envisage, over time, a system where the responsibility for decision making is transferred to the level of the district within a state - with perhaps a few districts coming together to form a viable unit where the size of an individual district is suboptimal. Government should use, at the level of such a unit, (i) a combination of departmental and independent purchasing agents and (ii) contracting-in high quality care, such that users have an adequate degree of choice and national portability through the NHEC. State governments should transfer funds to the district and allow the District Health System managers to allocate the funds between public provision and purchase of services on a competing basis from contracted-in private providers, while tracking outcomes at the district level and holding these managers accountable for these outcomes. We recognize the limited capacity within government and envisage that, to begin with, purchases may need to be centralized at the state level. However, over time, it is possible to foresee a system where the district health system managers may eventually be able to purchase and enhance quality of care by using a variety of methods and also keep costs as well under control.

State governments should consider experimenting with arrangements where the state and district purchase care from an integrated network of combined primary, secondary and tertiary care providers. These provider networks should be regulated by the government so that they meet the rules and requirements for delivering cost effective, accountable and quality health care. Such an integrated provider entity should receive funds to achieve negotiated predetermined health outcomes for the population being covered. This entity would bear financial risks and rewards and be required to deliver on health care

[k] Hsiao (2007)[14] expresses the view that market based competition between health insurers does not improve outcomes (gives United States as the most celebrated example of its failure amongst OECD countries) but such competition for the provision of health care itself "may hold the potential for more efficient and high quality care" and strongly argues against the use of health insurance to purchase any kind of health services on four grounds: (a) risk selection and selective rejection of claims by insurers. Mandatory enrolment and technology based cashless policies issued under RSBY in India seem to have taken care of this issue - however it remains to be seen how are the premiums that need to be sustainably charged to make these schemes viable for insurers. He suggests that both United States and Chile have however ended up in this situation owing to their reliance on insurance companies as purchasers of health care; (b) high transactions costs implied by the use of insurance companies relative to other direct and indirect methods of purchase of health care by the government. He cites numbers as high as 31% for the United States which uses private insurance to purchase health care versus only 16% for Canada which relies on a single payer social insurance system; (c) very high health care cost inflation that in his view is the inevitable consequence of the use of insurance style purchasing - he argues that while on average growth rate in health care spending across developed nations exceeds average GDP growth rate by 2.08%, he shows that in countries such as the United States and Germany which rely on insurance companies this rate is far higher than in Canada and United Kingdom which rely on Single Payer models.; and (d) no incentives for investment in preventive promotive health care strategies.

and wellness objectives. Ideally, the strengthened District Hospital should be the leader of this provider network.

Recommendation 11: All government funded insurance schemes should, over time, be integrated with the UHC system. All health insurance cards should, in due course, be replaced by National Health Entitlement Cards. The technical and other capacities developed by the Ministry of Labour for the RSBY should be leveraged as the core of UHC operations – and transferred to the Ministry of Health and Family Welfare.

Smoothly transforming the RSBY over time into a universal system of health entitlements and building on its existing capacity and architecture to issue citizens with a National Health Entitlement Card with a minimum amount of disruption, would in our view be the best way forward to satisfy the social objectives of both NRHM and RSBY. A high level of capacity has been developed within the Ministry of Labour for the management of the RSBY. This capacity should be utilized for the roll out of the UHC system even if the functions performed by the insurance companies will now be performed by the Ministries and Departments of Health.

Moreover, effective triaging and management of patients can ensure quick treatment times. Traditional insurance schemes, including those being funded by the government (such as RSBY and the Rajiv Aarogyasri Healthcare Insurance Scheme) are entirely focused on hospital networks rather than primary care services. The advantages of such a network design for consumers are a large supply of hospitals in the network and short waiting times for hospital admissions. However, since there is virtually no focus on primary level curative, preventive, and promotive services and on long-term wellness outcomes, these traditional insurance schemes often lead to inferior health outcomes and high health care cost inflation.

We wish to clarify at this stage that though the proposed UHC system shares a number of features with what is traditionally understood to be health insurance, there are a few critical differences that are a deliberate part of the design. These, in our view, are essential for realizing better health care access and cost outcomes. It can be seen from Table 6 that:

a) the system of Universal Health Coverage has all the characteristics of traditional health insurance on the risk pooling dimension along with financial protection;

b) the UHC system underscores the importance of an extensive and high quality primary care network and believes that this will then reduce considerably the need for secondary and tertiary facilities. The traditional insurance schemes, including those being funded by the government (RSBY and the Rajiv Aarogyasri Healthcare Insurance Scheme) are entirely focussed on hospital networks. The differences are in terms of provider network design;

c) the advantages of such a traditional insurance network design for consumers are a large supply of hospitals in the network and short waiting times for hospital admissions. However, since there is virtually no focus on primary level curative, preventive, and promotive services and on long-term wellness outcomes, these traditional insurance schemes most often lead to inferior health outcomes and high health care cost inflation;

d) the focus here, is on reducing disease burden faced by communities and to identify and treat illnesses early in their cycle. This is why we emphasise investing in primary care networks and holding providers responsible for wellness outcomes at the population level. This design requires relatively fewer secondary and tertiary care hospitals. A potential consequence of this, however, could be that those customers who choose to by-pass their primary care physician and go directly to hospitals may encounter queues and waiting

times. The expectation is that such queues would only be for elective and non-emergency surgeries and would act to persuade customers to return to their primary care physician as the first point of contact.

Table 6 presents a comparative picture of some of the features of selective existing insurance schemes and the proposed the UHC system.

TABLE 6. FEATURES OF SELECTIVE EXISTING INSURANCE SCHEMES AND THE PROPOSED UHC SYSTEM

	Voluntary Health Insurance	RSBY[16]	Rajiv Arogyasri[17]	The proposed UHC system
Risk Pooling	Yes	Yes	Yes	Yes
Risk Pooling Vehicle	Insurance Company	Government	Government	Government
Purchase of Healthcare	Insurance Company	Insurance Company	Insurance Company	Government
Cashless	Yes	Yes	Yes	Yes
Hospital Network	Very Large number of hospitals	Very large number of hospitals	Very large number of hospitals	Limited number of hospitals based on assessed need
Financial Protection	Limited to insured amount	Limited to Rs. 30,000 per year, per family upon hospitalisation only	Limited to Rs. 100,000 per year, per family upon hospitalisation only	No financial Limits. Covers all essential healthcare needs at all levels both in and out of the hospital
Primary Care Network	Limited to OPD at hospitals	Limited to OPD at hospitals	None	Extensive
Likelihood of waiting periods for non-emergency hospital admissions	Low	Low	Low	High
Integrated Care	No	No	No	Yes
Focus on Prevention and Wellness	No	No	No	Yes
Dominant Payment model to health provider	Fee for service[18]	Fee for service	Fee for service	Capitation[19]

Contd...

TABLE 6. FEATURES OF SELECTIVE EXISTING INSURANCE SCHEMES AND THE PROPOSED UHC SYSTEM				
	Voluntary Health Insurance	**RSBY[16]**	**Rajiv Arogyasri[17]**	**The proposed UHC system**
Regulation of Quality	Largely focussed on financial fraud prevention	Largely focussed on financial fraud prevention	Largely focussed on financial fraud prevention	Much more detailed input and outcomes based regulation
Private Sector Engagement	Yes	Yes	Yes	Yes
Primary Care	Extremely Limited	Extremely Limited	No	Yes. Unlimited
Secondary Care	Within Financial Limits	Within Financial Limits	No	Yes. National Health Package. No Financial Limits
Tertiary Care	Within Financial Limits	No	Within Financial Limits	Yes. National Health Package. No Financial Limits
Gatekeeping Function[20]	Third Party Administrator[21]	Third Party Administrator	Third Party Administrator	Primary care provider

The transition to the UHC system resulting from the above recommendations is captured in Table 7.

TABLE 7. TRANSITION IN HEALTH FINANCING AND INSURANCE TO UNIVERSAL COVERAGE			
	2011	**2017**	**2020**
Tax financing	Relatively low	Increasing	Relatively high
Private financing	Relatively high	Decreasing	Relatively low
Employer-employee contribution	Relatively low	Increasing	Relatively high
Coverage	Mostly rich and targeted poor	Expanded coverage to include poor and other targeted communities	Universal
User fees	Prevalent	Eliminated	Eliminated

TABLE 7. TRANSITION IN HEALTH FINANCING AND INSURANCE TO UNIVERSAL COVERAGE			
	2011	**2017**	**2020**
Central Government insurance schemes	Large numbers catering to different groups; little communality	Reduced in numbers; merged with the UHC system	None - and integrated fully with the UHC system (including CGHS, ESIS and other schemes for the rail-ways and other public sector institutions)
State government insurance schemes	Option open subject to state government financing	Option open to top up Central Government's UHC-National Health Package (NHP) funding subject to state government financing	Option open to top up Central Government's UHC-NHP funding subject to state government financing
Private (including community-based) insurance schemes	Large variety with option to individuals to top up government coverage	Large variety with option to individuals to top up government coverage	Large variety with option to individuals to top up government coverage

Two final comments: ***One***, clear cut guidelines as well as adequate checks and balances should be developed for both public provision as well as the effective contracting-in for the provision health care at all levels. ***Two***, a common IT-enabled information gathering, monitoring and networking system is critical for the effective implementation of the UHC system. Both these are discussed in the chapter on Management and Institutional Reforms.

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Chapter 2

Access to Medicines, Vaccines and Technology

1. The Role of Medicines in Achieving Universal Health Coverage

Medicines are a major component of modern health systems today and have helped to significantly reduce the burden of deaths and disease the world over. Despite the availability of adequate knowledge, technology and skills to innovate and develop new drugs, the global community faces tremendous challenges in prioritizing and delivering essential medicines to vulnerable populations who are in urgent need of them, while limiting the consumption of non-essential and expensive medicines by those who do not need them.

The past six decades of health and drug policies in India reflect this trend and highlight these challenges. The 20 year period between 1950s and early 1970s witnessed high drug prices and the dominance of transnational drug companies. This eventually gave way to a self-sufficient era post-1970s. However, since the initiation of market friendly economic reforms, drug prices have risen significantly. India's drug market structure is presently vulnerable to control by multinational companies who are beginning to take over the dynamic domestic generic drug industry.

Due to under-investment in public health and under-funding of drug procurement, many Indians are experiencing an impoverishment and are driven to debt and asset loss. Targeted approaches have not yielded results and have even led to distortion of the health system. Access to health care and to drugs must be therefore based on the principles of universalism, equity, efficiency and quality. The primary objective of any strategy in providing universal access to medicines is to remove financial risks and make prepayment a prerequisite. This must be complemented by cross-subsidising those who cannot afford medicines (poor and non-poor alike).[1]

Governments need to commit a higher level of spending on drugs to reduce inter-state and inter-district disparities in drug spending which become barriers to access and affordability. Advancing the cause of Universal Health Coverage is predicated on the assumption that efficient use of resources will be achieved. Unnecessary spending on non-essential medicines has to be reduced and irrational use eliminated. Improving overall governance and accountability of medicine supply system is absolutely essential to make medicines available to one and all.

2. Situational Analysis

a) Barriers to Access to Medicines, Vaccines and Technology

India's drug policies over the years have created an environment of duality. The country not only produces enough drugs to meet domestic consumption, but as one of the largest exporters of generic and branded drugs, is also known as the 'global pharmacy of the south.' India exports life-saving drugs to developing countries and also supplies quality drugs to the rich nations at affordable prices. Despite this seemingly commendable performance, millions of Indian households do not have access to drugs.[2] This results from both financial (lack of the necessary purchasing power) and physical (lack of public health facilities) barriers.

Evidence from large sample surveys of households over the last 25 years suggests that the impediments to access of medicines have become steeper. During the mid 1980s, approximately a third of the drugs prescribed during hospitalisation were supplied for free. This declined sharply to only about 9 % by 2004. Free drug supply for out-patient care has fallen from 18 % to about 5 % over the same period (see Table 1).

TABLE 1. TRENDS IN ACCESS TO MEDICINES IN INDIA — 1986-87 TO 2004

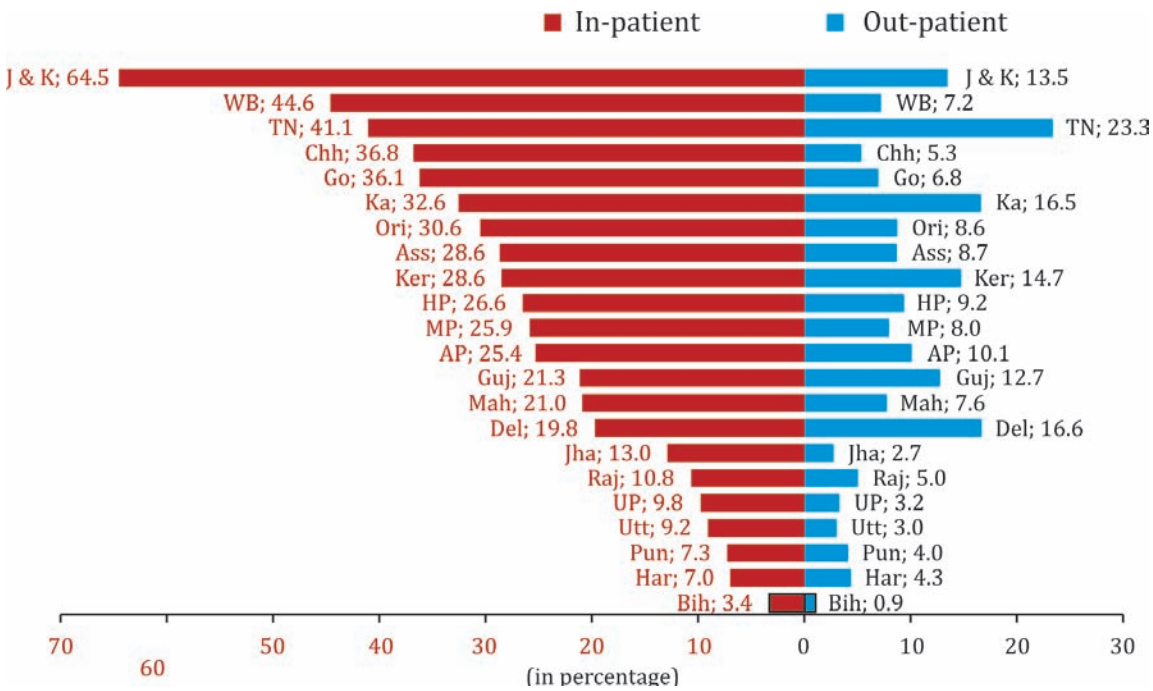
Period	Free Medicines	Partly Free	On Payment	Not Received	Total (In %)
In-patient					
1986-87	31.20	15.00	40.95	12.85	100
1995-96	12.29	13.15	67.75	6.80	100
2004	8.99	16.38	71.79	2.84	100
Out-patient					
1986-87	17.98	4.36	65.55	12.11	100
1995-96	7.21	2.71	79.32	10.76	100
2004	5.34	3.38	65.27	26.01	100

Source: Health data extracted from National Sample Survey Rounds 60, 52, and 42.[3-5]

During the same period, the number of hospitalisation episodes in which an ailing population paid out-of- pocket (OOP), has risen dramatically from about 41 % to close to 72 %. As far as out-patient care is concerned, the proportion of drugs fully purchased by households decreased from as high as 80% in the mid-1990s to 65 % in 2004. Table 1 shows that since medicines have started becoming unaffordable since the mid-1990s, by 2004, in over one-fourth of out-patient episodes, patients did not receive medicines because they could not afford them.

Figure 1 shows how heavily the Indian population is dependent on private chemists. The availability of free or partially free drugs in out-patient care is extremely low. This highlights the limited protection offered by the government and the preponderance of private players in drug prescription and dispensing. State-wise evidence from Figure 1 shows that people in some of the southern states appear to have relatively better access to medicines than in the other states. The success of the Tamil Nadu Medical Services Corporation (TNMSC) model is clearly reflected in the proportion of people able to obtain medicines free/ partly free from public health facilities. The Tamil Nadu figure is close to 25% in the case of Tamil Nadu, followed by Karnataka, Kerala and Delhi. The lower percentage share in other states indicates higher reliance on private chemists.

FIGURE 1: STATE-WISE BREAK-UP OF FREE/PARTLY FREE MEDICINES FROM PUBLIC HEALTH FACILITIES DURING 2004

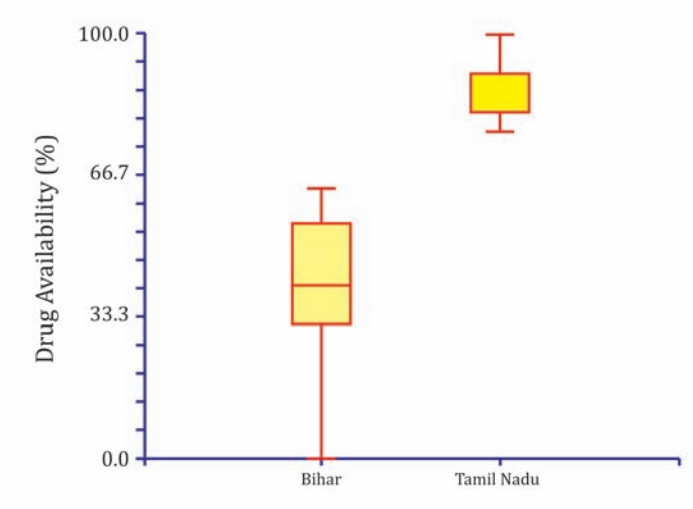


Source: Data extracted from Unit Level Records of Health Surveys of NSSO, 2004[5]

Published literature on drug availability and drug stock-outs in India is limited.[6-8] Cameron et al. (2008) show that the median availability of critical drugs in the public health system was about 30% in Chennai, 10% in Haryana, 12.5% in Karnataka, 3.3% in Maharashtra (12 districts) and 0% in West Bengal.[8] In Rajasthan, Lalvani et al. (2003) point out that the Essential Drug List (EDL) was inadequately implemented, resulting in the availability of essential drugs only to the extent of about 45%.[6] However, when EDL was expanded to include health facility lists, drug availability improved to about 76%. Further, their study also revealed that public facilities recorded out-of-stock drugs much more often (about 17% of the days) than the non-governmental health facilities (roughly 3% of the days).

A recent study of Tamil Nadu and Bihar by Selvaraj et al. (2010) shows that the mean availability of the basket of EDL drugs for Bihar on the day of the survey was about 43% as against roughly 88% for Tamil Nadu.[9] As far as drug stock-outs were concerned, Bihar's health facilities registered an average of 42% stock-outs, with a mean duration of 105 days, in the previous 6 months of the survey period. On the other hand, the proportion of drug stock-outs for Tamil Nadu stands at around 17%, with an average duration of about 50 days (Figure 2).

FIGURE 2: COMPARATIVE ANALYSIS OF AVAILABILITY OF DRUGS ON DAY OF SURVEY IN BIHAR AND TAMIL NADU (%)



Source: Selvaraj et al. (2010)[9]

Box 1: Acute Shortages & Chronic Stock-outs: A Study in Contrast (2010)

- The average availability of a basket of essential drugs in Bihar was 43% as against 88% in Tamil Nadu;
- Bihar's health facilities registered an average of 42% stock-outs of drugs with a mean duration of 105 days;
- The proportion of stock-outs for Tamil Nadu stands around 17%, with an average duration of 50 days

Within each state, moreover, there are wide variations between districts, especially in the health facilities of Bihar. In terms of availability of drugs, the variation ranged from 0% for the district of Darbhanga to 63.64% for Vaishali. Similarly, the period of drug stock-outs ranged from 100% for Darbhanga and Muzzafarpur to 22.73% for Nalanda. In Tamil Nadu, medicine availability ranged from as high as 100% at Nammakal to the lowest recorded at 77% at Nagapattinam and Tuticorin, which is far above the average of Bihar.

India has traditionally been self-sufficient in vaccine production and is also an exporter of certain vaccines. Despite this, immunisation coverage in the country has been extremely limited. Evidence from the last two decades, drawn largely from National Family Health Surveys (NFHS 1-3), shows only a marginal increase in or stagnant coverage rates of immunisation. The Expanded Program of Immunisation (EPI) covers BCG, Polio, DPT, and measles. Full immunisation coverage, in children aged 12-23 months, stood at 44% in 2005-06 as against 42% in 1998-99. While eight economically advanced states reported a decline in immunisation coverage rates, a few backward states have reported marginally improved immunisation coverage rates during this period.[10] However, the recent shortages of vaccines in India created by the shutdown of vaccine producing Public Sector Units (PSUs) have raised doubts about maintaining self- sufficiency in vaccine production, especially for Universal Immunisation Program (UIP) vaccines.[11]

b) Factors Affecting Access to Medicines

Since access to essential medicines is a critical component of an effective health system, it is imperative that good quality and safe medicines remain accessible, available and affordable to the beneficiaries. However, many countries and regions face several barriers in expanding access to medicines. These include: 1) unreliable medicine supply systems; 2) poor quality of medicines; 3) irrational prescription, dispensing and use; 4) unaffordable drug pricing; 5) unfair health financing mechanisms; 6) inadequate funding for research in neglected diseases and finally; 7) a stringent product patent regime.[12]

i. Inefficient and Iniquitous Financing Mechanisms

An efficient financing mechanism in the health sector is predicated on the three principles of prepayment, risk-pooling and cross-subsidisation. Out-of-pocket (OOP) payment is the most inefficient way of financing, as all 3 principles are absent; while a tax-based financing mechanism relies on these 3 principles. India's underfunded public health system has, over the years, pushed households to rely largely on OOP spending as a mechanism of paying for health care. Currently, in India the ratio of private to public spending is nearly 4:1, with over 71% of all OOP expenditure of households accounted for by drugs alone.[13] Meanwhile, the current efforts of the Government (both Central and State governments) veer towards providing publicly-funded health insurance coverage to vulnerable populations for hospitalisation care.

It is argued that social health insurance could help provide financial risk protection to the population. The underlying focus of such health insurance schemes (the Central government sponsored Rashtriya Bhima Suraksha Yojana, Rajiv Aarogyasri in Andhra Pradesh, Vajpayee Aarogyasri in Karnataka and the Kalaignar scheme in Tamil Nadu) is hospitalisation coverage, which is intended to mitigate the problems of unpredictable low-frequency high-cost treatments. Available evidence, however, clearly points to the need for addressing OOP spending on out-patient care, especially on purchase of drugs by households. This arises from drip-by-drip household spending on drugs, which are a result of high-frequency low-cost treatment. None of the current health insurance schemes cover out-patient expenses.[14]

Under-funding has not only resulted in acute shortages and chronic drug stock-outs in the public health system, but also significant financial vulnerability for both the poor and non-poor. As a result of this, poor populations are pulled even deeper into poverty (poverty-deepening), while a large number of above-poverty line households are subsequently pulled below the poverty line every year.[15-17] In addition, a large section of society ends up making catastrophic payments for healthcare, leading to depletion of savings, sale of assets, and incurrence of debts from usurious moneylenders.

Public spending on drugs is extremely low, with huge variation between states and across districts within a state. As evident in Table 2, data from 2010-2011 indicates that about 10-12% of the health spending in the states of Tamil Nadu and Kerala goes towards procuring drugs as against the 2-3% spent on drugs by states like Jharkhand, Punjab and Rajasthan. While there has been a significant improvement in drug procurement in the state of Bihar during this period as a result of increased allocation of NRHM funds, the financial allocation for drug purchase by the government and level of drug allocation and procurement were extremely low in earlier years. Despite a recent steep rise, states like Bihar are still spending a very little (Rs. 8 per capita) on drugs.

Skewed priorities in drug spending by governments are a stark reality in several states. At the one end of the spectrum are states like Rajasthan and Odisha, which are reported to have spent over 90% of resources on tertiary care medicines, followed by states such as Gujarat, West Bengal and Punjab who have allocated over 70% of their drug expenditure on tertiary care drugs.[9] At the other end of the list are states like Chattisgarh, Tamil Nadu, Jharkhand and Karnataka, where over half of all drug spending has gone into primary and secondary care.

TABLE 2. TRENDS IN STATE WISE GOVERNMENT DRUG EXPENDITURE IN INDIA						
State Name	State wise Government Drug Expenditure in India					
	2001-02			2010-11		
	Overall (Lakh)	Per Capita (Rs.)	Drug Exp. as % of HE	Overall (Lakh)	Per Capita (Rs.)	Drug Exp. as % of HE
Assam	1530	5.7	4.7	8635	28.5	5
Bihar	2203	2.6	3.1	13350	13.8	7
Gujarat	2693	5.3	3.7	15431	26.4	7.6
Haryana	3096	14.7	9.8	6090	24.2	5.5
Kerala	12420	38.9	17	24861	72.3	12.5
Maharashtra	20305	20.8	11.3	20882	18.7	5.2
Madhya Pradesh	7921	13.0	11.8	12213	17.1	9.3
Punjab	916	3.7	1.4	1545	5.6	1
Rajasthan	9045	15.9	9.3	3854	5.7	1.5
Uttar Pradesh	7104	4.2	5.2	31481	15.9	5.3
Jharkhand	NA	NA	NA	2716	8.7	3.4
West Bengal	5798	7.2	4.3	21403	24.1	6.8
Andhra Pradesh	12704	16.6	9.6	23458	27.9	10
Karnataka	7783	14.7	7.9	14831	25.1	6.3
Tamil Nadu	18097	28.9	15.3	43657	65.0	12.2
Himachal Pradesh	NA	NA	NA	1122	16.6	1.9
Jammu & Kashmir	NA	NA	NA	4550	39.2	4.3
Central Government	72649	7	12.2	253368	21	15
All India	**188903**	**18**	**9.6**	**503447**	**43**	**13**

Source: HLEG Secretariat, based on state-wise Budget Documents and Demands for Grants.

Note: HE – Denotes Health Expenditure

ii. High Drug Prices

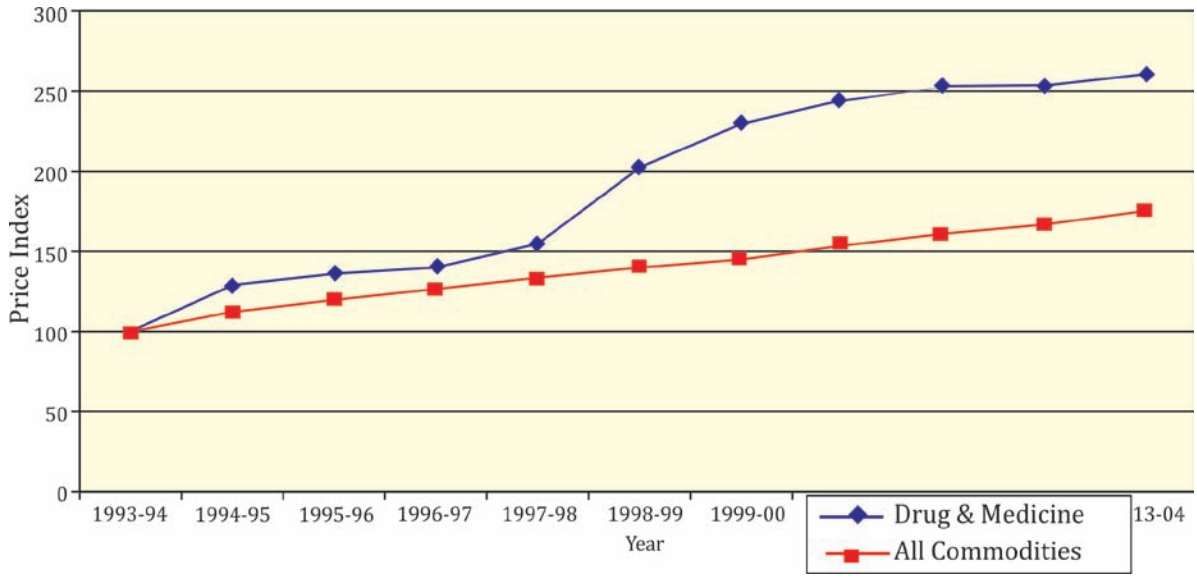
Drug prices play a significant role in the access to medicines, health service provision and financing particularly in low income countries dominated by the private sector and with weak to absent social health insurance systems. From a position of high drug prices in the pre-1970s era in India, rapidly growing domestic drug companies aided by effective drug policies are now capable of indigenously producing both bulk drugs and formulations, to a large extent. This has resulted in a situation in the country, where relatively speaking, drug prices are presently among the lowest in the world. However, policy changes in the 1990s reduced the coverage of drug price control from about 90% of the market in late 1970s to about 10% of the market in 1995.

Taking advantage of lax regulations on drug pricing, the pharmaceutical industry has been able to reap high margins through complex price setting activities. It has been observed that the price of a therapeutically similar drug could vary around 1000% between the most expensive and the cheapest brands.[18] Further, the variation between the market and procurement price of similar drugs could range anywhere between 100% to 5000%.[19]

Studies in the past few years have clearly demonstrated the effectiveness of price control. Sengupta et al. (2008) reported a nearly 40% increase in all drug prices between the period of 1996 and 2006.[18] During the same period, the price of controlled drugs rose only by 0.02% while the price of EDL drugs (Essential Drug List) rose by 15%. In contrast, the price of drugs that were neither under price control nor under the EDL grew by 137%. The price decontrol policies of the 1990s have contributed to an enormous price increase during the last 15 years.

Drug prices have shot up phenomenally, as shown in Figure 3 and have widened vis-à-vis general price trends during 1993-94 to 2003-04. The current practice of drug price control is based on cost-plus pricing. This can be an effective mechanism if the government is able to obtain cost data accurately. However, it is nearly impossible to get accurate cost data from companies, as it is not mandatory for them to provide such data. In the absence of precise cost data, pharmaceutical companies tend to project a higher base cost in the initial period, in addition to higher margins charged by manufacturers, wholesalers, stockists and retailers.

FIGURE 3: TRENDS IN PHARMACEUTICAL AND ALL COMMODITY PRICE INDEX



Source: HLEG Secretariat, Aggregated data from Respective Monthly Bulletin of Reserve Bank of India, Mumbai

When the list of medicines under price control is limited and close substitutes are not price controlled, companies find ingenious ways to circumvent price control. GlaxoSmithKline (GSK), for instance, markets 'Actified,' a drug used for cold and cough in India. While GlaxoSmithKline uses the active pharmaceutical ingredient pseudoephedrine in its global product 'Active,' in India it uses Phenylpropanolamine (PPA). PPA enhances the risk of cerebro-vascular accidents and has been banned in several countries, while pseudoephedrine is under price control in India.[18]

iii. Unreliable and Inefficient Procurement and Distribution Systems

While adequate allocation of funds is important, the concomitant presence of a reliable and efficient public procurement and distribution system is equally vital for avoiding shortages and drug stock-outs. In India, several different procurement mechanisms can be clearly identified: i) pooled procurement at the state level as in Tamil Nadu and Kerala, ii) decentralised procurement as in Chattisgarh; and iii) a combination of the two, as in Bihar. The procurement model of the Tamil Nadu Medical Services Corporation (TNMSC) has stood the test of time over the last 15 years, and has been hailed as the most efficient, reliable, transparent and replicable model (see Box 2). Neighbouring Kerala has adopted that model recently, while other states such Bihar, M.P. and Odisha are in the process of replicating it.

An efficient procurement system is characterised by pooled (centralised) purchasing of drugs at each state level and one at the central level. Currently the central government has four procurement agencies procuring drugs, vaccine and diagnostics. Several state governments procure drugs at district level with a rate contract. Given the fragmented nature of such purchases, price quotes are non-competitive, resulting in less value for money. Monopsony purchase can result in competitive buying practices as demonstrated in the Tamil Nadu and Kerala models.

It is often noted that states which do not follow the EDL in their procurement process create a scenario where physicians prescribe and dispense irrational drugs in the public health system, thereby compromising cost-effectiveness. During 2008-09, out of 239 drugs procured by the state of Bihar, only 82 drugs (34.89%) were found to be on the state EDL list (both in-patient and out-patient).[9] These accounted for approximately 71% of the state drug budget. Expenditure on procuring rate contract drugs, which are on EDL, was approximately 43% of the state's drug budget; while on the other hand, the rest of the funds (57%) are spent on non-rate contract drugs. Substantial

Box 2: Key Characteristics of Reliable & Efficient Medicine Supply Systems

- At least 15% allocation of public funding for health to drugs;
- State must procure all EDL medicines;
- Separate AYUSH, EDL and centralised procurement at state level;
- Prescription & Dispensing in accordance with Standard Treatment Guidelines (STG);
- A two-bid open transparent tendering process;
- Quality generic drugs ensured;
- Warehouses at every district level;
- An autonomous procurement agency for drugs, vaccines & diagnostics;
- An empanelled laboratory for drug quality testing;
- Enactment of Transparency in Tender Act;
- Prompt payments.

amounts of funds are not efficiently utilised, due to the system of decentralised procurement and distribution of drugs.[9]

Forecasting and procurement planning is critical to the cycle of drug procurement. Currently, several states do not have a forecasting or a planning mechanism for drug procurement. Evidence suggests that in Bihar, over a period of three years from 2005-08, the list of the drugs acquired in Bihar which were not on the EDL list or on rate contract, varied considerably. The number of drugs that were procured in 2007-08 was 369, as compared to 91 and 89 in previous two years.[9] All these factors invariably have an adverse effect on competition, price, quality, and the timely availability of drugs to frontline healthcare providers in the public health system.

The lack of overall governance and efficient administrative systems for the procurement and distribution of medicines is partly responsible for shortages and drug stock-outs. This can be improved through initiatives enhancing transparency and accountability of the system. The Tamil Nadu Medical Services Corporation (TNMSC) follows the Tamil Nadu Transparency in Tenders Act (43), 1998 and the Tamil Nadu Transparency in Tenders Rules, 2000. The Act and its Rules have clear and illustrative provisions for methods of tendering, publicity requirements, technical specifications, commercial conditions, evaluation criteria, place and time for receipt of tenders, minimum time for submission of bids, opening of bids, extension of tender validity, determination of the lowest evaluated price, preparation of the evaluation report and award of tenders. Such a system of transparency is absent in most Indian states.

iv. Widespread use of Irrational Medicines

India has the dubious distinction of having its pharmaceutical market flooded with about 90,000 formulation packs and brands.[19] The market is awash with irrational, non-essential and hazardous drugs. Of the top 10 products which accounted for 10% of the medicines sold in the market, two belong to the category of irrational vitamin combinations and cough syrup while the other is a liver drug of unproven efficacy. Ten of the top 25 products sold in India in 1999 belonged to one of these categories: blood tonic, cough expectorant, non-drug formulations, analgesics, nutrients, liver drug, etc. which are either hazardous, non-essential or irrational.[19] According to estimates available from DCGI (2007), about 46 banned Fixed Dose Combination (FDC) drugs continue to be marketed despite the ban.[20]

About 1067 FDCs are freely marketed with the state drug controllers' approval, but without the concurrence of the DCGI. The drug licensing approval for marketing is the prerogative of the DCGI, while state drug controllers are required to only approve manufacturing and selling license of drugs in the state. Drug makers conveniently circumvent this process by approaching state drug controllers for obtaining marketing approval licenses. Almost all the major medicine producers are engaged in producing irrational medicines. To further illustrate this point, during 2004, over 100 new combination drugs (FDCs) were introduced in the market, capturing a market share of Rs. 130 crore (Table 3).

A large number of these medicines are in segment pertaining to cardiac care. Table 4 profiles the changing pattern of drug consumption, which does not reflect the disease profile of our country. In addition, there has been a rapid increase in the range of lifestyle drug categories such as cardiovascular drugs, hormones, anti-diabetic drugs and nutraceuticals in the last few years. As an example, although 'alimentary & metabolism' drugs accounted for one-fourth of the market in the therapeutic drug category in 2006, the major segments within that category in 2006 were: i) anti-diabetic therapy, ii) vitamins and mineral supplements, iii) antacids and anti-flatulents, which accounted for 4.4%, 6.5% and 4.8%, respectively. Part of this increasing market share of such drugs also reflects the growing disease burden, especially diabetes. As far as systemic anti-infectives are concerned, this category accounts for one-fifth of the Indian pharmaceutical market.

TABLE 3. NEW INTRODUCTIONS INVOLVING COMBINATION THERAPIES, 2004				
New Combinations	**Category**	**Launch Date**	**No. of Brands**	**Value in Crores**
Aspirin + Clopidogrel	Cardiac	2002	23	40.9
Glimepiride + Metformin	Diabetic	2002	24	29.1
Pantoprazole + Domperidone	Gastro-Intestinal	2002	13	17.7
Pioglitaz + Glimepride	Diabetic	2002	18	7.2
Pipracillin + Tazobactum	Antibiotic	2002	5	5.4
Valdecoxib + Tizanidine	Pain/Analgesic	2003	8	3.1
Peridopril + Lindapamide	Cardiac	2002	2	2.8
Amlodipine + Atenolol	Cardiac	2003	6	2.1
Mosapride + Pantoprazole	Gastro-Intestinal	2004	1	21
Losartan + Atenolol	Cardiac	2003	4	1.3
Grand Total			**104**	**130.6**

Source: Intercontinental Market Services (IMS), 2005

Antibiotics and anti-bacterial formulations account for nearly 18% of the pharmaceutical market, clearly demonstrating the huge supply-driven demand created by pharmaceutical companies. Recent controversies related to high levels of antibiotic drug resistance in India are a clear reflection of this induced demand. Almost one tenth of the current market caters to the demand for cardiovascular therapies. Apart from a rising disease burden, this may also, in part, reflect a supply-induced demand: for instance, the industry spent over 25% of its annual sales turnover on sales promotion alone as against a paltry 7% on Research and Development expenditure during 2008-09.

TABLE 4. INDIAN THERAPEUTIC MARKET			
Therapeutic Category	Market Share of Value in Percentage (%)		
	May-04	May-05	May-06
Alimentary & Metabolism	24.6	24.8	25.0
Systemic Anti-Infectives	20.3	20.1	20.5
Cardiovascular System	9.3	9.7	9.8
Respiratory System	10.0	9.5	9.3
Musculo-Skeletal System	7.7	7.6	7.2
Central Nervous System	6.8	6.7	7.0
Dermatologicals	5.4	5.4	5.4
Blood + B. Forming Organs	4.0	4.2	4.1
GU System & Sex Hormones	3.4	3.6	3.6
Others	3.1	2.9	2.7
Sensory Organs	1.8	1.7	1.8
Parasitology	1.4	1.4	1.4
Systemic Hormones	1.4	1.5	1.4
Hospital Solutions	0.4	0.5	0.5
Antineoplast + Immunomodul	0.3	0.4	0.4
Diagnostic Agents	0.1	0.1	0.1
Indian Pharmaceutical Market	100	100	100

Source: IMS, 2007

The large scale promotion and publicity of these non-essential drugs by the pharmaceutical industry has resulted in physicians and pharmacists in both private and public health facilities being incentivised to prescribe and dispense drugs that are irrational. Irrational practices in the prescriptions and dispensing of drugs continues to be rampant in the country, and is largely observed through the number of injections and antibiotics prescribed, prescriptions by brand names rather than generic names, polypharmacy, and related practices. Standard Treatment Guidelines (STGs) are rarely followed and adhered to.

v. Lack of Regulation of Drugs and Diagnostics

Poor enforcement and multiple interpretations of the Drugs and Cosmetics Act of 1940 have made regulation in the health sector an unviable proposition.[21] An effective drug regulatory system has significant bearing on the prices, quality and availability of drugs.

The Central Drugs Standard Control Organisation (CDSCO) of India is vested with the task of approving new drugs and clinical trials, laying down standards, import control, overall coordination of state drug control authorities. State drug control authorities, on the other hand, are responsible for regulating the manufacture, sale and distribution of drugs.

Poor drug regulation results in the production and sale of spurious and substandard drugs. The overall quality of drugs is affected as, over time, any medicine could turn out to be inefficacious or unsafe. The recent deaths of pregnant women in Jodhpur due to contaminated IV fluids have brought this issue to the forefront again. Drug quality has especially become an issue in recent years with allegations, of ineffective and sub-standard drug production, levelled against small-scale drug manufacturers.

Since 2005, drug manufacturers in India have been mandated to abide by and comply with Good Manufacturing Practice (GMP) regulations, concordant with global standards, to produce quality drugs. A 2009 government survey of drugs reveals that 0.3% of all sample drugs were found to spurious, while 6-7% of drugs in the country were found to be sub- standard in quality.[22]

Despite growing awareness and compliance with GMP regulations, the quality of Indian drugs has been questioned time and again. According to Gulhati (2011), there are different terms and definitions which create confusion regarding nomenclature, such as fake/substandard/spurious and counterfeit drugs.[23] For example, in the United States of America, counterfeit drugs include even genuine, foreign medicines/brands that are not approved by the United States Food and Drug Administration (FDA). According to the Drugs and Cosmetics Act (Section 17B), the term 'spurious' drugs is not only limited to fake medicines but also includes products that use unauthorised names or are produced by unrecognised manufacturers. As Gulhati (2011) illustrates: "a strip of 10 good quality genuine paracetamol tablets will be deemed to be 'spurious,' by the FDA, if that product uses the name 'Crocin' without permission from the trade mark holder GSK."[23] Indian quality labels, therefore, must follow rational and well-enforced Indian criteria.

vi. Stringent Product Patent Regime

India's changeover from process to product patent regime since 2005, has been viewed as a barrier which limits access to new medicines. This is expected to provide monopoly rights to drug makers in certain therapeutic categories, such as, oncology, AIDS/HIV, and mental conditions. In view of these changes in patent climate, market structure is likely to gradually undergo changes with immediate impact on prices of new medicines. For instance, it was with the arrival of Indian generic pharmaceutical companies on the global scene in 2001, that the prices of ARVs began to decline sharply - from US $ 10,439 in late 1990s to about US $ 350 per annum per patient for first-line AIDS treatment in 2005.[24] Currently, the drug is quoted at less than US $ 70 per patient. This scenario clearly demonstrates the importance of empowering Indian generic drug makers with process patent and the forces of competition that it unleashed. Patented medicines, without close substitutes, are unaffordable for large sections of society, in India as well as in several developing countries where drug purchase occurs without social health insurance coverage. For instance, the price of pegylated interferon alfa-2a, a drug used in the treatment of Hepatitis C, costs about Rs. 18,200 (US $ 390) per 180mg Pre-Filled Syringe (PFS). The annual cost of such treatment could run into a mind-boggling amount, placing it clearly out of reach of many middle class patients.[24]

Developing economies were able to exercise their right in getting safeguards and flexibilities under the Trade-Related Intellectual Property Rights (TRIPS) regime to protect national public health. Nations can utilise safeguards such as compulsory licensing, parallel imports, etc. to protect their citizens from national health emergencies. In addition, it is also argued that countries can implement national price control policies as a means to arrest drug prices from spiralling high.

Notwithstanding these flexibilities and country experiences (of Brazil and Thailand) in using TRIPS safeguards, India is yet to make use of these TRIPS provisions to its advantage. Despite the fact that several households face tremendous public health challenges and financial vulnerabilities, not a single compulsory license has been issued to date. Alarmingly, the country now faces the challenge of TRIPS plus provisions which will 'evergreen' patents for a longer than 20 years duration. Under a data exclusivity clause that is negotiated under the India- European Union (EU) and India-Japan bilateral agreement, India has been called upon to provide data exclusivity to transnational drug conglomerates, which would then enjoy the benefit of extended monopoly rights. The country is also being advised to soften clause 3(d) clause of the amended Indian Patent Act of 2005 which limits the scope of patentability criteria, so as to permit frivolous patents or allow minor improvements of known pharmaceutical products.

vii. Insufficient Research & Development Focus

Under-funding of public health research institutions, alongside a general lack of focus on priority diseases by private sector, hinders current drug research efforts in the country. The other major area where India could have taken a lead, like China, is in adequately utilising its indigenous traditional medicine base. India had so far failed to take advantage of this huge traditional knowledge base. Weak institutional frameworks and poor regulation of clinical research and trials endanger the safety of research subjects. A plethora of new medical technologies and devices are introduced and utilised without any clear guidelines and policies. This arises from the lack of capacity for technology assessment and evidence-based decision-making. Many of these drug and device technologies are introduced without due assessment of cost-effectiveness, safety and efficacy. For examples, new vaccines which vie for inclusion in the Expanded Programme of Immunization (EPI) must satisfy the criteria of national relevance, cost-effectiveness and safety, without which they would be wasteful, unaffordable or harmful.[25]

3. Recommendations and Way Forward

The availability of most essential drugs in India is not a serious concern; it is rather that access to drugs in the public health system has been poor, despite the country being a global leader in supplying quality generic medicines at affordable prices. Overall Under-funding of the governmental health system, along with paltry allocation of government resources to procure drugs, has resulted in poor access to drugs in the public health system. In addition, poor governance and accountability have also compromised the system. By directly improving health outcomes and providing financial risk protection to the population, expanding access to medicines is the key driver in achieving universal access to health care. To meet this important goal, government policies and strategies must be grounded in the principles of universality, equity, efficiency and quality. This is clearly feasible and implementable, and the results can be demonstrated rapidly and scaled up within a short span of 1-2 years, with minimum resources and maximum benefits.

Recommendation 1: Increase Public Spending on Drug Procurement to 0.5% of the GDP and provide free essential medicines to all.

Currently the public health system in India spends about Rs. 6000 crores (0.1% of GDP) for procuring drugs. An additional four fold rise in medicine purchase by the public health system is required at Rs. 24,000 crores (0.4% of GDP). This works out to about Rs. 30,000 crores (0.5% of GDP), roughly half a percent of GDP. This resource is adequate to supply essential medicines free to everyone, distributed through public and private channels. This is expected to result in substantial reduction in Out of Pocket (OOP) expenditure and thereby provide much-needed financial risk protection to households. This measure is

likely to result in a supply of quality generic drugs. Their rational use, through a pooled public procurement for supply through the public health system as well as through private chemists contracted into the UHC system, will achieve substantial gains in drug access. The inter-state and inter-district disparities in the availability of drugs must be minimised, through planned allocation of funds in an equitable manner.

Recommendation 2: Enforce price regulation and apply price control on all formulations in the Essential Drug List.

India's current drug price control mechanism is inadequate in its coverage and does not serve its purpose to a large extent. The current practice of using monopoly and market dominance measures needs to be replaced with the criteria of 'essentiality,' which is expected to have maximum spill-over effect on the entire therapeutic category. This is also likely to prevent the present trend of circumventing price controls through non-standard combinations and at the same time would discourage producers moving away from controlled to non-controlled drugs. Direct price control should be applied to formulations rather than on basic drugs. This is likely to minimise intra-industry distortion in transaction and reduce as well as prevent a substantial rise in drug prices.

Recommendation 3: Ensure drug and vaccine security by strengthening the public sector and protecting the capacity of Indian private sector companies to produce low cost drugs and vaccines needed for the country. [a]

It is ironic that despite India supplying quality generic drugs around the world, the country has concerns about sufficient domestic drug supply and vaccine security. With the increasing acquisition of Indian companies by transnational drug corporations, there is a pressing need to rethink our country's drug strategy. Even when multi-national drug firms are not acquiring Indian owned drug manufacturing companies, effective control on policies and pricing may be gained through 'strategic alliance' agreements. Various options are proposed below for the government's consideration:

a) In order to reduce our vulnerability to restructuring and its serious implications, we suggest that the government strengthen Public Sector Units (PSUs), which have drug manufacturing capability. This is possible through infusion of capital into existing but 'sick' PSUs such as, Indian Drugs and Pharmaceuticals Ltd. (IDPL), Hindustan Antibiotics Limited (HAL), and state owned enterprises, in addition to providing them with autonomous status.

b) The use of PSUs will offer an opportunity to produce drug volumes for use in primary and secondary care facilities as well as help in 'benchmarking' drug costs. The existence of PSUs would also provide an opportunity to utilise the provision of Compulsory Licensing under TRIPS.

c) In addition, we also need to urgently revisit India's FDI regulations to amend the present rules of an automatic route of 100% share of foreign players in the Indian industry to less than 49%, so as to retain predominance of Indian pharmaceutical companies and preserve our self-sufficiency in drug production. Another option is to move the drug industry from an automatic route to the Foreign Investment Promotion Board (FIPB) route, which would ensure that all proposals of foreign mergers and acquisitions of Indian drug companies are scrutinised thoroughly. Alternatively, a provision for separation of 'financial' ownership from 'legal' ownership may be enforced, analogous to the

[a] This recommendation did not have unanimity within the HLEG. One member was of the view that reviving public sector capacity for pharmaceutical production, without examining the reasons for failure of previous public sector drug manufacturing units, would not be an appropriate use of resources.

Reserve Bank of India (RBI) rules, which limit the voting rights of the foreign investor.

d) The domestic drug manufacturing industry should transition from the current scenario of import dependency to self-sufficiency with respect to ingredients. The Active Pharmaceutical Ingredients (APIs) industry has placed the drug-making (formulation) sector in jeopardy in recent years. India, which was to a large extent self-sufficient in API manufacturing until the 1990s, has found itself in an awkward position in recent times with several disruptions and cost-escalation of largely Chinese import. There is a need to incentivise domestic production of APIs in the private sector, while at the same time actively engage drug PSUs to manufacture quality and cost-effective APIs.

e) There is also a need to engage medium and small-scale drug industries in the production of quality generic medicines for UHC by helping them to transit to Good Manufacturing Practice (GMP)-compliant status, by providing financial and non-financial assistance.

f) Vaccine security is equally vital, given the large disruption the country experienced in vaccine supply recently. We suggest that existing public sector vaccine-manufacturing units be strengthened with additional infusion of capital and the provision of autonomous status, and new vaccine parks be set up immediately. Indian private sector units manufacturing vaccines must be safeguarded against external interference with their mandate to prioritise Indian needs, as in the case of drugs.

Recommendation 4: Strengthen institutional mechanisms for procurement and distribution of allopathic and AYUSH drugs.

Various mechanisms have been considered for ensuring delivery of drugs to the public:

a) A Centralised Procurement and Decentralised Distribution Model: This system is based on the TNMSC model for centralised procurement to achieve economies of scale and the use of monopsony purchasing methods for procuring drugs, vaccines and medical devices at substantially marked down prices. It is recommended that state and central governments establish a centralised procurement mechanism for procuring drugs, vaccines and medical devices. They should follow an open, transparent two-bid tendering system. Such drugs should be procured based on the Essential Drug List (EDL), which are generic in nature and rational in content.

b) In order to facilitate and streamline drugs and vaccine storage and distribution logistics, it is proposed that at least one warehouse be built in each district to ensure ease of availability of drugs and vaccines to all front-line providers, preventing stock-outs or wastage of drugs.

c) The government may contract-in private chemists, at least one at every block level and four to five at district headquarters. Drug supply to such stores would be linked to centralised procurement at state level to ensure uniform drug quality and cost minimisation by removing intermediaries. This is expected to not only significantly reduce costs but also enforce much-needed rational prescription and dispensing methods.

d) AYUSH medicines should be brought under the National Essential Drugs List (NEDL). Thereby, procurement will move towards purchase of only NEDL drugs which should include identified and approved chemical, biological and traditional Indian medicines or AYUSH medicines. This will also ensure that AYUSH drugs are available at PHCs, where presently many AYUSH doctors are handicapped by the lack of AYUSH drug supplies.

e) For provision of diagnostic services, government diagnostic centres should be strengthened at the block and district levels. Private diagnostic facilities may also be contracted into the system.

Recommendation 5: Promote rational use of drugs through prescriber, patient and public education.

a) There is a clear need to phase out hazardous, non-essential and irrational medicines and irrational 'Fixed Dose Drug Combinations' from the market. Recent reports on 'superbug' nosocomial infections indicative of anti-microbial drug resistance in India, clearly point to the need to end the irrational drug prescription and dispensing practices.

b) Efforts will need to be backed by education and behaviour change among doctors, towards the adoption of rational prescribing and dispensing procedures for drugs, possibly through the advocacy of National and State Health Promotion Trusts (see chapter on Management and Institutional Reforms).

c) Standard Treatment Guidelines should be implemented in the NHP system, and should include only rational formulations.

d) Unethical or aggressive marketing practices by drug and devices manufacturers and sales persons as well as incentives offered to doctors to promote prescriptions should be banned and penalised.

Recommendation 6: Strengthen Central and State regulatory agencies to effectively perform quality and price control functions.

a) Regulatory mechanisms need to be tightened for better drug quality control. Existing state regulatory agencies in India have neither an adequate workforce nor appropriate testing facilities. Fresh investments should be made to set up regulatory facilities in each state and recruit additional regulators, essential for regulating manufacturing drug units as well as drug outlets.

b) Global practices in drug regulation involve a variety of functions and mechanisms that range from food control, drug quality and safety, pharmaceutical price regulation and medical devices and equipment standardisation. The problem in India is that while only some of these functions are undertaken by the Central Drugs and Standard Control Organisation (CDSCO), there are multiple additional authorities and departments that fail to coordinate among themselves for efficient and effective functioning. For instance, the Department of Pharmaceuticals under the Ministry of Chemicals and Fertilisers is responsible for drug price control while the Essential Drug List is prepared by the Ministry of Health and Family Welfare. Therefore, there is a need to integrate the role of drug price control into the CDSCO. In addition, the CDSCO should responsibility for collecting, tabulating and disseminating data on drug production, category-wise sales, company level information on drugs and undertake the responsibility of carrying out prescription audits. Currently, various Ministries rely on private data on drug consumption (which is both expensively priced and whose methodology is not very robust) to formulate drug price policies. To make the policy-exercise more credible, the Health Ministry must be empowered to take necessary action in this direction.

c) Adding new drugs and vaccines to the government drug procurement system must be based on scientific evidence, with due regard to safety, efficacy and cost. We propose an institute akin to the National Institute for Health and Clinical Excellence (NICE) in the United Kingdom to critically evaluate the evidence needed to guide decisions on inclusion of new drugs and vaccines into the public health system.

Recommendation 7: Protect the safeguards provided by the Indian patents law and the TRIPS Agreement against the country's ability to produce essential drugs.

a) India's current amended patent law includes several key safeguards such as restriction on the patenting of insignificant or minor improvements

of known medicines (under section 3[d]); this provision needs to be protected from any dilution.

b) Secondly, Compulsory Licenses (CL) should be issued to companies, as necessary, to make available at affordable prices all essential drugs relevant to India's disease profile. This provision, under India's own Patents Act and Trade-related aspects of Intellectual Property Rights (TRIPS) as clarified by the Doha Declaration, allows countries to use such licenses in public interest and can be invoked in the interest of public health security.

c) Finally, the 'data exclusivity clause' must be removed from any Free Trade Agreement that India enters into, since such a clause extends patent life through 'evergreening' and adversely affects drug access and affordability.

Recommendation 8: Transfer the Department of Pharmaceuticals to the Ministry of Health.

The manufacture of drugs is under the purview of the Department of Pharmaceuticals, which is presently a part of the Ministry of Chemicals and Fertilisers. This department is also responsible for drug price control. Since the Ministry of Health is not only responsible for ensuring the quality, safety and efficacy of drugs but is also accountable for the unhindered availability of all essential drugs in the UHC system, public interest would be best served by transferring the Department of Pharmaceuticals to the Ministry of Health. This would help to better align drug production and pricing policies to prioritised national health needs.

4. Financial Implications and Timeline

India's presently underfunded health system not only requires a significant scale up of public spending on healthcare including drugs, but also needs to efficiently utilise available resources (as well as additional investments) in a manner that achieves better health outcomes and reduces OOP spending on health, especially on drugs. While increased investments are critical, reorganisation of government spending strategies would achieve significant savings to both the administration and to the society at large. Table 5 provides a clear pathway to achieve universal access to medicines under different scenarios and the associated cost savings achievable by rationalizing prescription and dispensing patterns.

TABLE 5. SCALING UP TO ACHIEVE UNIVERSAL ACCESS TO MEDICINES

Overall Drug Consumption	Present Market Pattern (Non-EDL+EDL) Current Scenario (Rs. Crores)	Retail Market Price Converted to Procurement Price (EDL) Scenario I (Rs. Crores)	EDL Substituted for Non-EDL in Open Market Scenario 2 (Rs. Crores)
Essential Drugs	20,000	4,000 ~ 5,000	4,000 ~ 5,000
Non-Essential Medicines	36,000	36,000	8,000 ~ 15,000
Govt Procured Drugs	6,000	6,000	6,000
Total Market	62,000	46,000 ~ 47,000	18,000 ~ 26,000

Source: *Figures obtained from IMS and government budgetary documents for private market and government procurement data respectively. The estimates are based on various assumptions and scenarios. Selvaraj and Hasan (2011)*[26]

Note: *The figures above are indicative and should not be considered final. This is because the assumptions and scenarios are based on situation when non-EDL drugs in the open market are substituted by EDL drugs, assuming that physicians prescribe by the EDL and abide by Standard Treatment Guidelines. In such a scenario, the upper bound would be on the higher side while the lower bound appears feasible. Price inflation is not considered here due to the fact that government procurement data based on TNMSC show that price change has been extremely insignificant in the past, in that system.*

a) The Current Scenario

The current pattern of drug consumption in the country reveals several disturbing trends which carry significant implications for the government, private sector providers and individual consumers. Estimates from IMS data reveal that nearly Rs. 56,000 crores worth of medicines consumed in the domestic open market, were sold through roughly 600,000 private chemists in March 2011. On the other hand, governments at central and state levels continued to procure drugs at the rate of Rs. 6,000 crores during the same period, a number which is about one-tenth the price rate supplied by retail chemists. The ratio of essential (EDL) and non-essential (Non-EDL) drugs in the retail market is 2:3. Non-essential medicines consist of irrational combinations, superfluous and useless drugs, in addition to drugs that are prescribed and dispensed without any adherence to Standard Treatment Guidelines. Table 6 presents and details current and future implications for drug security and consumption in the country.

i. Scenario One

In scenario one, we demonstrate how cost savings could be achieved, if essential drugs that are sold in the retail market could be bought by the government at procurement prices (for instance, TNMSC prices). This yields a total savings of Rs. 15,000 to Rs. 16,000

crores to the nation. The significant difference between retail market and procurement price is due to exorbitant margins charged by drug manufacturers, in addition to a number of intermediaries including stockists, wholesalers and retailers. However, this is based on the assumption that all essential drugs would be bought by the government for its facilities. Presently, however, private players dominate the market, especially in medicine purchase for out-patient facilities. Therefore, in order to achieve these outcomes, there is a tremendous need to shore up the public procurement and distribution system, in addition to higher allocation of public funds for drugs.

ii. Scenario Two

In scenario two, while the cost savings through bulk procurement prices are factored into estimations, an attempt is also made to substitute essential medicines for non-essential drugs through Standard Treatment Guidelines (STG). The cost savings here are likely to be enormous, to the tune of Rs. 36,000 to Rs. 44,000 crores, simply by phasing out irrational drugs to a large extent from the market. On the whole, by moving to an efficient procurement policy complemented by rationalizing the drug market, system inefficiencies can be brought down from Rs. 62,000 crores to an amount ranging from Rs. 18,000 to Rs. 26,000 crores. This yields a substantial saving of Rs. 36,000 to Rs. 44,000 crores to the nation, which amounts to about 0.5 to 0.6 % of the GDP.

5. Expected Outcomes

We believe that our recommendations could tremendously improve and enhance physical and financial access to medicines in the country in a short span of time. Overall governance and accountability of both public and private players involved in drug procurement, distribution, financial allocation, and drug quality requirements should improve. This is likely to be reflected in regular availability of all essential medicines and elimination of drug stock-outs. Other key outcomes as a result of these recommendations will include:

a) Scaling up public spending on health and allocating at least 15% of that funding for drugs is expected to dramatically reduce OOP spending for households. The adverse ratio of Government to Households on drug spending -which is presently at 1:10- is likely to be reversed or at least substantially reduced.

b) Significant reduction in impoverishment and catastrophic spending due to OOP expenditure on drugs.

c) A centralised drug procurement and decentralised distribution mechanism would produce much needed economies of scale through monopsony purchasing, significantly reducing drug prices and creating better value for money. This system can be further strengthened by allowing the purchase of only generic drugs from the essential drug list. Since physicians in the public health facilities would be required to prescribe only EDL drugs and follow STGs, rational prescription and dispensing would increase.

d) Bringing all essential medicines under price control would have a beneficial effect on open market drug prices, resulting in large savings to households.

e) Strengthening drug control institutions and staffing drug control authorities with a skilled workforce will reduce the production and sale of spurious and sub-standard drugs and increase the confidence of the Indian public in drug quality.

TABLE 6. CRITICAL PATHWAYS TO ACHIEVE UNIVERSAL ACCESS TO MEDICINES

Drug Insecurity (Current Scenario)	Partial Drug Security (Scenario 1)	Complete Drug Security (Scenario 2)
Current Landscape & Its Implications: 1. Gross Under-investment & significant inter-state & inter-district disparities of public expenditure on drugs with enormous burden on households-ratio of government: household current spending on drugs is 1:10; 2. Partial EDL, Generic & Rational use of drugs in public health facilities; 3. Largely fragmented public procurement & distribution system; 4. High drug price due to liberalisation of drug price control; 5. Rampant use of irrational medicines and non-essential drugs in the private health care system;	**Significant Scale-up & Its Implications:** 1. Scaling up public spending on drugs with considerable reduction in household spending-government: household ratio to 1:1; 2. Government health facilities to substantially procure EDL drugs with focus on generic and rational drug use; 3. Strengthened Public procurement & distribution system; 4. All essential drugs under price control; 5. Considerable reduction in irrational medicine use & substantial weeding of irrational medicines.	**An ideal bu t achievable scenario & its implications:** 1. Reversal of current ratio of government :household expenditure to 2:1, with financial burden moving to government; 2. Centralised public procurement & public distribution system of medicines; 3. Centralised public procurement and private drug distribution (prescriptions based on contracted-in General Practitioner from private sector); 4. Price control for essential drugs while non-essential drugs are price monitored; 5. Minimise use of irrational medicines in both public & private medical facilities;
Key Outcomes: a. High Impoverishment & catastrophic payments of households; b. Acute shortages & chronic stock-outs of drugs in public health facilities; c. Wastage of resources to the tune of 0.4 to 0.6% of GDP; d. Poor prescription & dispensing practices leading to inefficiency and safety concerns; e. Lack of governance and poor accountability mechanism.	**Expected Outcomes:** a. Large decline in impoverishment & catastrophic payments to households; b. Public facilities provide uninterrupted drug supply; c. Significant savings to the exchequer and large reduction in wastage of resources to households to the tune of 0.2 to 0.4% of GDP; d. Prescription & Dispensing practices in public health facilities improve; e. Governance & accountability enhanced.	**Potential Outcomes:** a. Insignificant share of OOP on drugs leading to very low impoverishment & catastrophic spending of households; b. Drug shortages & stock-outs eliminated; c. Savings to the tune of 0.5 - 0.6% of GDP to the exchequer; d. Prescription & dispensing of drugs through EDL and STGs, both in public & private facilities; e. Good governance & high accountability ensured.
Timeline: Current Scenario	**Timeline: 1-2 years**	**Timeline: 5-7 years**

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High Level Expert Group Report on Universal Health Coverage for India

SECTION II

Chapter 3

Human Resources for Health

Introduction:

Effective, accountable and efficient Human Resources for Health for enabling Universal Health Coverage

India's mandate for Universal Health Coverage (UHC) depends, to a great extent, on adequate and effective Human Resources for Health (HRH) providing care at primary, secondary and tertiary levels in both the public and private sectors. States are presently struggling with the complexities of escalating human resource costs, additional demands on the available health work force, compounded by chronic HRH shortages, uneven distribution and skill-mix imbalances. India's health system is among the country's highest employers and absorbs almost two-thirds of the health budget for allocations in deployment, education, training, etc. Reform of HRH will therefore be the keystone of Universal Health Coverage reform in the country.

During the past eleven Five-Year plans, India has substantially upgraded and increased her health facilities. The country presently has 1,47,069 Sub-Health Centres (SHCs), 23,673 Primary Health Centres (PHCs), 4,535 Community Health Centres (CHCs)[1] and 12,760 hospitals[2] in the Government sector. The evidence on the actual functionality of these facilities, however, is mixed. As per the District Level Household and Facility Survey -III (DLHS 2007-2008), 62% of PHCs are conducting less than 10 deliveries in a month, 10% of CHCs do not provide 24x7 normal delivery services, 34% of CHCs do not have operation theatre facilities, only 19% of CHCs offer caesarean section deliveries, only 9% of CHCs have blood storage facilities[3] and of the 4,535 CHCs, 754 only are functional as per IPHS norms.[1]

The private health sector has grown exponentially in the country. From initially providing 8% of healthcare facilities in 1949, the private sector now accounts for 93% of the hospitals and 85% of doctors in India.[4]

The situation of HRH in India is evolving, but remains inadequate, as evidenced by recent health sector outcomes. Over 20% of deliveries are outside health facilities in 485 districts. Over 15% of children in 358 districts receive only partial immunisation. The recent initiatives of the National Rural Health Mission (NRHM) contributed to the 17% decline in the Maternal Mortality Ratio (MMR) from 254 in 2004-2006 to212 in 2007-2009. The decline was most significant (18%) in the eight Empowered Action Group (EAG) states and Assam. India's Infant Mortality Rate (IMR) has declined from 57 in 2006 to 50 in 2009 per 1000 livebirths.[5] This still falls short of the National Population Policy (2000) and NRHM goals of <30 per 1000 live births (by 2010) and the Eleventh Five Year Plan goal of 28 per 1000 live births (by 2012).

Globally, India accounts for half of the current leprosy cases (1.3 lakhs) and 21% of Tuberculosis (TB) cases (19 lakhs).[6] While mortality from communicable diseases has declined, there has been no decline in incidence. The new sputum positive case detection rates for Tuberculosis (TB) are less than 60% in 243 districts, the Annual Parasite Index (API) for malaria continues to be above 1.9 in 142 districts, and the prevalence rate for leprosy is more than 1% in 53 districts.[7]

Non-communicable diseases are on the rise particularly, coronary heart disease and diabetes.1 Deficiencies in HRH, both in numbers and skills, are major contributors to the suboptimal performance of the health systems in these areas. They need to be

addressed with urgency if UHC is to become a reality, not only in design but also in delivery.

1. Existing HRH norms and HRH availability in the country

a) A brief historical review of Human Resources for Health in India

The development and deployment of HRH in India over the last six decades has been steered by various Government-commissioned expert committees Notable amongst these are the Health Survey and Development Committee headed by Sir Joseph Bhore (1946), the Health Survey and Planning Committee lead by Mudaliar (1961), the Chadha Committee (1963), the Kartar Singh Committee (1974), the Shrivastav Committee (1975), the Medical Education and Review Committee led by Mehta (1983), the Bajaj Committee (1986), the Mukherjee Committee (1995), the National Commission on Macroeconomics and Health (2005), and the Planning Commission Task Force on Planning for HRH (2007).

The Bajaj Committee for health manpower planning and development presented the first ever assessment of HRH availability in India.[8] It recognized that health systems and human resources development were isolated from each other across ministries. The Committee made projections for rural HRH requirements for the millennium along with recommendations for building human resource capacity in educational institutions. In order to ensure quality in health services, the Bajaj Committee recommended a competency- based curriculum, refresher and bridge courses, in-service trainings, career structures for all categories and uniform pay scales across the country. The Bajaj committee also recommended cadre-wide coordinated planning for HRH production and the establishment of a University of Health Sciences in each state during the Eighth plan, as advocated earlier by the Medical Education and Review Committee in 1983.

The High Level Expert Group (HLEG) on Universal Health Coverage acknowledges and endorses the comprehensive and critical recommendations made by these earlier expert bodies. While central and state leadership in health ministries may not have always adopted or implemented the recommendations ofthese expert committees, their suggested rationale and norms continue to be the basis for HRH planning and formulation of standards.

b) Evolution of HRH Norms in India

Physical infrastructure and HRH norms based on population were envisaged as early as 1946 by the Bhore Committee. Since then, various expert committees have set targets for HRH, many of which are yet to be achieved. These include the norm of one nurse per 500 population, one pharmacist per 2000 population (Bhore Committee 1946); one laboratory technician per 30,000 population and one health inspector per20,000 population (Chadha Committee 1963); one male and female health worker each for 3,000 - 3,500 population at the grassroots, i.e. within a distance of less than 5 kilometres (Kartar Committee 1974).

The Bajaj Committee (1986) suggested that the assessment of HRH requirements be based on multiple parameters including population ratio, inter-professional ratio and manpower mix.[6] More recently, in 2007 and again in 2010, the Government of India formulated the Indian Public Health Standards (IPHS) and streamlined the requirements of physical infrastructure based on population and HRH requirements for health facilities ranging from the grassroots level SHCs, primary care level PHCs, first referral level CHCs, as well as hospitals with bed strengths of 31-50, 51-100, 101-200, 201-300 and 301-500 beds, respectively. The IPHS (2010) norms are for HRH as well as for equipment, drugs and service delivery. The physical infrastructure targets are one SHC for a population of 5,000, one PHC for a population of 30,000, and one CHC for a population of 1,20,000. This includes one SHC per 3,000 population, one PHC per 20,000 population and one CHC per 80,000 population for hilly / tribal and remote areas.[9]

c) Global HRH norms and HRH in India

The World Health Organisation (WHO) Joint learning Initiative (JLI) report on HRH (2004) estimated the health worker density of physicians, nurses, midwives, dentists and pharmacists.[10] While no global norms currently exist for HRH density, the JLI has established a threshold of 25 health workers (doctors, nurses and midwives) per 10,000 population, with a WHO endorsed lower threshold of 23 workers per 10,000.[11] As per the most recent figures reported in the World Health Statistics Report (2011), the density of doctors in India is 6 for a population of 10,000 and that of nurses and midwives is 13 per 10,000, which represents 19 health workers for a population of 10,000.[10] India finds itself ranked 52 of the 57 countries facing an HRH crisis.[12]

Based on cumulative data from comparative time periods (2001-2005), the NCMH reported in 2005 that India had a doctor: population ratio of 0.5 per 1,000 persons in comparison to 0.3 in Thailand, 0.4 in Sri Lanka, 1.6 in China, 5.4 in the United Kingdom, 5.5 in the United States of America and 5.9 in Cuba. The ratio of 2.19 nurses and midwives per doctor ranks India lower than Sri Lanka (3.94) and Thailand (5.07).[13] This makes it necessary for India to simultaneously augment the number of doctors and improve the nurse/midwife ratio to doctor in the coming years.

These HRH shortfalls have resulted in skewing the distribution of all cadres of health workers, such that vulnerable populations in rural, tribal and hilly areas continue to be extremely underserved. For example, in 2006, only 26% of doctors resided in rural areas, serving 72% of India's population.[13] Another study has found that the urban density of doctors is nearly four times that in rural areas, and that of nurses is three times higher than rural areas.[14]

d) Meeting norms through HRH production

India has the largest number of medical colleges in the world, with an annual production of over 30,000 doctors and 18,000 specialists. However, India's average annual output is 100 graduates per medical college in comparison to 110 in North America, 125 in Central Europe, 149 in Western Europe, 220 in Eastern Europe. China, with 188 colleges, produces 1,75,000 doctors annually with an average of 930 graduates per college.[15] China's increased number could be attributed to a higher rate of admissions per medical college.

During the recent past, admission capacities in India have increased considerably for dentists, AYUSH doctors (Ayurveda, Yoga and Naturopathy, Unani, Siddha, and Homeopathy), and pharmacists. The number of dentists registered from 2004 to 2009 have increased from 55,000 to over 1,04,000 in a short span of four years.[21] In addition, approximately 30,000 AYUSH doctors, 54,000 nurses, 15,000 Auxiliary Nurse Midwife (ANM) and 36,000 pharmacists (diploma holders) are produced annually.[2] Existing AYUSH institutions will likely sustain a decadal increase of AYUSH doctors by over 25%.

Our review of registration data from professional councils indicates the availability of one doctor per population of 1,953, with a nurse / ANM availability of 1.5 per doctor. We are still far from the WHO norms of one doctor per 1,000 population and 3 nurses / ANMs per doctor. It is imperative that the admission capacities of these critical cadres are also increased by establishing additional educational institutions in the states with weak HR capacity and high HRH requirements. In addition to HRH availability, it is important to emphasise appropriate education and training for skill up-gradation as recommended by the Commission on the Education of Health Professionals for the 21st Century.[15]

2. Existing systemic deficits in the HRH system

a) Lack of data

In India, there is no comprehensive information available on HRH for health facilities across public and private sectors. Data available with professional councils for doctors, dentists, nurses and pharmacists are cumulative and do not exclude attrition (from

death, retirement, migration, etc.), as there is no periodic renewal of registration. Annual publications such as Rural Health Statistic Bulletins (RHS) and National Health Profile (NHP) from the Ministry of Health & Family Welfare include data of selective categories and exclude hospital and medical college-related information. The decadal Census (2001) of India has collected extensive data on the occupation of individuals but these are unvalidated (i.e. based only on self-report).[15]

The weak knowledge base on HRH in Government and private sectors has been a matter of grave concern, for it impedes any rationalised HRH planning and health system strengthening. The present HRH situation in India is also characterised by a lack of HR Development Policies[16] and HRH Management Information Systems (HRMIS) at national, state, and district levels. Given these barriers, the task of estimating HRH needs of the growing Indian population is a complex one.

b) Skewed production of HRH

The distribution of medical colleges, nursing colleges, nursing and ANM schools, paramedical institutions is uneven across the states with wide disparities in quality of education.[17] Six 'high HRH production' states (i.e. Andhra Pradesh, Karnataka, Kerala, Maharashtra, Pondicherry and Tamil Nadu) represent 31% of the Indian population, but have a disproportionately high share of MBBS seats (58%) and nursing colleges (63%) as compared to the eight 'low HRH production' states (i.e. Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha, Rajasthan, Uttaranchal and Uttar Pradesh), which comprise 46% of India's population, but have far fewer MBBS seats (21%) and nursing colleges (20%).[4]

The uneven distribution of professional colleges and schools has led to severe health system imbalances across the states, both in production capacity and in quality of education and training, eventually leading to poor health care outcomes in districts, a problem that has been highlighted at length by the National Commission on Macroeconomics and Health (NCMH).[13] In high HRH production states, the share of HRH production by private medical colleges has increased from 33% in the year 1990 to 52% in the year 2006, and presently stands at 57%.[17,18] A large number of private colleges are run for profit, with serious shortages in faculty, infrastructure and quality of education. The clustering of private colleges around cities further exacerbates the shortage of doctors in rural areas. In low HRH production states, shortages of allopathic doctors are being met through AYUSH doctors, who are at times practicing allopathy without appropriate training or adequate support and infrastructure.

c) Uneven HRH deployment and distribution

India's major limitation has been in the production and distribution of human resources across multiple levels of care. Non-creation of posts at health facilities is pervasive. Over 57% of required posts for specialists have not been created; the figures are 60% for doctor posts, 72% for nurse posts, 71% for laboratory technician posts, 68% for radiographer posts and 52% for male health worker posts.[1] As of March 2010, undue delays in recruitments have resulted in high vacancies even in available posts at health centres; over 34% for male health workers are not in position, while 38% of radiographer posts, 16% of laboratory technician posts, 31% of specialist posts, 20% of pharmacist posts, 17% of ANM posts, and 10% of doctor posts are vacant.[1] Overall, HRH shortfalls range from 63% for specialists to 10% for allopathic doctors, and 9% for ANMs, respectively.[1]

The past few decades have seen the disappearance of certain cadres: village health guides and traditional birth attendants, first instituted in 1986, have now decreased to a point of non-existence. The number of male health workers has also dwindled from 88,344 in the year 1987 to 52,744 in the year 2010.[1]

d) Disconnected education and training

Health curricula in the country have not kept pace with the changing dynamics of public health, health policies and demographics. The Auxiliary Nurse

Midwife (ANM) and General Nursing & Midwifery (GNM) curricula have only twice been revised in the past 40 years. Education for health professionals is more clinically and technologically driven towards a treatment-oriented curative paradigm rather than population-focused primary and preventive health care. Current medical and nursing graduates in the country, trained in urban environments, are ill-prepared and unmotivated to practice in rural settings. There is an increased drive towards super-specialisation in various medical disciplines, further pushing the onus and focus of care towards tertiary health models rather than essential primary care services. The Task Force on Medical Education, NRHM, and the Independent Commission on Development and Health in India have recommended the revision of curriculum to focus on primary health care and rural orientation.[20,21]

3. Reprioritizing HR for the visionary shift towards primary health in the country

Beginning with the Bhore Committee report, India's policies have consistently reflected its commitment to the principles of primary health. In the five years since its inception in 2005, the NRHM gave a major boost to strengthening primary care human resources by introducing flexibility and financial provision for the contractual appointments of 10,000 allopathic doctors (including 2,500 specialists), 7,700 AYUSH doctors, 27,000 nurses, 47,000 ANMs and 15,000 paramedical staff.[6] Recruitments were made at the district level and HRH incentives were introduced for postings in underserved areas. Under the norms proposed by the National Rural Health Mission (NRHM), the provision of ANMs at SHCs has doubled.[22] A long felt need of having one Community Health Worker (CHW) at the village level was met with the deployment of over 8 lakh Accredited Social Health Activists (ASHAs), roughly one per 1,000 rural population.[23]

These are watershed improvements and set a strong precedent for reform shaped under a primary health paradigm. Yet, the availability of frontline qualified practitioners is still lacking; the nearest government doctor or professional nurse is still relatively far from the home, deployed at the PHC (one for 30,000 population). As a consequence, communities depend on private, informal, and often unqualified practitioners (quacks) for treatment, often resulting in further complications. There is, thus, a clear need for building a mid-level cadre of health care professionals in the country to take primary health services closer to people. The Task Force on Medical Education, NRHM, and the Independent Commission on Development and Health in India have further recommended that at least one medical college be set up per district in each of India's underserved districts.[20,21]

This requires greater focus on primary health facilities, i.e. SHCs, PHCs and CHCs, and district referral hospitals, with an additional consideration of underserved districts. In our recommendations, state provision of services at these levels is a non-negotiable, while at other levels (sub-district hospitals, medical college hospitals), HRH estimations for production and deployment factored in the involvement of the private (for profit and non-profit) sector.

Investments in primary health care, including increasing density and effectiveness of health workforce at the community level and primary care health facilities could: a) generate positive health that is likely to reduce the need for secondary and tertiary care facilities; b) reduce costs of healthcare; and, above all, c) enhance health equity. Accordingly, the HLEG actively examined multiple HRH options that have the potential to transform health care at the grassroots.

4. Projecting HRH availability and production commensurate with needs

While developing a blueprint and investment plan for meeting human resource requirements by 2020, the HLEG had to first arrive at robust and reliable baseline figures. This required sourcing Census data along with triangulated and attrition-adjusted human

resources data, across cadres, related to education and deployment, down to the district level. Framing health reform in India's larger planning process, the HLEG calculated its projections based on the recommendations through the years 2012-2017 (Twelfth Plan) and 2017-2022 (Thirteenth Plan).

Recommendations were developed based on population norms (e.g. doctor per 1,000 persons), inter-cadre ratio targets (ratio of nurses and midwives to doctors), and HRH norms at the facility level in order to serve health care needs. This required careful estimation of India's population density down to the district level, factoring in equity considerations (underserved or vulnerable states and districts were given greater priority), current and future cadre sizes for a variety of health professionals, state-level differentials in HRH architecture (educational institutions, available faculty), as well as the goal of improving both access to health services and access to health sector as a career trajectory for women.

According to the 2011 Census, the present population of India is 1,210 million.[24] In order to project India's population from now through 2022, the HLEG considered the 2011 Census figure as the baseline and factored in projections from the National Commission on Population for future years.[25] As per these, India's population will reach 1,284 million by 2017 and 1,353 million by 2022.

Determining and estimating HRH needs (current and future) was a challenging task, requiring consideration of various estimation methodologies, sources of data, and often divergent estimates (discussed in Recommendation 3). Cadre figures, wherever available, were sourced from Medical Council of India (MCI)[26], Indian Nursing Council (INC) and other professional councils,[27-29] publications by the Ministry of Health and Family Welfare such as Health Information of India,[30,31] Medical, Health and Manpower Statistics,[32] Rural Health Statistics Bulletins,[11,19,33,34] Annual Reports,[35,36] National Health Profile,[2] and reports of expert committees.[8] These cumulative figures were adjusted for career span (36 years for doctors, 38 years for nurses, 40 years for ANMs)[a] in order to arrive at more realistic baseline figures for available human resources, and further adjusted for attrition from other causes (3%).

We recognise that in many cases, the availability of HRH is not synonymous with deployment of HRH and therefore the need for both the creation of posts, as well as optimal utilisation of existing HRH, especially AYUSH doctors, dentists, physiotherapists and pharmacists, was also factored into recommendations.

Financial estimates were calculated for strengthening and establishing infrastructure for health professional and worker education based on the reports of the Planning Commission, Task force on Human Resources for Health,[17] Task Force on Development of Strategic Framework for Nursing,[38] and others. Estimates were additionally triangulated by consulting guidelines and reports issued by the Ministry of Health and Family Welfare.

The HLEG believes that UHC requires the availability and equitable distribution of a competent, motivated, and empowered health workforce across the country. This will create unprecedented employment opportunities. Based on our projections, the health sector could emerge as the single largest employer in the country, providing employment opportunities for almost 50 lakh people by 2022 (two-thirds of whom will be women). In order to enable states to move towards equitable Universal Health Coverage, we envisage enhanced production capacities and quality with a focus on primary health, integrated service delivery and training at the district level, and improved HRH management.

[a] The career span was calculated based on an average age at recruitment into Government services and the prescribed age of retirement from these services.

Major Recommendations

1. Increase production capacities to meet HRH shortages, with a focus on delivering primary health care through frontline HRH in underserved districts

Recommendation 1: Provide one additional Community Health Worker (CHW) at the village level and one urban CHW low-income urban populations, for primary health care.

In order to ensure adequate provision of health care in communities, it is recommended that one additional CHW be provided at the village level (1 per 500 population) and in underserved urban areas for low-income populations (1 per 1,000 population).

- The new CHW may be a male or female, belonging to the same village/area.
- The broad scope of work for the CHWs would include maternal and child health including Home-Based New Born Care (HBNC), family planning, adolescent and reproductive health. Existing CHWs should be trained in newborn care and child care by 2014. The control of communicable and non- communicable diseases may be assigned to the second CHW with specific job responsibilities that include basic health promotion and prevention activities around the control of malaria, filaria, TB, HIV, leprosy and other infectious diseases, safe water and sanitation. The CHW will also be involved in health education for non-communicable and chronic diseases such as hypertension, diabetes, heart diseases, strokes, cancers and mental health. The second CHW should undergo induction training for a period of about 3-4 weeks followed through add-on courses and on-the-job mentoring.[39]
- CHWs should be de facto members of the (village or urban-equivalent) Health and Sanitation Committee, which will be involved in monitoring of CHW and disburse a monthly fixed payment of Rs. 1500 to each CHW.
- CHWs should be paid half of their package as a fixed compensation and the rest as performance-linked compensation.
- Supervision of CHWs will be by Health Workers (male / female) of the respective SHCs and Nurse Practitioners in urban areas. The performance based monthly compensation of Rs. 1500 should be through ANMs in rural areas and their corresponding equivalent in urban areas.
- CHWs should be offered performance-based admissions to ANM schools, nursing schools, Bachelor of Rural Health Care courses (see Recommendation 2) and certificate courses for skill up-gradation at District Health Knowledge Institutes (see Recommendation 9).

Rationale

The importance of primary care accessible from the home is an important factor in the HLEG's recommendations. The additional CHW proposed will expand the scope of health promotion on key primary health issues and emerging local health problems. The CHW will be able to represent community voices and will help create essential linkages to the health system. Finally, opportunities to transition into the health system should be open to CHWs.

Expected Outcome

The estimated availability of roughly 19 lakh CHWs by 2022 will pave the way for health care accessibility and thereby shift the focus of health care delivery from secondary and tertiary sectors to the primary sector over the next two decades.

Recommendation 2: Each Sub-Health Centre (SHC), covering 3,000 to 5,000 population, should have a mid-level professional Rural Health Care Practitioner, two ANMs and a Male Health Worker. In urban settings, trained and qualified Nurse Practitioners are recommended in lieu of Rural Health Care Practitioners.

a) As an immediate measure, the HLEG recommends 3-6 month bridge courses for mid-level rural professional practice offered to ANMs, nurses, AYUSH doctors and dentists, as many of these professionals (with the exception of nurses) are available in surplus in several states, including Bihar, Madhya Pradesh, Rajasthan, Uttarakhand and Uttar Pradesh.

b) The HLEG endorses a 'Bachelor of Rural Health Care' (BRHC) course with a 3-year curriculum which should have an intensive component covering primary and preventive health care. The BRHC course should be offered at District Health Knowledge Institutes and the BRHC degree linked to State Health Sciences Universities (see Recommendations 9 and 12).

c) The BRHC should have the following components:

- The course should focus on an essential skills package to ensure a high quality of competence in preventive, promotive and rehabilitative services required for rural populations with pedagogy focussed on primary health care.
- BRHC students should be taught in local settings where they live and work. The BRHC course should not be a mini-MBBS course, but rather become a unique training programme aimed at the basic health care needs of its target population.
- BRHC faculty should be drawn both from existing teaching institutions and India's pool of retired teachers, also drawing non-physician specialists from the fields of public health and the social sciences.
- The BRHC course is a professional education programme and should be steered by national and state level Boards to ensure quality and effective implementation of the curriculum.
- It should be mandated through legislation that a graduate of the BRHC programme is licensed to serve only in specific notified areas in the government health system. A similar Act implemented by the state of Assam for such mid-level health workers could be a potential model.
- Service parameters and career pathways should be developed for BRHC graduates. The Government should take steps towards establishing suitable salary and service conditions for BRHC practitioners. The option for career progression to the public health service, after 10 years of service, may be offered.

Rationale

The rapid expansion of HRH on a massive scale will take multiple Five-Year Plans. Planning must include some provision of interim solutions to address HRH gaps that could supplement and/or replace long term HRH expansion. In addition, India requires a renewed emphasis on primary and secondary health care, with greater levels of expertise closer to the grassroots. International evidence suggests that adequately trained and supported mid-level practitioners may successfully provide health care, in particular to marginalised communities.[41,42]

Recent research in Chhattisgarh suggests that mid-level practitioners such as Rural Medical Assistants have the requisite levels of competence to deliver primary health care, can prescribe rationally, and may serve as a competent alternative to physicians in primary health care settings.[43] This warrants serious consideration of such a cadre as an interim measure until production of doctors is increased, at which point, the continued production of such a cadre may be revisited.

Expected Outcome

It is expected that full coverage of BRHCs at the sub centre will be achieved by 2030. In order to support the production of this cadre, the HLEG recommends the phased production of 172 BRHC colleges in Phase A (by the year 2015), 163 BRHC colleges in Phase B (by the year 2017), and 213 BRHC colleges in Phase C (by the year 2022), such that by the end of this period, a BRHC college exists in all districts with populations of over 5 lakh. These colleges will be co-located with or closely aligned to District Health Knowledge Institutes (See Recommendation 9), which will also be produced with the same phasing. This would enable positioning of rural health practitioners at 1.14 lakh SHCs by the year 2022 and facilitate outreach to underserved rural populations. Similarly, Nurse Practitioners would be positioned to serve vulnerable urban populations and supervise urban CHWs.

Recommendation 3: Increase HRH density to achieve WHO norms of at least 23 health workers (doctors, nurses, and midwives) per 10,000 population as well as 3 nurses/ANMs per doctor (allopathic).

Rationale

In 2004, the Joint Learning Initiative advocated an availability of 25 health workers (including midwives, nurses, and doctors) per 10,000 population.[10] A more recent figure from the World Health Organisation's Global Atlas of the Health Workforce established a minimum HRH norm of 23 workers per 10,000 population.[12] As per the WHO report, the density of doctors in India is presently 6 per 10,000 and that of nurses and midwives is 13 per 10,000, representing a combined density of just 19 health workers per 10,000 population.[12]

The WHO report figures are derived from cumulative numbers listed by the health professional councils. They do not exclude losses due to attrition (death, retirement, migration), and are not revised periodically. Other sources of data are similarly problematic. For example, annual publications such as Rural Health Statistics Bulletins and National Health Profiles of the Ministry of Health & Family Welfare include data of certain cadres and exclude hospital and medical college-related information. The decadal Census of India has collected a large amount of representative data on occupation of individuals, but these are based on self-report and difficult to validate. In the HLEG's survey of the data, varying estimates emerged, based on different data sources (see Table 1 for illustrative example of variations in doctor cadre size).

Based on yearly admission data in colleges and schools, and the annual registrations of doctors, nurses and ANMs indicated by their respective councils, we estimate an adjusted HRH density of 12.9 health workers per 10,000, comprising 5.1 doctors, 5.4 nurses and 2.4 ANMs per 10,000 people. This estimate, stated in Table1, while the most recent, is at variance with other figures. Given the differences in sources of data and estimation methodologies (see Table 1), any one estimate is likely to be contested by a section of HRH researchers. The councils' registration and admissions data were considered most appropriate for current and future estimates for a number of reasons. Firstly, this would enable comparability across these three critical HRH cadres. Secondly, apart from direct adjustments related to retirement, the HLEG secretariat additionally adjusted council figures for cumulative attrition of 3 % (due to deaths, emigration from sector, etc.). As a result, the HLEG's adjusted figure for the number of doctors for the equivalent period is 28% lower than the MCI's cumulative number reported in the 2010 NHP (see Table 1 for illustrative comparison of HLEG estimates to other methodologies). Finally, registration and admissions data of various councils enables us to project of availability of these categories for any specific year, thereby enabling prospective projections and planning to meet the HRH provision.

Expected Outcome

The WHO recommended norms of one doctor per 1,000 population and 3 nurses and midwives per doctor are key targets for UHC. The norm of one doctor per 1,000 population should be approximated by the year 2028. Moreover, India should be able to expand her HRH density beyond the 23 health workers per 10,000 population and surpass a cumulative ratio of 3 nurses/midwives per doctor by the year 2020 (see Table 2). The HLEG's focus on improving HRH availability in districts with acute HRH shortages will also redress distributional inequities and simultaneously generate educational and employment opportunities for a large number of unemployed youth and women in these districts.

TABLE 1: SOURCES, ESTIMATION METHODS, AND RESULTING DOCTOR DENSITIES

Authors	Sources/Estimation Method	Year	Doctor Density
Anand & Fan (2010)[16*]	Numerator: Self -report of employment and educational attainment Denominator: Census 2001	2001	2.6 doctors per 10,000 1 doctor per 3,800 1 doctor per 1,320 urban 1 doctor per 15,800 rural
National Commission on Macroeconomics and Health[13]	Numerator: Cumulative State Medical Council Data through September 2004 Denominator: not indicated	2004	5.97 doctors per 10,000 1 doctor per 1676 (urban rural breakdown not possible with data)
Rao and colleagues (2009)[14]	Numerator: Census 2001 for employment directly adjusted against employment codes in NSSO (2004-2005) data (using proportions, as figures match in aggregate) Denominator: Census 2001	2005	3.8 doctors per 10,000 1 doctor per 2,631 1 doctor per 1,000 urban 1 doctor per 10,000 rural
HLEG Secretariat (2011)	Numerator: Yearly MCI registration records 1974-2010 (adjusted for retirement, and 3% attrition from other causes) Denominator: Census 2011	2011	5.1 doctors per 10,000 1 doctor per 1,953 (urban-rural breakdown not possible with data)

** Anand and Fan found that 57.3% of self-reported doctors in the 2001 Census lacked medical qualifications, bringing down the density of doctors in that year from 0.6 per 1,000 to 0.27 allopathic doctors per 1,000.[16]*

TABLE 2: PROJECTED HRH DENSITY BASED ON IMPLEMENTATION OF HLEG RECOMMENDATIONS				
	2011	2017	2022	2025
Health worker density per 1000 population (doctors - allopathy, nurses and midwives)	1.29	1.93	2.53	3.33
Population served per Doctor (allopathy)	1,953	1,731	1,451	1,201
Ratio of nurses and midwives to a doctor	1.53	2.33	2.94	3.01
Ratio of nurses to a doctor	1.05	1.81	2.22	2.19

Source: HLEG Secretariat

India's physical infrastructure targets under the Indian Public Health Standards are one SHC for 5,000 population, one PHC for 30,000 population and one CHC for 1,20,000 population, including one SHC per 3,000 population, one PHC per 20,000 and one CHC per 80,000 for hilly / tribal / difficult areas.[9] Current Government of India norms have prioritised tribal and rural populations by stipulating the provision of additional health centres for these hard to reach under- populated areas for easier accessibility to health care. This has not been achieved due to financial constraints and the non-availability of requisite HRH in underserved districts, resulting in poor healthcare outcomes. The service guarantees under UHC require that we address both present HRH gaps and future HRH needs for additional health facilities.

As per the present population norms for the health centres, India's population for the year 2022 will require staffing for 3.14 lakh SHCs, over 50,000 PHCs, over 12,500 CHCs, as well as close to 5,000 sub-district hospitals, 642 district hospitals and over 500 medical colleges (under the 2 beds per 1,000 population norm (see Chapter on Health Service Norms). The staffing requirements for these facilities, as per the HLEG recommendations (see Annexure I), have been assessed at 45.7 lakhs (see Annexure II). HRH requirements for various cadre categories are summarised in Table 3.

TABLE 3: PROPOSED HRH NEEDS AT HEALTH FACILITIES BY THE YEAR 2022								
	Category	SHCs (314547)	PHCs (50591)	CHCs (12648)	SDH (4561)	DH/ Hq. (642)	MCH (502)	Total HRH
1	**ANMs**	629094	151773	25296	22805	3210	-	832178
2	**Health Worker-male**	314547	101182	25296	4561	642	-	446228
3	**Pharmacists**	-	151773	50592	36488	7062	7530	253445
4	**Technicians**	-	202364	113832	159635	34668	34136	544635
5	**Nursing**	-	252955	252960	665906	189390	255016	1616227
6	**Rural Health Care Practitioners**	314547	-	-	-	-	-	314547
7	**Dentists**	-	50591	12648	9122	1284	1004	74649

TABLE 3: PROPOSED HRH NEEDS AT HEALTH FACILITIES BY THE YEAR 2022								
	Category	**SHCs (314547)**	**PHCs (50591)**	**CHCs (12648)**	**SDH (4561)**	**DH/ Hq. (642)**	**MCH (502)**	**Total HRH**
8	**Doctor (AYUSH)**	-	50591	12648		1284		64523
9	**Doctors (Allopathy)**	-	151773	75888	91220	15408	82830	417119
10	**Specialists***	-		65770	104903	17334	21084	209091
11	**Managerial Categories**	-	101182	50592	31927	8988	4016	196705
	Grand Total	1258188	1214184	685522	1126567	279270	405616	4969347

**Specialisations estimated are Anaesthesia, Medicine, Obstetrics, Opthalmology, Paediatrics, and Surgery*

Source: HLEG Secretariat

HRH requirements for the year 2022 are estimated at close to 64% for rural health facilities, i.e. SHCs, PHCs and CHCs. HRH requirements for various categories are almost 12.6 lakh (25%) at SHCs; over 12 lakhs (24%) at PHCs; roughly 6.9 lakhs (14%) at CHCs, which are designated as the first referral units for rural areas; close to 11.3 lakhs (23%) at the sub- district hospitals for secondary level care and the remaining 6.8 lakhs (14%) for tertiary care at district and medical college hospitals.

In order to ensure an adequate number of health workers for Universal Health Coverage, it is necessary to augment the health workforce at different levels. We recommend widening and deepening the base of the pyramid to strengthen the healthcare system for the delivery of primary and preventive health care. Meeting the requirements of UHC will call for an improvement in the country's present doctor-to-population ratio from 0.5 per 1,000 persons based on our estimates to a well-measured provision approaching one doctor per 1,000 persons by the end of the year 2027. Thus, we recommend increased financial allocations for strengthening physical infrastructure for SHCs, PHCs and CHCs, ensuring HRH availability through the creation of new educational institutions for medical, nursing, midwifery (see Recommendations 4, 5, and 6), the introduction of new BRHC course in underserved districts (see Recommendations 2 and 9); and the creation of required posts for the health facilities.

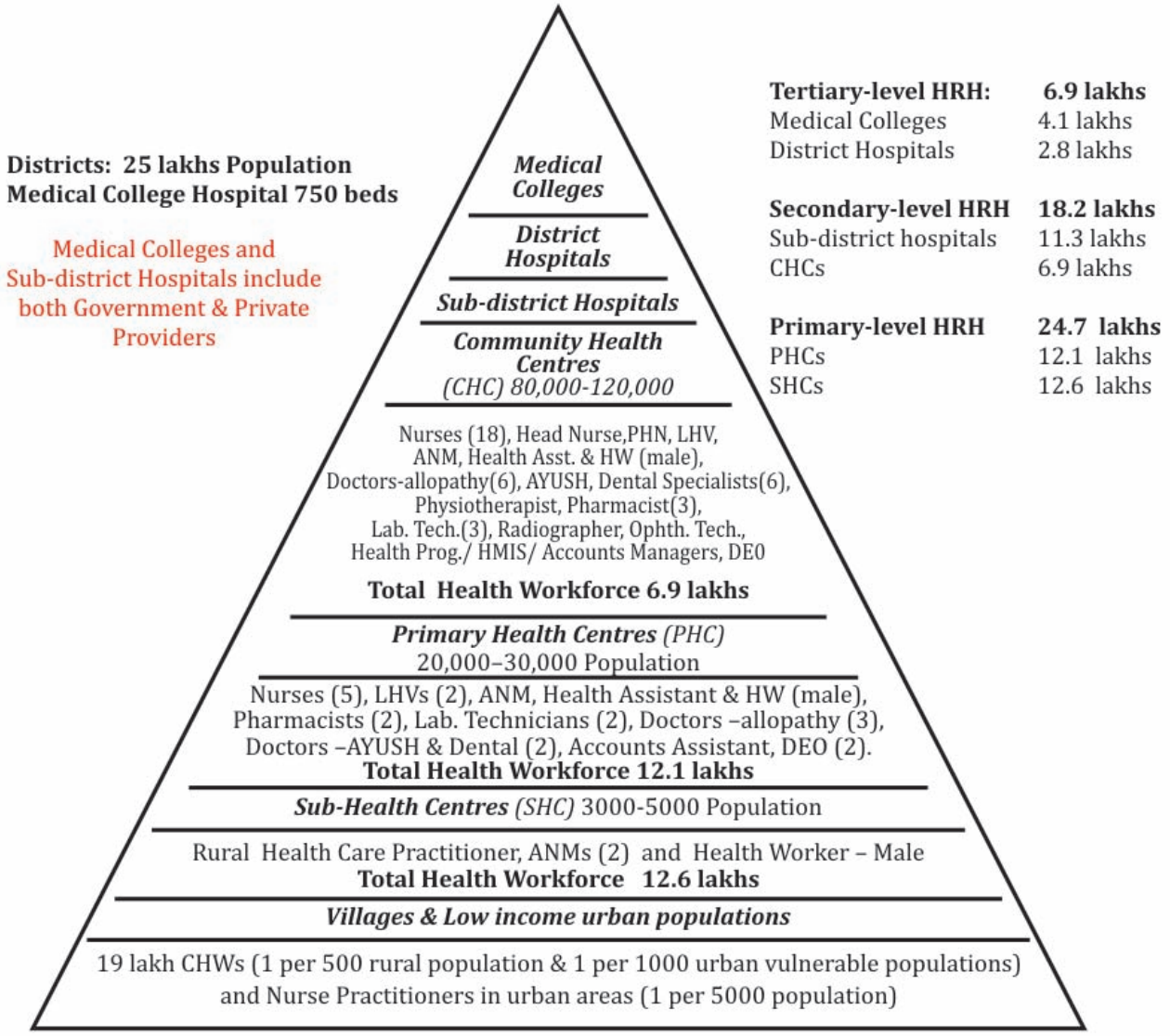
The Government of India norms provides for a minimum of nine health workers at a new PHC while the IPHS 2010 recommends nineteen. We envisage the PHC as the first contact point for allopathic, AYUSH, and dental care and strongly recommend the provision of almost 25 health care providers, comprising not just nurses and doctors, but also paraprofessionals like technicians and a health educator. We propose that the CHC be the access point for emergency services including caesarean section deliveries, newborn care, cataract surgeries, sterilisation services, disease control programmes and dental care. This will likely require, on average, over 50 health care providers, including nurses, ANMs, AYUSH and allopathic physicians (including specialists), as well as allied health providers like radiographers, an operation theatre technician, and physiotherapist.

The High Level Expert Group (HLEG), acknowledging HRH provisioning at hospitals as per IPHS and MCI norms, recommends close to 250 staff at sub-district hospital, over 400 at district hospital and over 800 at medical college hospitals. This distribution will achieve a more equitable distribution of HRH, with

almost half the workforce at the primary care level, approximately 36% at the secondary care level and 14% at the tertiary care level.

The provision of care from the SHCs to the level of CHCs and district hospitals (Figure 1) will be exclusively by the public sector. At sub-district level hospitals and medical college hospitals, private providers will also provide services through careful contracting-in mechanisms. Figure 1 summarizes the healthcare delivery system and the proposed provision of Human Resources for Health (HRH) at different levels.

FIGURE 1: NORMS AT PRIMARY, SECONDARY, AND TERTIARY LEVELS



Source: HLEG Secretariat

Recommendation 4: Provide adequately skilled ANMs at SHCs, PHCs and CHCs through the addition of Auxiliary Nurse Midwife (ANM) schools in 9 priority states phased from 2012 to 2017.

Ensure adequately skilled ANMs at all health centres with emphasis on high focus states

a) Simultaneously progress towards making available at least one ANM school in all districts with over 5 lakh population.
b) Ensure minimum of 40 ANM students per batch and biannual admissions in ANM schools as per local needs. This may be reduced subsequently after required norms are reached.
c) Strengthen Lady Health Visitor (LHV) training centres to ensure adequately trained CHW and ANM supervisors.

Rationale

Primary health care coverage at the SHC level requires over 8 lakh ANMs by the year 2022. The Indian Nursing Council has registered 5.76 lakh ANMs (as on 31st December 2009). Of these, less than 2 lakh ANMs are currently employed in the Government sector, even though ANM posts are only available at Government health facilities.[1] Despite the NRHM introducing a second, fully paid ANM at the SHC level, states like Bihar and Uttar Pradesh are still lacking ANMs even at basic levels of care.[1,22] Other states like Rajasthan, Jharkhandand Jammu & Kashmir are able to produce enough ANMs to staff one position at the SHC, but still require additional capacity to provide for a second ANM. The distribution of ANM cadres is widely uneven, with relatively higher shortages in underserved districts.[1]

Expected outcome

Increased production through new ANM schools and enhanced admission capacities in existing schools would fulfil the requirements of ANMs and LHVs at health facilities in all states.

Recommendation 5: Increase the availability of skilled nurses to achieve a 2:1:1 ratio of nurses to Auxiliary Nurse Midwives, (i.e. minimum of 2 nurses and one ANM) to allopathic doctors, through the provisioning of new nursing schools and colleges.

Rationale

It is estimated that there are 6.51 lakh nurses and 2.96 lakh ANMs currently available in the country, reflecting a combined nurse and ANM ratio of one per 1,277 population. This is in comparison to one per 2,250 estimate of the National Task Force for Nursing for the Eleventh Five Year Plan (2004).[38]

The amount of Rs. 1500 crores allocated during the Eleventh Plan for new nursing schools and up-gradation of nursing schools to colleges contributed to an annual production capacity for 1.15 lakh additional nurses. This included nursing schools for the General Nursing and Midwifery diploma and nursing colleges for the Bachelor of Science (Nursing) degree. However, this production remains skewed across states. Some positive changes have been observed over the past five years, with the addition of 539 nursing schools in the twelve states of Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Madhya Pradesh, Odisha, Punjab, Rajasthan, Uttaranchal, Uttar Pradesh and West Bengal. Despite these efforts, we have fallen short of requirements, to the extent that in many states, the National Rural Health Mission has had to appoint far fewer nurses than required, due to their non-availability. In 2010, only 57,450 of the required 2.76 lakh required nurses were employed at PHCs and CHCs.[1]

The need for specialized nurses has been felt in multiple clinical areas including operation theatres, chronic care, midwifery, ophthalmology, ICUs, cardio-thoracic, and neurosurgery. The High Powered Committee on Nursing (1989)[39] observed that very few senior positions exist in nursing and advocated for greater autonomy and professional development for

nurses along with recommending nursing positions in directorates.

Expected Outcome

Implementation of these recommendations will make available an additional 7.8 lakh nurses and ANMs by the year 2017. This production would, during the Thirteenth plan, be enhanced further from newly added nursing schools and colleges so that 10.1 lakh additional nurses and ANMs would be added during 2017 to 2022. With this rate of growth, it is expected that the HLEG target of 3 nurses and ANMs per doctor (following a 2 nurses: 1 ANM: 1 doctor distribution) will be achieved by the year 2025.

These norms may be achieved in four phases (A: 2012-2015; B: 2015-2017; C: 2017-2022 and D: 2020-2022) starting with underserved districts identified in 15 states (see Table 4). This scope of production is feasible as demonstrated by the financial support of the Government of India in the current five-year plan, which has produced a remarkable increase in nursing schools and colleges over the past four years. It also takes into account faculty shortages that may exist in particular for nursing colleges in a number of states.

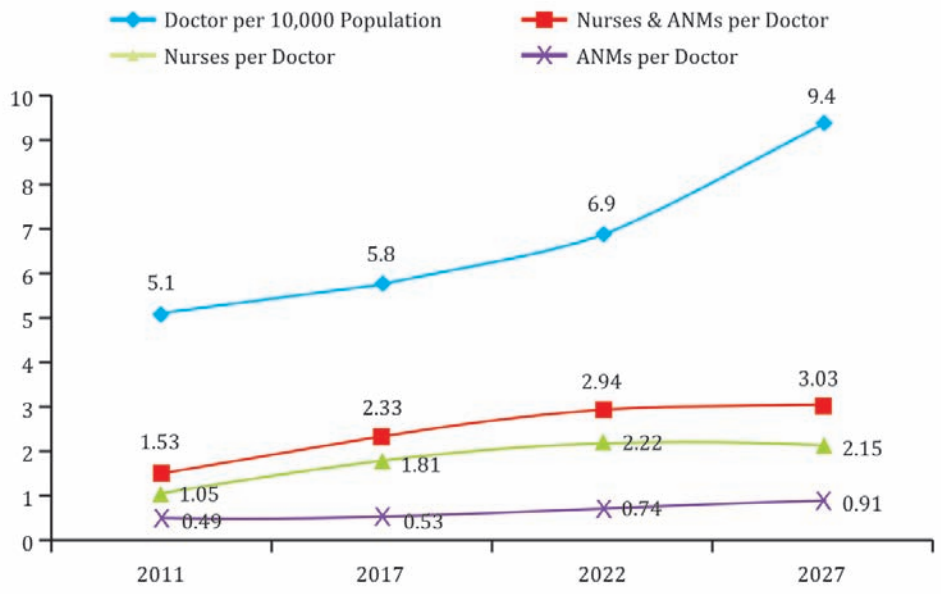
Recommendation 6: Increase the availability of allopathic doctors to 1 per 1000 population, with specific thrust on underserved populations, through the establishment of medical colleges in high focus states, during Twelfth and Thirteenth Five Year Plans.

a) Along with the establishment of new medical colleges in underserved districts, the admission capacities of existing colleges in the public sector should also be increased. Partnerships with the private sector should be encouraged with conditional reservation of 50% of seats for local candidates, fixed admission fees and government reimbursement of fees for local candidates.

b) Medical colleges who have the requisite academic infrastructure and are associated with 750 bed hospitals could be an ideal hub for nursing and other health professional colleges, enabling inter-professional education.

c) The revised MBBS curriculum proposed by the Medical Council of India (MCI) should be refined to include greater focus on preventive, promotive and rehabilitative health care. Measures such as a compulsory posting of one year for all MBBS

FIGURE 2: PROJECTED HRH AVAILABILITY (2012- 2022)



Source: HLEG Secretariat

graduates immediately after internship, with 10% extra marks weightage for one year of rural service and 20% extra marks for 2 years of rural service in the postgraduate entrance examination should be included.

d) The recent policy stipulated by the Medical Council of India has doubled the number of seats for postgraduate training and will help to meet future requirements. Postgraduate medical education reform should be aligned with principles and framework of universal healthcare coverage. Postgraduate seats should be specifically enhanced in high focus states and districts.

e) The National Board of Examinations (NBE) should be strengthened to enable post-graduate medical education in qualified hospitals not attached to medical colleges, to produce required number of specialists as per national needs. This will also help to provide required faculty for medical colleges.

Rationale

As per MCI data, 31,866 new MBBS doctors were registered during the year 2009-2010 and 34,595 students were admitted in 300 colleges for the academic year 2009-2010.[2] Based on adjusted figures as per HLEG's estimations, the number of allopathic doctors registered with the MCI has increased progressively since 1974, to 6.12 lakhs in 2011 - which yields an adjusted ratio of 1 doctor for 1,953 persons. This density of 0.5 doctors per 1,000 population is higher than that of nurse- rich countries such as Thailand and Sri Lanka and much lower than doctor-rich nations like the UK and the USA. Moreover, this density has a strong urban skew and is concentrated in very few states.

The production of allopathic doctors in the country as per current trends is both inadequate and uneven. India currently has a density of one medical college per 38.41 lakhs population. Presently, 315 medical colleges are spread over just 188 of the country's 642 districts. This skew is worse in certain states: there is only one medical college for a population of 115 lakhs in Bihar, 95 lakhs in Uttar Pradesh, 73 lakhs in Madhya Pradesh and 68 lakhs in Rajasthan whereas Kerala, Karnataka and Tamil Nadu each have one medicalcollege for a population of 15 lakhs, 16 lakhs and 19 lakhs, respectively.

With respect to specialist doctors, changes in MCI regulations concerning faculty-student ratios will double the number of postgraduate seats in the coming years. While this yields more specialists, it will result in fewer graduates opting to focus on primary health care. This creates an additional need for medical colleges to produce enough doctors so that primary health care needs may be met. The National Board of Examinations (NBE) presently engages hospitals, which are not attached to medical colleges for postgraduate training, in conventional disciplines as well as in disciplines like rural surgery, which are not taught in medical colleges. Strengthening the NBE will help meet the shortages in specialists as well as the faculty needed for new colleges.

Expected Outcome

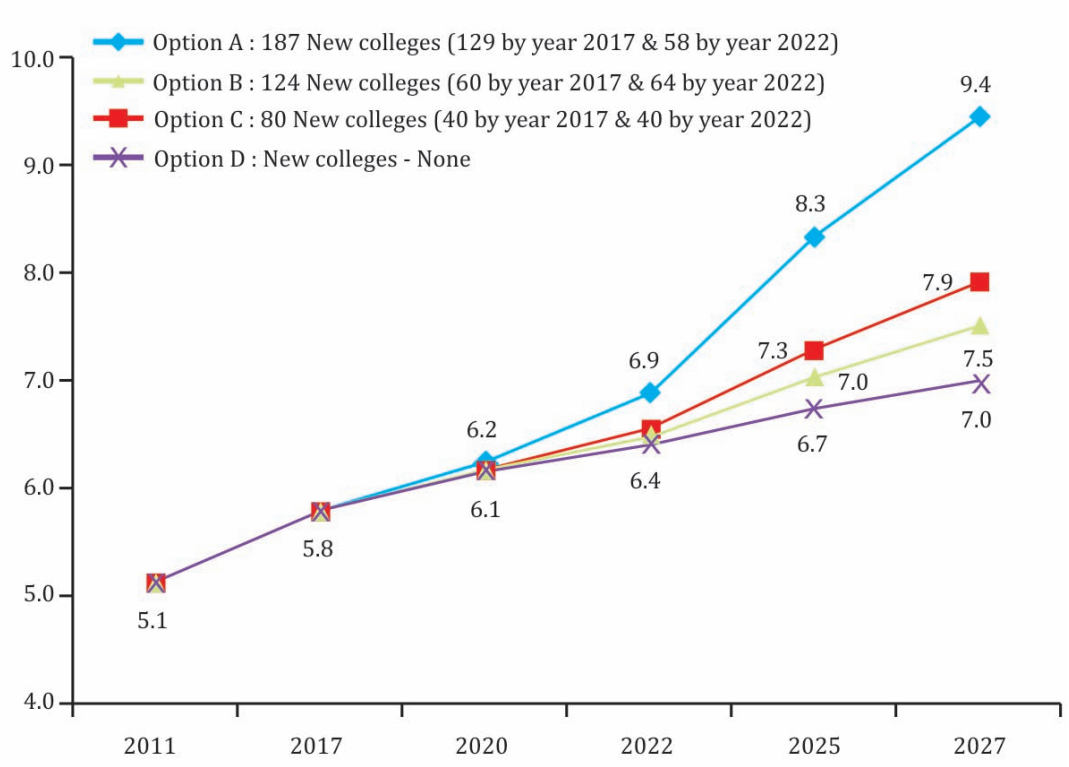
The HLEG proposes a phased addition of 187 colleges in underserved districts during the XII and XIII plans for equitable health care accessibility across the states. Like in the case of nursing, these norms may also be achieved in four phases (Phase A: 2012-2015; Phase B: 2015-2017; Phase C: 2017-2020 and Phase D: 2017-2022). Through this phasing process, by the year 2022, India will have one medical college per 25 lakh population in all states except Bihar, Uttar Pradesh and West Bengal.

The implementation of HLEG recommendations will enable the additional availability of 1.2 lakh doctors by the year 2017. This production would, during the XIII plan, be enhanced further from newly added medical colleges so that 1.9 lakh additional doctors would be added during 2017 to 2022. This production would yield a doctor population ratio of 1:1,058 at the end of Thirteenth Plan. With this rate of growth, it is expected that the HLEG target of 1 doctor per 1,000 population will be achieved by the end of

year 2027. The provision of fewer medical colleges during the next two Five Year Plans (i.e. slower phasing of medical college production) would further delay the goal of 1 doctor per 1,000 population. (See Figure 3)

The HLEG recognises that the establishment of such a large number of new medical colleges is a

FIGURE 3: PLANNING FOR 1 DOCTOR PER 10,000 POPULATION - FEASIBILITY OPTIONS



Source: HLEG Secretariat

logistical challenge, due to shortage of faculty and the scarce financial inputs for the requisite infrastructure. The HLEG believes, however, that linking the new medical colleges to district hospitals will considerably reduce financial burdens, as the existing district hospitals need only to be expanded and academic infrastructure constructed. Additional concerns about 'over-medicalisation' must be balanced against the need to correct the adverse health care imbalance in states with very high preventable morbidity and mortality. We do not view medical colleges merely as production units for doctors. Instead, we see each medical college as an integral part of the health system, responsive to and partly responsible for the health needs of one or two districts with training and service opportunities for various cadres. We believe this purpose can be served by functionally linking medical colleges to district hospitals to contribute towards the normative provision of 2 beds per 1,000 population. These new medical colleges being attached to the district hospitals would facilitate local student enrolment and also be the district hub for other professional colleges in nursing and allied health professional courses.

TABLE 4: PROPOSED MEDICAL, NURSING & MIDWIFERY INSTITUTIONS

Districts	Number of districts	Available				Proposed								
		Medical College	B.Sc. Nursing	GNM Nursing	ANM Schools	Medical Colleges	2012-15		2015-17		2017-22		Total Nursing	ANM Schools 2012-17
							BSc	GNM	BSc	GNM	BSc	GNM		
India	642	315	1418	2233	1035	187	15	98	14	93	29	191	440	232
Arunachal Pradesh	16	0	0	2	2	-	-	1	-	1	1	-	3	0
Assam	27	4	6	9	10	8	2	4	3	2	4	5	20	10
Bihar	38	9	1	10	35	27	5	30	3	30	8	42	118	46
Chhattisgarh	18	3	42	24	45	7	-	-	-	-	-	-	0	0
Gujarat	26	16	31	65	26	8	-	1	-	1	-	-	2	15
Haryana	21	5	20	43	47	5	-	1	-	1	-	-	2	0
Jammu& Kashmir	22	4	4	8	6	1	1	2	1	2	-	1	7	2
Jharkhand	24	3	5	19	18	10	1	4	1	4	2	6	18	2
Madhya Pradesh	50	11	97	125	92	18	-	3	-	2	-	16	21	0
Maharashtra	35	41	77	104	287	3	-	3	-	2	-	-	5	0
Meghalaya	7	0	2	7	2	1	-	-	-	-	-	-	0	1
Nagaland	11	0	0	1	1	-	-	1	-	1	1	1	4	1
Odisha	30	6	14	47	67	10	2	4	2	3	3	8	22	0
Punjab	20	8	85	156	92	3	-	-	-	-	-	-	0	0
Rajasthan	33	10	132	157	17	17	-	-	-	-	-	-	0	28
Sikkim	4	1	2	1	-	-	-	-	-	-	-	-	0	1
Tripura	4	2	1	3	2	-	-	1	-	1	-	-	2	2
Uttarakhand	13	4	10	11	14	-	-	1	-	1	2	2	6	0
Uttar Pradesh	71	21	33	141	73	49	3	40	2	40	5	82	172	99
West Bengal	19	11	15	50	59	20	1	2	2	2	3	28	38	25

Source: HLEG Secretariat

Recommendation 7: Utilize available doctors within the state at PHCs, CHCs and district hospitals.

Optimally utilise available AYUSH doctors in the following ways:

a) Facilitate the skill up-gradation of AYUSH doctors for the provision of primary health care at SHCs through a 3-6 month bridge course. AYUSH doctors who are available in surplus in Bihar, Madhya Pradesh, Rajasthan, Uttarakhand and Uttar Pradesh[2] may be selected for these courses to lead primary health care teams at the SHC.
b) Create posts of AYUSH doctors at the PHCs, CHCs and district hospitals. This gives patients the option of availing of AYUSH or allopathic services, as per their preference.
c) Support AYUSH practice through the use of an AYUSH Essential Drugs List. This will enable AYUSH practitioners to use their system-specific knowledge (see Chapter on Access to Medicines, Vaccines and Technology).
d) Involve AYUSH practitioners in health promotion and prevention of non-communicable diseases.
e) Create career trajectories in public health and health management for this cadre.

Rationale

India currently has 492 operational AYUSH institutions, with an average admission capacity of over 30,000 undergraduate and postgraduate students per annum.[2] This is almost double the annual admissions observed in the 1990s.[40] The challenge of Universal Health Coverage will be to optimally utilise this key HRH cadre, particularly given the critical role AYUSH doctors can play in the primary health care system.

Expected Outcome

The HLEG expects that these recommendations will lead to integration of Indian systems of medicine in the health systems and provide for choices of AYUSH and allopathy health care under a Universal Health Coverage (UHC) framework.

Recommendation 8: Allied Health Professionals should be trained and utilized to achieve the goals of UHC.

The existing allied health workforce (pharmacists, technicians, radiographers, etc.) is both inadequately trained and unevenly distributed. Non-availability of these professionals in several states is due to non-creation of posts and vacancies in existing posts. The creation of relevant posts is therefore a key step in ensuring their integration in health system.

For these cadres to serve the larger goals of UHC, it is recommended that:

a) Posts be created and filled at appropriate levels as per norms with close attention to distributional equity as assessed routinely through a Human Resources Management Information System (HRMIS).
b) Training opportunities be ensured for these cadres with opportunities for skill-building, and career advancement (see Recommendation 10). In states without adequate allied health professionals, capacity for paramedical education should be increased in order to address distributional inequities in the longer term.

Rationale

The educational infrastructure for many cadres of allied health professionals is notably weak in India. The type of courses, nomenclature, training patterns, entry of candidates, course curriculum, assessment of candidates, affiliating bodies, nature of awarding institution / university are widely variable. Only a few training institutes in the public or private sector deliver high quality education. Moreover, pre-service education/training still lacks rationalisation and standardisation. In the case of certain other cadres, career progression can be ensured at the district level (e.g. medical technician courses at the DHKIs, see Recommendation 9).

Expected Outcome

The creation of new posts, enhanced training of allied health professionals, strengthened educational facilities along with improved scope and support for career progression will reduce gaps in these cadres.

II. Enhance the quality of HRH education and training and improve HRH management by competency based, health system-connected, problem solving, IT enabled learning methods and integrated trainings.

Recommendation 9: Establish District Health Knowledge Institutes (DHKI) in districts with more than 5 lakh population, as nodal centres for development of competency-based professionals.

- Create DHKIs for induction training, in-service training, continued medical education, continued nursing education and continued paramedical education programmes. The DKHIs can be authorised to issue course completion certificates to the CHWs on completion of all the mandated training modules.
- Develop onsite training linkages with DHKIs, hospitals and health centres in the district. DHKIs should serve as centres for skill up-gradation with capacity for offering: 1) an LHV training course for ANMs; 2) an Health Assistant training course for male health workers; 3) a diploma course in Public Health Nursing; 4) a Diploma course for Medical Technicians (DMT); 5) Bridge courses for AYUSH doctors, dentists, pharmacists, physiotherapists and nurses to function as rural health practitioners at SHCs; 6) a Bachelor of Rural Health Care (BRHC) course; and 7) a Bachelor of Medical Technology (BMT) course.
- Develop the DHKI as the nodal point for distance and e-learning and faculty sharing across the streams.
- DHKI would pave way for admission of local candidates and also uniformity in admissions, curricula, and training. District HRMIS should be used to keep track of progression through training, for various cadres.

Rationale

We envisage that the DHKIs will address the severe shortage of educational infrastructure and provide the appropriate level of decentralisation of health care education. They will also ensure competency-based training to meet the health needs of local communities and provide much needed synergy between health and education sectors. Our recommendations echo the proposal by the Bajaj Committee (1987) advocating the creation of a 'District Institute of Education and Training' to offer 'integrated training modules'.[8] In 2008, the National Training Strategy further advocated integrated training for all health and family welfare programmes and district level training at functional facilities as well as capacity building of districts for HRH trainings.[44] Despite the NRHM's efforts, training continues to be disorganised due to a lack of physical and academic infrastructure at the district level. The lack of training facilities has been a major concern across districts for skill development of HRH.

Quality of education is of particular concern; recent data from the five Empowered Action Group (EAG) states show that only 20-25% of ANMs graduating from training programs reported the ability to conduct a delivery independently. Moreover, between 40% and 55% of GNMs report the inability to administer immunisation without supervision.[45-49] The lack of competency-based training geared towards on-the-ground health needs is connected, we believe, to the lack of educational infrastructure at the decentralised level.

It is critical to scale up training capacities in terms of physical infrastructure and trainers, maximise the use of information technology and develop competency-based assessments and certification processes to ensure optimal utilisation of HRH. The first step in this direction would be to establish DHKIs for induction and in-service training under various national health programmes. The supervision of the large ANM workforce needs to be strengthened. To enable this, the DHKI will offer courses for LHV, PHN and Male Health Assistant training. This will improve the quality of supervision of CHWs/ASHAs, ANMs and

male health workers at the primary health care level.

In addition, the proposed DKHIs should also offer diploma programmes in Public Health Nursing for LHVs and nurses with experience at PHCs / CHCs, which will enable them to become PHNs. DHKIs should conduct the new bridge course for male health workers to be effective in supervisory roles as health assistants, and subsequently, as health inspectors.

DHKIs should also be developed as institutions for entry-level Diploma in Medical Technology (DMT) courses and the subsequent Bachelor of Medical Technology (BMT) course with specialisations in medical laboratory technology (biochemistry, microbiology, pathology, histology, cytology), ophthalmology, operation theatre technology, cardiology, radio-diagnosis, radiotherapy, imaging technology and ultrasonography. Admissions procedures for these courses could be modelled after the male health worker course currently offered by the Government of India (2010).

The creation of the Bachelor's degree and bridge courses in Rural Health Care should also be located at district level, so that the graduates of these courses may be locally recruited and have opportunities for practicum experience at the SHCs, relevant to the needs of local communities.

Expected Outcome

Through a phased process where underserved states and districts with larger population densities will receive priority, 172 new DHKIs will be set up during 2012-2015, 163 by the year 2017 and an additional 213 by the year 2022.

Recommendation 10: Strengthen HRH management and supportive supervision mechanisms at block, district, state and national levels along with the provision of Human Resources Management Information Systems (HRMIS). Provide support for the advancement of public health professionals through training in public health and health sciences.

We recommend strengthening health sector management by supporting postgraduate courses in public health and hospital management for the health professionals and health programme management for medical, dental, AYUSH, nursing and allied health professionals (see Chapter on Management and Institutional Reforms).

Rationale

a) Public Health Managers: One of the major challenges in the health system has been in the area of health sector management including public health, hospitals and the management of a large multi-cadre health work force. The MOHFW's Expert Committee on the Public Health System (1996) observed that many of the central health programme managers have no formal education in public health and management.[50] The positioning of adequately skilled public health managers continues to be a major constraint in public health responses across the districts.

b) Public health is a formal discipline, which integrates streams of knowledge in epidemiology, biostatistics, demography, health promotion, social and behavioural sciences, health economics, gender, ethics and management. The availability of public health professionals with multidisciplinary education would enhance the efficiency and equity of the health system and its synergy with delivery of health care. This would also relieve the current burden on clinical professionals who are ill-equipped, and yet required by default, to cope with public health management. The states of Andhra Pradesh, Odisha and Gujarat initiated the development of public health cadres by deputing in-service candidates to the public health management courses; the same needs to be extended to other states.

- In view of the limited availability of these categories, there is an immediate need to establish public health training institutions and strong partnerships with public health management training institutions. These courses could be duly recognised by the State Health Sciences

Universities (see Recommendation 12). These qualifications should be made mandatory for all positions with public health responsibilities. The HLEG recommends new public health management institutions,[10] established in phases from 2012-2015, 2017-2022, and 2017-2022.

c) Nursing & ANM cadre management: With Nurses and ANMs forming the largest category of HRH, there is a dire need for enhanced managerial support in terms of nursing positions at directorates in states and also in the MOHFW, as recommended by the High Powered Committee on Nursing Professions.[39]

The provision of nursing and midwifery management cadres at the national, state and district levels would enable supportive supervision for nursing and midwifery cadres, including nurse practitioners.

d) Supportive Management Units: The lack of managerial support for implementing health care programmes is a major constraint and there is an urgent need for the provision of health managers, hospital managers, Human Resources for Health (HRH) managers, Health Management Information Systems (HMIS) managers and Accounts managers. These managerial cadres would be trained toprovide HRH monitoring for performance and accountability, and facilitate decentralised and timely recruitment, as well as needs based distribution of available HRH. Managerial structures supporting Human Resource Management Information Systems (HRMIS) at national, state, and district levels would enable the monitoring of HRH availability and provide basic inputs for HRH policies and planning. The introduction of HR managers at the sub-district hospital level and higher facilities would ensure effective HR management and enable technical professionals to focus on clinical care.

The HLEG assessed the needs of health sector managerial cadres at block, district and state levels to be over 1.96 lakhs in the aforementioned categories. With the provision of appropriate career paths, these cadres would progress from the block level to district, state and national levels, resulting in better integration and implementation of health programmes.

Recommendation 11: Strengthen the existing State and Regional Institutes of Family Welfare and selectively develop Regional Faculty Development Centres to enhance the availability of adequately trained faculty and faculty-sharing across institutions.

Rationale

State and Regional Institutes of Health and Family Welfare (SIHFW/RIHFW) play a key role in education and training. These institutes should extend their scope of work to include support for management cadres and implementers of national health programs. The proposed rapid scale-up of HRH requires greater attention to health faculty across states, striking a balance between local needs, availability, and pedagogical quality. The MCI has spearheaded efforts to improve the quality of medical training through 13 regional centres, equipped with medical education technologies.[51] In addition to cadre-specific efforts, faculty development across cadres under SIHFW/RIHFW can ensure integrative, competency-based, and field-relevant teaching. Where appropriate, this should be designed to engage multiple cadres at once (nurses and doctors, ANMs and male health worker). To facilitate this, regional collaboration for faculty development is proposed.

Many existing educational institutions are presently facing severe imbalances in faculty as well as infrastructure. The proposed rapid scaling up of HRH educational and skill development training institutions, up to the district level, necessitates centre for faculty development and continuing education. The HLEG recommends the provision of 20 regional centres for faculty development and sharing of faculty across institutions. The existing 44 State and Regional Institutes of Health & Family Welfare should be strengthened as the nodal institutes for Training of Trainers (ToTs) and skill development of health

managers as per local needs. They should develop curricula and training modules and undertake analysis of training uptake and utilisation in collaboration with academic institutes such as NIHFW, National Health Systems Resource Centre (NHSRC) and the Public Health Foundation of India (PHFI).

Expected Outcome

By 2017, 44 State and Regional Institutes will function as the nodal points for coordination of all induction and in-service trainings and entrust various educational programmes to DHKIs. In this way academic and technical support will be made available for primary health care programmes. It is anticipated that 12 faculty development centres at RIHFW/SIHFWs would be established by the year 2015, and an additional 8 by the year 2017. There will be sharing of faculty between states who need them, and those with existing capacity in faculty development. These regional faculty development centres will ensure faculty production, faculty sharing, and the creation of competency-based curricula relevant to local needs incorporating appropriate use of information technology to facilitate distance education.

Recommendation 12: Improve Quality in HRH Education through appropriate linkages in accreditation mechanisms of state level boards, State Health Sciences Universities and National Council for Human Resources in Health (NCHRH).

Rationale

Curricula in health professional education should keep pace with the changing dynamics of public health, health policy and health demographics. Medical education also requires greater orientation of providers to social determinants of health, including gender and equity issues. Health professional education should be oriented more towards population-based primary and preventive health care rather than being driven by a curative/treatment paradigm. Medical and nursing graduates in the country should be well trained, prepared and motivated to practice in both rural and urban environments. The curricular reform process initiated by the Medical Council of India for medical education should be emulated by other councils.

We recommend the use of Information Communication Technology (ICT) for standardised teaching across institutions and the development of institutional networks to facilitate and disseminate e-learning packages and resource materials. It is equally important to ensure that on-going training and advancement opportunities are offered to community health workers serving in villages and urban areas. These workers, who provide essential outreach to patients as well as feedback on emerging problems in the health system, need decentralized, intra-district training. Systems of continued medical education and continued skill improvements - linked to promotions and renewal of license to practice - should be introduced.

The current training of medical and nursing graduates mostly prepares them for urban settings leading them to super specialize instead focussing more strongly on basic primary health care. A study by WHO has aptly commented on the disconnect between medical syllabi and reducing morbidity.[52] The Commission on the Education of Health Professionals for the 21st Century has pointed out that "in India the growth of private medical schools raises concerns about the quality and transparency of one of the one of the world's largest medical educational system."[15] Recommended changes would obviously need policy thrusts for major reforms of adopting competency-based curriculum, inter-professional/ transprofessional education, employing IT learning, local adaptation, strengthening of educational resources and promotion of professionalism.

It is imperative to establish robust accreditation mechanisms for ensuring adequately trained health care professionals. State level boards for paramedical professionals are required for uniformity in the admissions, curricula, trainings and accreditation. The proposed bridge courses for skill up-gradation, certificate courses and diploma courses for allied health

professionals should be duly recognized by state level boards as stipulated by the National Council for Human Resources in Health (NCHRH) for uniformity across the states and Union Territories.[53] All degree courses could be under the purview of the State Health Science Universities as per the national guidelines formulated by the National Council for HRH. As early as 1987, the Bajaj Committee recommended the establishment of Health Science Universities in each state.[8] States such as Andhra Pradesh, Punjab, Rajasthan, and Tamil Nadu have already established these institutions. The NCHRH should eventually be the apex body for all HRH policymaking and implementation of standards across the country.

Expected Outcome

At least 20 new Health Sciences Universities should be established by the year 2022. By the year 2017, councils should be in place for all cadres of health workers. Universal accreditation, registration, and regulatory institutions will ensure that the pedagogical needs for HRH are determined in a timely fashion. They will also ensure that output is carefully monitored and managed, and standards of education and practice are maintained, with NCHRH as the overarching body for all categories of health professional education. Ensuring quality of education and practice will ensure that the goals of accessibly and quality health care are met in turn.

Recommendation 13: Establish HRH management systems for improved recruitment, retention, performance; rationalized pay and incentives; and assured career tracks for competency-based professional advancement.

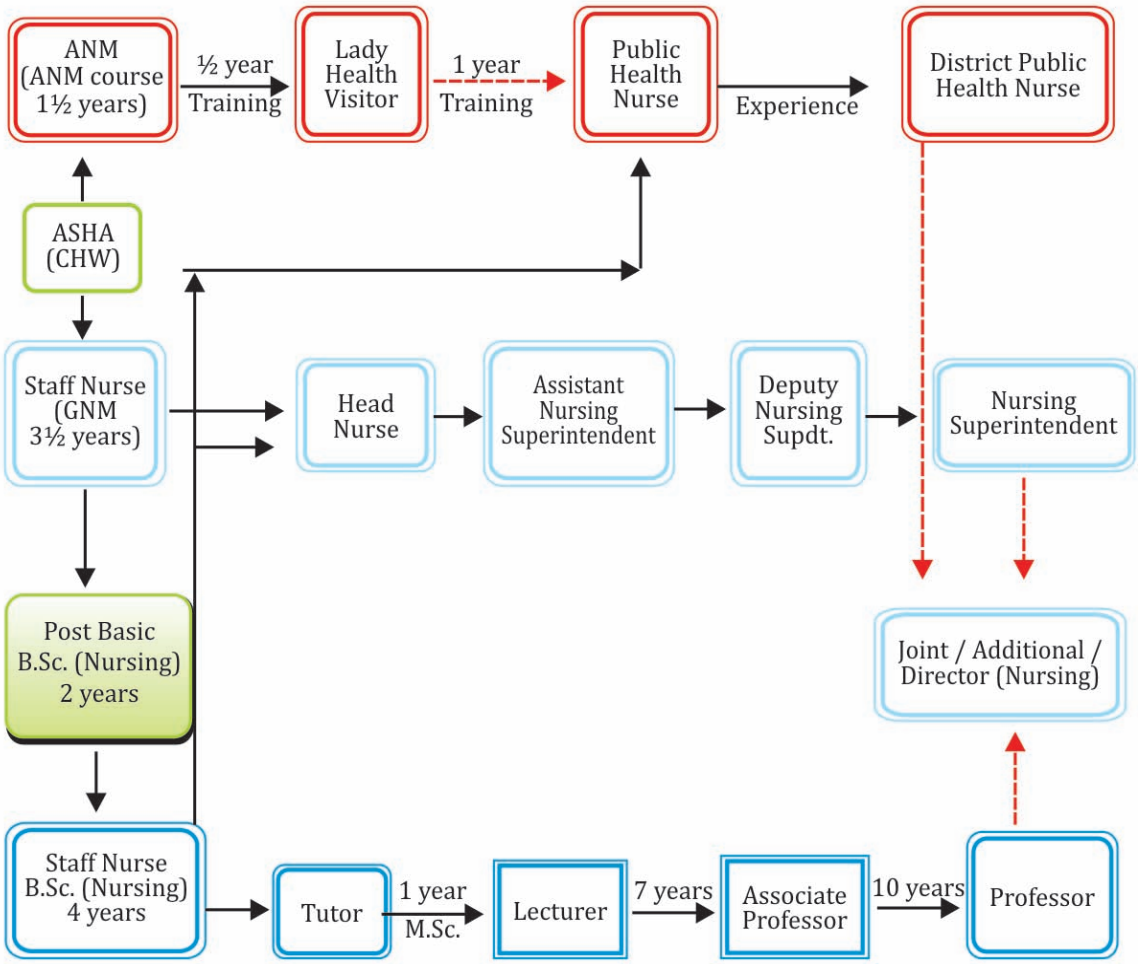
HRH Retention and Performance incentives should be introduced uniformly and must include:

a) Provision of requisite posts and filling up of all vacancies regularly in a time bound manner.
b) Transparent transfer policies and implementation.
c) Fixed tenure, especially in hardship areas, and residential complexes in hardship areas, along with career progression through reservation of postgraduate seats.
d) Bridge courses with study leave; performance-based, time-bound promotions; contractual appointments on equal pay; and regularisation on satisfactory completion of 2-3 years.
e) Systematic performance assessment for recruitment, mentoring, supervising, and career progression, linked to the Health System Surveillance Unit (see chapter on Management and Institutional Reforms).
f) Monetary incentives such as rural area allowance, hardship area allowance, child education allowanceand transport allowance (doubled in difficult postings).
g) Doctors and nurses should be full-time employees in the public sector and they may be duly compensated on parity with their colleagues in other sectors.
h) Revision of job responsibilities and duties should be routinely undertaken, with provisions for task shifting and task sharing to appropriate cadres (e.g. administrative tasks shifted to health systems managers, specific clinical functions of doctors and nurses to BRHCs and nurse practitioners respectively).
i) Two separate Health Systems Management (HSM) and Public Health cadres are recommended, that are well integrated with various health departments to address both the management and public health related inadequacies in the present system. Training of these cadres will incorporate principles of professional management into decision-making in health institutions. (Detailed in the chapter on Management and Institutional Reforms).
j) Well-defined career paths are recommended to motivate health workers and improve health system efficiency, ensuring minimisation of career discontinuity for women in particular. We suggest a minimum of four promotions in the career span of each category as detailed in Figure 4. This includes nurses, ANMs, male health workers, lab technicians and health programme managers.

Career tracks have been putatively suggested for a number of cadres as an illustrative exercise:

Nurses and ANMs: Presently, an ANM, after completing class X and a 1.5 year diploma course, enters service at about 20 to 22 years of age, and has at best one opportunity for promotion (after six months of training) to become a Lady Health Visitor (LHV) in her professional tenure of nearly 40 years. We recommend that ANMs, after promotion as LHVs, should be considered for the posts of Public Health Nurses (PHN), advancing further to District Public Health Nurses (DPHN) subject to their completion of one year DPHN course. The present lateral entry of clinical nurses to the posts of PHN could be retained, subject to their completion of a PHN course and a minimum of 5 years working experience in PHCs. The ANM cadre should be provided with one-year courses in midwifery education (diploma in nursing education) so that they can pursue academic careers at ANM schools and LHV training schools. ANMs should be provided opportunities to become staff nurses facilitated through the reservation of seats in nursing schools. Similarly, CHWs (ASHAs), who are well-performing members of the

FIGURE 4: PROPOSED HEALTH CAREER TRAJECTORIES FOR NURSES AND ANMs



Source: HLEG Secretariat

workforce, should be provided with opportunities to advance their careers by reservation of seats in ANM and nursing schools.

Similarly, nurses who complete a three and a half year GNM diploma course or a four year graduation (B.Sc.) in nursing after class XII and enter the service around the age of 24 years are provided with promotional posts of Head Nurse, Assistant Nursing Superintendent, Deputy Nursing Superintendent and Nursing Superintendent. Graduate nurses also have the opportunities in the teaching cadre to become a Tutor, Lecturer, Associate Professor or Professor. We recommend that bridge courses be provided for clinical areas such as operation theatres and ICUs, as well as clinical super specialty areas such as cardiology and psychiatry, for their professional development as specialist nurse practitioners. The nursing cadre should also be provided bridge courses in nursing education, nursing administration, hospital management and health management to enable them to take up the administrative posts at facility, block, district and state levels.

Male Health Worker: The Male Health Worker, after completing class XII and a one year diploma course enters service and is promoted only once in his service span, to a supervisory role as a Male Health Assistant. We recommend that further promotional avenues be offered to this category with a supervisory post of Health Inspector up to possibly block level health managers. This would help in the effective implementation of communicable and non-communicable disease programmes as well as prevention and control of potential epidemics.

FIGURE 5: PROPOSED CAREER TRAJECTORY FOR HEALTH WORKER (MALE)

Source: HLEG Secretariat

Laboratory Technician: The Laboratory Assistant, after completing class XII and a two-year diploma course, enters service and is first promoted to laboratory technician and later as senior lab technician. We recommend that a B.Sc. and M.Sc. qualification may be made mandatory for the promotion of this category to higher level posts, such as technical assistants and scientific assistants at district public health laboratories and medical college hospitals for diagnostic services.

FIGURE 6: PROPOSED CAREER TRAJECTORY FOR LABORATORY TECHNICIANS

Source: HLEG Secretariat

Managerial category: Health managers, with a management degree as a minimum qualification, who are part of the managerial force can progress in their career paths from the block level to the district and to statelevel positions, and after acquiring public health qualifications, can become a public health manager.

FIGURE 7: PROPOSED CAREER TRAJECTORY FOR HEALTH MANAGERS

Source: HLEG Secretariat

Rationale

It has been argued that regulatory frameworks should ensure efficiency in the public health delivery system and ensure access to health workers in remote, rural or otherwise underserved areas.[54] WHO is currently developing recommendations to ensure recruitment and retention of HRH in areas with linkages to education, regulation, financial incentives, as well as personal and professional support.[54] Enhanced financial incentives such as transport allowance and Non-Practicing Allowance (NPA) are suggested for rural postings, so as to compensate for the lack of children's educational facilities, irregular electricity and potable water. These recommendations echo, and in some cases build upon, considerations built into the NRHM and other government initiatives to improve the overall functioning of the health system.

We also recommend that effective systems of performance assessment should guide human resources in recruitment, training, mentoring, supervising, and motivating personnel. Managing for equitable results (to ensure equity) and value for money (to ensure efficiency and cost-effectiveness) should drive the performance of the proposed UHC system. Formal systems of performance appraisal should be applied to health workers at every level and used as a basis for awarding individual and group incentives - both monetary and non-monetary.

Expected Outcome

These steps are likely to improve the ability of the health system to attract, recruit, retain and motivate health personnel in underserved areas, optimise their competencies and encourage team functioning for larger impacts on health outcomes especially in under-served areas.

III. Invest in health sciences research and innovation to inform policy, programs and develop feasible solutions.

Recommendation 14: Build capacity for health sciences research relevant to prioritized national health problems and health system operations.

We need to invest in building capacity for health sciences research, which is particularly relevant to national health priorities. This includes epidemiology, barriers to care, affordable interventions and health system operations. NCHRH and the National Council for Health Education Research should collaborate in advancing interdisciplinary research. This should involve:

a) We recommend increasing the research budget in public health and biomedical sciences across all national funding agencies. State governments

should also be encouraged to allocate suitable funds for locally relevant research, particularly in public health.

b) Investments should be made in centres of excellence, Health Sciences Universities, independent research organisations and in the establishment of an Interdisciplinary Commission on Health and Biomedical Research to develop a vision, roadmap and investment plan for India's health sciences research and innovation programme for 2022.

c) Given that health sciences and technology research spans multiple disciplines, agencies and ministries, the membership of this high level commission should comprise of government research agencies, academia, private industry, state governments and civil society.

Rationale

It is critical for India to augment research budget and capacity for health sciences research and innovation to inform health policy and to discover affordable, relevant treatments, products and solutions for Universal Health Coverage. Investments in research and innovation are extremely important to India's knowledge base in the health sector. Research output in health sciences is presently low in content, quality and impact.[55]

This is largely due to the modest health research budgets of national funding organisations such as Indian Council of Medical Research, the Department of Biotechnology and the Department of Science and Technology for health sciences research. The Twelfth Plan should aim at building strong research capacity and support, innovative platforms in public health, biomedical sciences, and health sciences.

Expected Outcome

In the medium and long term, India will be capable of discovering affordable new drugs, vaccines, preventive treatments and healthcare devices and diagnostics to meet her rapidly increasing health sector needs. This enhanced self-sufficiency of country will overtime play an important role in reducing the country's dependence on imported products and technologies. The country could then eventually build its knowledge base in public health, biomedical sciences and biotechnology. Health systems research (operational / implementation) will promote and encourage design and evaluation of innovations to improve health services performance and population health outcomes.

Implementation of HLEG Recommendations

Strategic investments in education for rapid expansion of HRH can enhance the availability of scientifically credible and socially connected professionals for all communities. Present HRH production capacities are lagging far behind needs in states and districts with poor health outcomes. The HLEG recommends greater focus of public investment for the creation of additional educational institutions in HRH deficient states and districts so as to facilitate local production of HRH in the districts with populations of over 10 lakhs. Government of India's support could be 80% of total budget for Government sector and 20% for private sector medical colleges, nursing colleges, nursing schools and ANM schools. This monetary support should be limited to new educational institutions in identified underserved districts, preferably for medical colleges and nursing colleges attached to district hospitals and for nursing schools and ANM schools at sub-district hospitals and CHCs. These institutions should allot 50% of seats to local candidates in the district, 30% seats for other districts within the state, and the rest of the 20% of seats open to others (also to be allocated by merit-based criteria).

There is still a long way to go before we attain the ideal norm of one doctor per minimum of 1,000 population, and 3 nurses/ANMS per doctor. Existing institutions in the country are inadequate to meet the present needs as per the norms advocated by various expert committees, as well as WHO global norms. Increasing admission capacities are crucial boosting the critical cadres of doctors, nurses, midwives and male health workers. It is equally important to ensure

a high level of quality in educational institutions to upgrade HRH skills to match the changing health needs of communities. The HLEG recommends the implementation of the aforementioned strategies during the Twelfth and Thirteenth plan periods in four phases, as detailed in Table 5, with a total investment of an estimated Rs. 37,000 crore, or roughly 3,700 crore per annum. Costing is based upon estimations and projections made by the HLEG Secretariat on the basis of figures and projections from existing government documents as well as consultation and discussion with experts and officials.

TABLE 5: ILLUSTRATIVE HRH EDUCATION & TRAINING COSTS (XII AND XIII PLANS, 2012-2022)

	Institutions	Unit Cost (Crore)	Number Proposed				Costs (Rs. Crore)				Total Costs
			2012-2015	2015-2017	2017-2022	Total	2012-2015	2015-2017	2017-2020	2020-2022	
			A	B	C & D		A	B	C	D	
A	Educational Institutions										
1	ANM Schools - New*	5	201	31	-	232	1005	155	-	-	1160
2	ANM Schools-Strengthening	1	145	66	-	211	145	66	-	-	211
4	Nursing Schools – New *	8	98	93	191	382	784	744	784	744	3056
5	Nursing Schools-Strengthening	0.5	150	100	-	250	75	50	-	-	125
6	Nursing Colleges - New	10	15	14	29	58	150	140	150	140	580
7	Nursing Colleges - Strengthening	6	30	30	-	60	180	180	-	-	360
8	Medical Colleges – New	100	59	70	58	187	5900	7000	4000	1800	18700
9	Public Health Management colleges	10	10	10	10	30	100	100	100	-	300
10	Allied Health Professional Colleges	10	172	163	213	548	1720	1630	2130	-	5480
	Sub-Total		880	577	501	958	10059	10065	7164	684	29972
B	Trainings & Quality Strengthening										
11	District Health Knowledge Institutes#	10	172	163	213	548	1720	1630	2130	-	5480
12	CHW Trainings at DHKIs	-	10 lakh CHWs	10 lakh CHWs	20 lakh CHWs	-	275	275	275	275	1100
13	LHV Schools – Strengthening	1	16	28	-	44	16	28	-	-	44
14	SIHFW & RIHFWs - Strengthening	1	25	19	-	44	25	19	-	-	44
15	Faculty Development Centres at SIHFWs	10	12	8	-	20	120	80	-	-	200
16	State Boards	1	35	-	-	35	35	-	-	-	35
17	State Health Sciences Universities	5	25	-	-	25	125	-	-	-	125
	Sub-Total		285	218	213	716	2316	2032	2405	275	7028
	Grand Total		1165	795	714	2674	12375	12097	9569	2959	37000

Source: HLEG Secretariat

** Districts with > 5 lakh population* *# Includes trainings, bridge courses, LHV training, BRHC, Diploma courses (Technicians, etc.)*

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Annexure – I : HRH Norms (32 categories)

		Indian Public Health Standards Essential HRH[2] (Revised 2010)					Medical Council of India	Recommended (2011)					
		SHC	**PHC**	**CHC**	**SDH**	**DH/** Dist. Hq	**Medical College**	**SHC**	**PHC**	**CHC**	**SDH** (201-300 beds)	**District Hosp.** (301-500 beds)/ Dist.Hq	**Medical College Hospital@** (750 beds)
	Total	**3**	**19**	**50**	**234**	**411**	**796**	**4**	**24**	**54**	**247**	**435**	**808**
1	ANM	2	1	1	4	4	-	2	1	1	4	4	-
2	LHV	-	2	1	1	1	-	-	2	1	1	1	-
3	PHN	-	-	1	-	-	-	-	-	1	-	-	-
4	DPHN	-	-	-	-	1	-	-	-		-	1	-
5	Health Worker – Male	1	-	-	1	1	-	1	1	1	1	1	-
6	Health Asst. – Male		1	-	-	-	-		1	1	-	-	-
7	Lab. Technician	-	2	3	13	9	30	-	2	3	13	16	30
8	Pharmacist (allopathic)	-	2	3	8	9	15	-	2	3	8	9	15
9	Pharmacist (AYUSH)	-	-	1	-	1	-	-	1	1	-	2	-
10	Radiographer/ DRA	-	-	2	5	20	16	-	-	2	5	20	16
11	O.T. Technician	-	-	1	12	12	14			1	12	12	14
12	Ophthalmic Tech./Asst.	-	1	1	2	2	2		1	1	2	2	2
13	Physiotherapist	-	-	-	1	2	-	-	-	1	1	2	4
14	Health Educator/ Counselor	-	-	1	2	2	-	-	1	1	2	2	2
15	Health Programme Manager	-	-	1#	-	1	-	-	-	1	-	1	-
16	Hospital Manager	-	-	-	1	1	-	-	-		1	1	1
17	HR Manager/ Asst.	-	-	-	-	1	-	-	-	-	1	1	1
18	Accounts Manager/Asst.	-	1	1	3	5	2	-	1	1	3	5	2
19	HMIS Manager / DEO	-	1	2	2	6	4	-	1	2	2	6	4

contd...

		Indian Public Health Standards Essential HRH> (Revised 2010)					Medical Council of India	Recommended (2011)					
20	Staff Nurse	-	5	18	127	269	437	-	5	18	127	269	437
21	Head Nurses /Sister in-charge	-	-	-	-	-	60	-	-	1	12	16	60
22	Matrons / Asst. Matron	-	-	-	7	9	7	-	-	-	7	9	11
23	Rural Health Care Practitioner	-	-	-	-	-	-	1	-	-	-	-	-
24	Doctor (AYUSH)	-	1	1	-	2	-	-	1	1	-	2	-
25	Dentist	-	-	1	2	2	2	-	1	1	2	2	2
26	Doctor (allopathic)	-	2	6	20	24	165	-	3	6	20	24	165
27	Specialist – Obstetrics	-	-	1	6	8	8	-	-	1	6	8	8
28	Specialist - Pediatrics	-	-	1	3	4	6	-	-	1	3	4	6
29	Specialist - Anesthesia	-	-	1	6	6	8	-	-	1	6	6	8
30	Specialist - Medicine	-	-	1	3	4	6	-	-	1	3	4	6
31	Specialist - Surgery	-	-	1	3	3	12	-	-	1	3	3	12
32	Specialist - Ophtha-lmology	-	-	1/5 CHC	2	2	2	-	-	1/5 CHC	2	2	2

> Sub-district & district hospitals - Essential HRH
@Medical Council of India guidelines
** one medical officer to be trained/ qualified in public health*
 # Public Health Manager- Specialist or PG with MBA/DPH/MPH
^ MOs trained / qualified in Obst., Paediatrics & Anaesthesia

Annexure-II: HRH Requirements (32 categories) at Health Facilities
(for provision of 2 beds/1000 Population year 2022)

	HRH Category	SHCs -(314547)	PHCs (50591)	CHCs (12648)	SDH (4561)	DH/Hq. (642)	MCH (502)	Total HRH
	ANM Category	**629094**	**151773**	**25296**	**22805**	**3210**	**-**	**832178**
1	ANM	629094	50591	12648	18244	2568	-	713145
2	LHV	-	101182	12648	4561	642	-	119033
	Health Worker-male category	**314547**	**101182**	**25296**	**4561**	**642**	**-**	**446228**
3	Health Worker – Male	314547	50591	12648	4561	642	-	382989
4	Health Assistant – Male	-	50591	12648	-	-	-	63239
	Pharmacists	**-**	**151773**	**50592**	**36488**	**7062**	**7530**	**253445**
5	Pharmacists (allopath)	-	101182	37944	36488	5778	7530	188922
6	Pharmacists (AYUSH)	-	50591	12648	-	1284	-	64523
	Technicians etc.	**-**	**202364**	**113832**	**159635**	**34668**	**34136**	**544635**
7	Lab. Technician	-	101182	37944	59293	10272	15060	223751
8	Radiographer/ DRA	-	-	25296	22805	12840	8032	68973
9	O.T. Technician	-	-	12648	54732	7704	7028	82112
10	Ophthalmic Technician	-	50591	12648	9122	1284	1004	74649
11	Health Educator	-	50591	12648	9122	1284	1004	74649
12	Physiotherapists	-	-	12648	4561	1284	2008	20501
	Nursing Category	**-**	**252955**	**252960**	**665906**	**189390**	**255016**	**1616227**
13	PHN	-	-	12648	-	-	-	12648
14	DPHN	-	-	-	-	642	-	642
15	Staff Nurses	-	252955	227664	579247	172698	219374	1451938
16	Head Nurses	-	-	12648	54732	10272	30120	107772
17	Matrons / Assistant Matrons	-	-	-	31927	5778	5522	43227
18	Rural Health Care Practitioner	314547	-	-	-	-	-	314547
19	Dentists	-	50591	12648	9122	1284	1004	74649
20	Doctor (AYUSH)	-	50591	12648	-	1284	-	64523

contd...

	HRH Category	SHCs -(314547)	PHCs (50591)	CHCs (12648)	SDH (4561)	DH/Hq. (642)	MCH (502)	Total HRH
21	Doctor (allopathy)	-	151773	75888	91220	15408	82830	417119
	Specialists – Total	-	-	**65770**	**104903**	**17334**	**21084**	**209091**
22	Specialist – Obstetrics	-	-	12648	27366	5136	4016	49166
23	Specialist – Paediatrics	-	-	12648	13683	2568	3012	31911
24	Specialist – Anaesthesia	-	-	12648	27366	3852	4016	47882
25	Specialist – Medicine	-	-	12648	13683	2568	3012	31911
26	Specialist – Surgery	-	-	12648	13683	1926	6024	34281
27	Specialist – Ophthalmology	-	-	2530	9122	1284	1004	13940
28	Health Programme Manager	-	-	12648	-	642	-	13290
29	Hospital Manager	-	-	-	4561	642	502	5705
30	HR Manager / Assistant	-	-	-	4561	642	502	5705
31	Accounts Manager/Assistant	-	50591	12648	13683	3210	1004	81136
32	HMIS Manager / DEO	-	50591	25296	9122	3852	2008	90869
	Grand Total	**1258188**	**1214184**	**685522**	**1126567**	**279270**	**405616**	**4969347**
	Technical Categories	1258188	1113002	634930	1094640	270282	401600	4772642
	Managerial Categories	-	101182	50592	31927	8988	4016	196705

Source: HLEG Secretariat

Chapter IV

Health Service Norms

Reorienting Health Service Delivery for Universal Health Coverage

In this chapter, we describe the structural and functional changes required to develop Universal Health Coverage (UHC) in India, with a special focus on underserved populations. We summarise health system factors related to health outcomes, outline the issues affecting access, equity and quality of health care, discuss our rationale for normative reform and finally present a set of overarching recommendations.

1. Situational analysis

a) The need for normative architectural corrections: A global perspective

A well-functioning health system is of paramount importance in ensuring UHC. Marchal and Cavalli et al. (2009) discuss the growing consensus on "the need for health system strengthening by creating the necessary enabling institutional and systemic environment to achieve and sustain [the United Nations' Millennium Development Goals] in the long term."[1] A critical strategic and managerial role of any national health system is to identify and target health priorities at national and state level and design context-specific service delivery and financing models.[2] The World Health Report of 2008 identifies ten trends in health care delivery that are common across low, middle and high-income countries that need to be addressed adequately to strengthen the health system as a whole.[3,4] The trends are detailed in Table 1.

Perhaps because of the unique and dynamic challenges facing the country, India's performance in creating a paradigm of health and wellness for its citizens has been less than satisfactory. The advantages of the availability of large technical human resources, science education and access to the English language have not resulted in better health outcomes for citizens. In matters relating to health, the country ranks below many others that started with similar health indicators and economic bandwidths.[5]

TABLE 1: INEFFICIENCIES IN HEALTH CARE DELIVERY		
Source of inefficiency	**Common reasons for inefficiency**	**Ways to address inefficiency**
1. Medicines: under use of generics and higher than necessary prices for medicines	Inadequate controls on supply-chain agents, prescribers and dispensers; lower perceived efficacy and safety of generic medicines; historical prescribing patterns and inefficient procurement and distribution systems; taxes and duties on medicines; excessive mark-ups	Improve prescribing guidance, information, training and practice. Require, permit or offer incentives for generic substitution. Develop active purchasing based on assessment of costs and benefits of alternatives. Ensure transparency in purchasing and tenders. Remove taxes and duties. Control excessive mark-ups. Monitor and publicise medicine prices.
2. Medicines: use of substandard and counterfeit medicines	Inadequate pharmaceutical regulatory structures and mechanisms; weak procurement systems	Strengthen enforcement of quality standards in the manufacture of medicines; carry out product testing; enhance procurement systems with pre- qualification of suppliers.
3. Medicines: inappropriate and ineffective use	Inappropriate prescriber incentives and unethical promotion practices; consumer demand and expectations; limited knowledge about therapeutic effects; inadequate regulatory frameworks	Separate prescribing and dispensing functions; regulate promotional activities; improve prescribing guidance, information, training and practice; disseminate public information.
4. Health care products and services: overuse or supply of equipment, investigations and procedures	Supplier-induced demand; fee-for-service payment mechanisms; fear of litigation (defensive medicine)	Reform incentive and payment structures (e.g., capitation or diagnosis-related group); develop and implement clinical guidelines.
5. Health workers: inappropriate or costly staff mix, unmotivated workers	Conformity with pre-determined human resource policies and procedures; resistance by medical profession; fixed or inflexible contracts; inadequate salaries; recruitment based on favoritism	Under take needs-based assessment and training; revise remuneration policies; introduce flexible contracts and performance-related pay; implement task-shifting and other ways of matching skills to needs.

Contd...

TABLE 1: INEFFICIENCIES IN HEALTH CARE DELIVERY		
Source of inefficiency	**Common reasons for inefficiency**	**Ways to address inefficiency**
6. Health care services: inappropriate hospital admissions and length of stay	Lack of alternative care arrangements; insufficient incentives to discharge; limited knowledge of best practice	Provide alternative care (e.g., day care); alter incentives to hospital providers; raise awareness about efficient admissions practices.
7. Health care services: inappropriate hospital size (inefficient use of infrastructure)	Inappropriate level of managerial resources for coordination and control; too many hospitals and in-patient beds in some areas, not enough in others, often reflecting lack of planning for health service infrastructure development	Incorporate inputs and output estimation into hospital planning; match managerial capacity to size; reduce excess capacity to raise occupancy rate to 80-90% while controlling length of stay.
8. Health care services: medical errors and suboptimal quality of care	Insufficient knowledge or application of clinical care standards and protocols; lack of guidelines; inadequate supervision	Improve hygiene standards in hospitals; provide more continuity of care; under take more clinical audits; monitor hospital performance.
9. Health system leakages: waste, corruption and fraud	Unclear resource allocation guidance; lack of transparency; poor accountability and governance mechanisms; low salaries	Improve regulation and governance, including strong sanction mechanisms; assess transparency and vulnerability to corruption; under take public spending tracking surveys; promote codes of conduct.
10. Health interventions: inefficient mix and inappropriate level of strategies	Funding high-cost, low-effect interventions when low-cost, high-impact options are unfunded; inappropriate balance between levels of care and among prevention, promotion and treatment	Conduct regular evaluations; incorporate into policy of evidence on the costs and impact of interventions, technologies, medicines and policy options.

Source: World Health Organisation (2010)[4]

A comparison of India's major health indicators with those of several other countries (Table 2) highlights the need for improving health system capabilities in India.[6] Moreover, the relationship between increased Government health spending as a percentage of total health expenditure and the corresponding outcomes for each country deserves closer examination. It is important to note that Brazil, Sri Lanka and Thailand have travelled long and far on the road to universal health care. Annexure I lists additional indicators for various nations in the past decade.

TABLE 2: KEY INDICATORS: INDIA COMPARED WITH OTHER COUNTRIES[6]

Indicator	India	China	Brazil	Sri Lanka	Thailand
IMR/1000 live-births	**50**	17	17	13	12
Under-5 mortality/1000 live-births	**66**	19	21	16	13
Fully immunised (%)	**66**	95	99	99	98
Birth by skilled attendants	**47**	96	98	97	99
Health expenditure as percentage of GDP	**4.2**	4.3	8.4	4.1	4.1
Government share of total health expenditure (%)	**32.4**	47.3	44	43.7	74.3
Government health spending share of total government spending (%)	**4.4**	10.3	6.0	7.9	14.2
Per capita spending in US dollars	**122**	265	875	187	328

**Source: World Health Orgazation (2011)[6]*
IMR = Infant Mortality Rate

It is important to note that Brazil, Sri Lanka and Thailand have travelled long and far on the road to Universal Health Coverage. Annexure I lists additional indicators for various nations in the past decade.

b) Strengths and weaknesses of India's health system

The commitment to public provisioning of health services featured in the National Health Policy was a good start. Inadequate resource allocation and poor governance, however, have led to a progressive weakening of services. The substantial development of the private sector has been compensating for the shortcomings of progressively weakening public systems over the years. From 8% in 1947, the private sector now accounts for 93% of all hospitals, 64% of all beds, 80% to 85% of all doctors, 80% of out-patients, and 57% of in-patients.[7]

Private entrepreneurship has covered all aspects of health care markets including health financing, health worker education as well as health equipment manufacturing and service. While this adds strength to the health system, the lack of a regulatory framework has also led to cost escalation and variable quality in the health services provided by this sector.

Meanwhile, the extensive framework of public systems has succeeded in permeating the entire country, even the many difficult, unreachable areas where for-profit providers would not consider venturing and even the presence of Non-Governmental Organisations (NGOs) is minimal.[8] State health directorates have evolved robust procedures to recruit personnel, manage cadres, procure equipment and maintain contracts.

India has one of the oldest population stabilisation and family welfare programmes in the world. Its concerted efforts towards eradicating polio have recorded success in recent years.[9] The country has created capacity for training and education in health care and related streams and also evolved corresponding regulatory platforms like councils and accreditation boards for various cadres. The overall morale amongst health planners is high in view of achievements like elimination of leprosy at national level, elimination of neonatal tetanus from many states,

maintenance of Tuberculosis (TB) cure rate above the global target of 85% and efficient response to avian flu and other international health alerts, among others.[10]

However, those strengths coexist with grave weaknesses. The National Sample Survey Organisation report of March 2006 presented the following critical triggers for health sector reform in India:[11]

- 18% of all episodes in rural areas and 10% in urban areas received no health care at all.
- 12% of people living in rural areas and 1% in urban areas had no access to a health facility.
- 28% of rural residents and 20% of urban residents had no funds for health care.
- Over 40% of hospitalised persons have to borrow money or sell assets to pay for their care.
- Over 35% of hospitalised persons fall below the poverty line because of hospital expenses.
- Over 2.2% of the population may be impoverished because of hospital expenses.
- The majority of the citizens who did not access the health system were from the lowest income quintiles.
- India ranks amongst the lowest in the world in public spending on health, yet its proportion of private spending is one of the highest. According to the National Rural Health Mission Framework document, "more than Rs. 100,000 crore is being spent annually as household expenditure on health, which is more than three times the public expenditure on health."[8]
- Catastrophic health care expenditures are a major cause of household debt for families and a leading cause of poverty in the country.

It is therefore important to identify potential financial barriers, explore options for scaling up public spending and provide a strategy for using public resources efficiently and equitably.

c) Pace of change and interstate diversity in outcomes

Table 3 compares several health indicators across the past decades and paints a picture of definite but unacceptably slow progress.

TABLE 3: HEALTH INDICATORS IN INDIA, 1951-2009

Indicator	1951	1971	1981	1991	1999	2005	2009
Birth rate	40.8	36.9	33.9	29.5	26.1	23.8	22.5
Death rate	25.1	14.9	12.5	9.8	8.7	7.6	7.3
Infant mortality rate	148	129	110	80	70	58.0	50.0
Maternal mortality ratio*	1321	853	810	424	407	254	212
Total fertility rate	6	5.2	4.5	3.6	2.9	2.9	2.6

Source: HLEG Secretariat, data assembled from multiple Sample Registration Survey Bulletins (1951-2009)[12,13]

**Source: Ministry of Health and Family Welfare (2007)[14]*

However, progress has not been uniform across the country: there are wide interstate variations in each of these health indicators. Although Kerala retains its status as a well performing state (with an infant mortality rate, (IMR of 12 and a maternal mortality ratio, MMR, of 81), Uttar Pradesh (IMR 63, MMR 359), Madhya Pradesh (IMR 67, MMR 269) and Odisha (IMR 65, MMR 258) continue to under-perform.

Some states have demonstrated substantial improvements in health indicators between 2001 and 2008: IMR reductions in this period have been reported in Jharkhand (70 to 44), Chhattisgarh (79 to

54), Odisha (95 to 65) and Rajasthan (79 to 59).[13,14]

These wide interstate (and even inter district) variations in health indicators provide ground for debate on the determinants of differential performance. Annexure II lists the major health indicators of the various states of the country.

d) Primary health care: A view from communities

Various block-level analytical exercises were undertaken in six districts across the nation by members of the High Level Expert Group (HLEG).[a] This enabled the group to gain insight into local contexts that influence access to health care, the role of private providers, the demand for different types of primary, secondary and tertiary care, the growing burden of non-communicable diseases and the need to expand teams of frontline health workers at the village level.

Field studies by members of the HLEG highlighted the following issues that need to be addressed adequately if UHC is to be achieved:

- The expectations and demands from the health system are not uniform across different states. The resource needs in various settings are accordingly varied.
- Even from the perspective of basic provisioning of health care services, the gaps are wide: the need is often three to six times greater than the current level of provision. Besides human resources for health, essential inputs such as physical infrastructure, hospital beds, drugs and diagnostics are far below the prescribed norms.
- The need for a village-level team of community health workers, who serve as a link between the community and the organised health delivery apparatus, was universally articulated.
- Communities greatly value residential skilled health workers.
- There is a need to train community workers as true health workers, sensitive to the communities' needs and aspirations.
- Communities often patronise non-governmental providers who may or may not be formally qualified in delivering health care. It is important to bring these providers into the health system and appropriately address issues of rational drug use, ethical practice, skills improvement and gate keeping, among several other challenges.

2. Summary of India's health system challenges

a) The public health system in India suffers from weak stewardship and oversight, HR shortages, weak HR management and ineffective service delivery.

b) Doctors, nurses and allied health providers are in short supply for the populations they serve. The ratio is often skewed, resulting in the following shortcomings: a) fewer health providers in rural areas, especially in primary health care settings; b) inefficient secondary services in smaller towns; and c) a high concentration of tertiary health care services in urban cities.

c) The skill mix, autonomy and funding of the medical bureaucracy at the district level need to be augmented.

d) Initiatives for health need to be coordinated with efforts to address social determinants of health.

e) Local community and Panchayati Raj institutions need to play a more proactive role in health programmes and their governance.

f) National health programmes do not comprehensively address morbidities, leaving gaps in critical services. It is imperative for horizontal and vertical programmes to function synergistically.

g) Public health infrastructure has not been able to maintain basic standards of hygiene, patient

a Analytical exercises were conducted by Dr. Abhay Bang in Gadchiroli district in Maharashtra; Dr. Yogesh Jain in Ganiyari block of Bilaspur district in Chattisgarh; Ms. Anu Garg in a tribal block in Kalyansingpur, Rayagada district in Odhisa; Dr. Nachiket Mor in Pattukkottai block, Thanjavur district in Tamil Nadu; Dr. Leila Caleb Varkey in Palwal, Haryana; and Mr. Amarjeet Sinha in Phulwarisharif block, Patna district of Bihar.

comfort and empathetic care. Adequate processes for recording the transactions of citizens with the public systems and ensuring quality of treatment, referral and transport connectivity have not been developed.

h) Poorly equipped and underutilized facilities continue to function despite limited utilisation, while others are unable to meet demand because of inflexible budgets, limited resources, rising drug costs and supply shortages.

i) Public health surveillance systems in the country are inadequate to measure and monitor health-related events and develop models for health outcomes in the country. An effective system would systematically collect and analyse accurate health data to develop more robust health strategies to combat disease. In addition, it would also map health needs, making the health system appropriately responsive to delivering care where it is needed the most.[16,17]

j) Despite targeted increases in health spending, many states continue to be hampered by poor governance and inadequate planning. The under-performing states will require the largest infusion of resources but also face challenges in making efficient use of the additional funds already available to them.

k) Referral linkages and follow-up services are very weak, rendering the connectivity between primary, secondary and tertiary services dysfunctional.

3. Rationale for change

a) Need to address health inequities and impediments to universal care

Health equity is a major driver for Universal Health Coverage. India's health system is currently failing to respond to the health needs of poor and vulnerable populations, particularly women and girls, scheduled tribes, scheduled castes, adolescents, migrant populations and peri-urban communities.[18] As Frenz and Vega (2010) have noted,[19] "The idea of UHC loses its meaning, if it is not accompanied by equity. Equity of access recognises that everyone has a right to health care… Inequitable access means that less advantaged groups use and experience less health care than their needs require, resulting in personal, community and societal health losses."

Bureaucratisation of guidelines and highly centralised procedures are a major impediment to the country's health system, inhibiting flexibility and responsiveness to local diversity and needs. Disaggregated local data leading to needs-based planning of health services and active outreach to disadvantaged populations are essential for promoting health equity. There is, therefore, a strong case to decentralise health systems with an emphasis on resourcing, empowering and enabling communities as a prerequisite for addressing equity.[20]

The socio-cultural complexities of the country and the presence of multiple dividing lines within communities create additional challenges for the health system in India. Eleven states in the country (including six northeast states) have tribal populations exceeding 25% of the total state population.[21]

These districts need special dispensations of health infrastructure and health HR as well as higher financial allocations. The absence of commercial opportunities in the tribal areas prevents them, unlike most other parts of the country, from experiencing the benefits of economic reforms.

Tribal populations also face pressures of sustainability, shrinking resources and changing social and cultural values.[22] If the country is to ensure inclusive growth, the public systems must make special provisions for these populations. A responsive health care system should acknowledge the need to create health HR from within tribal communities, build functional health infrastructure within tribal areas and establish administrative and technical protocols that are compatible with the social framework of these communities. Increasing the density of well-functioning health infrastructure with appropriate human resources in tribal and other underserved areas should be of highest priority to both policy makers and implementers.

India currently has the world's greatest burden of

maternal, newborn and child deaths.[23] In 2008 alone, India lost 68,000 mothers[24] and 1.8 million children under the age of five to maternal and child morbidity.[25]

Thus, in addition to the tribal population, mothers, infants and children constitute the majority of the underserved. There are other vulnerable populations in India as well, such as the elderly and the disabled.

Although disability is often considered a physical condition, it is in fact a normative, cultural and legal construct. According to Census 2001, 21.9 million persons, or 2.13% of the total population, were living with disabilities in India.[26] Alternative estimates from various sources with more inclusive definitions of disability indicate a still higher prevalence, in the range of 80 million to 90 million.[26]

The Government has undertaken various efforts towards improving disability-related health care and wellness services in rural areas. However, access to treatment for persons with disabilities is usually seen only in terms of procuring medication; planners tend to ignore disabled people's other needs, such as physical access (including ramps in medical facilities), complete and accurate information about their conditions in an appropriate format (e.g., Braille), assistance in buying aids and appliances (e.g., hearing aids), access to technological advancements in the field, alternative modes of treatment (psychotherapy, physiotherapy, etc.), health workers trained in disability management, affordable services (especially since a large proportion of disabled people tend to be from lower socio-economic strata), educational and employment opportunities, support for self-help groups and transportation.[26]

Notable among the disabled are people with mental disabilities who face stigma and discrimination, often because of misperceptions about the nature of mental illness. Failure to integrate mental health into the broader public health agenda only increases their social exclusion. [27]

Policy makers must give those issues adequate consideration while formulating policies, devising programmes and building facilities.

b) Need to adopt a primary h ealth care approach

"How far can a mother on foot walk with a sick baby? Health care must be available within that distance." - First National Health Congress, China, 1950

Changes in the health system should focus on delivering services as close to the community as possible, driven by a robust system design and clear standard operating procedures, rather than the mere availability of providers. It has been found in public hospitals in Malaysia, Sri Lanka and Thailand that good access to even small facilities, even if not well equipped, helps distribute health benefits more widely.[28] Redistribution of health care benefits is greater where there is better access to a range of levels of care. We cannot over-emphasise the fact that service delivery should be re-oriented through a primary health care approach, encouraging re-allocation of resources and significant strengthening of primary health care provision, including hospital services, so that they ultimately benefit the poor.[29,30]

The advantages of a primary health care model for health service delivery are as follows:

- greater access to needed services;
- better quality of care;
- a greater focus on prevention;
- early management of health problems;
- cumulative improvements in health and lower morbidity as a result of primary health care delivery; and
- reductions in unnecessary and potentially harmful specialist care.

In addition, primary health care teams promote health equity through increased social cohesion and empowerment. By acting as a navigator through the system to help people get to secondary and tertiary levels of care only when needed, they help achieve overall system cost-effectiveness.[3] The evolution of the primary health care approach globally and in India is discussed in greater detail in Box 1.

The absence of a dedicated cadre at the village level, lack of capacity to connect at the last mile and poor responsiveness of public systems to community processes are perceived as major bottlenecks in providing primary health care to citizens.

Box 1. Policy Evolution in the Global Context

The Alma Ata Declaration of 1978[31] envisaged achievement of health for all through adoption of a primary health care approach. Primary health care was understood as universal health care that is acceptable and affordable to all, comprising the preventive, promotive, curative and rehabilitative aspects of health and an integrated and comprehensive approach to development of health services.

Between 1978 and 2000, the agenda of Alma Ata was substantially revisited. Progressively the strategy shifted from welfare to efficiency, with the Government seeking to give a basic package of essential health services and the World Bank supporting health programmes and reform projects. There was growing realisation that the Alma Ata strategy was leaving many health aspirations of a large population unaddressed. Structural adjustment for macroeconomic stability (involving slashing of public expenditure on social services and imposition of user charges) also enfeebled health services and eroded health equity.

In India, the ICSSR-ICMR joint report of 1981[32] proposed an alternative model for development of health services. This model was based on an integrated approach to development - with an inverted pyramid model, decentralisation, participation of communities and voluntary organisations - and intended to replace the existing top-down, curative-oriented, urban-biased health system.

In line with the Alma Ata Declaration, the National Health Policy 1983 aimed to create a nationwide infrastructure of Primary Health Centres (PHCs) and develop a health system based on greater participation of communities and the voluntary sector.

Despite the articulation of political commitment to the Alma Ata goals, the implementation of NHP 1983[33] continued along vertical programmes and curative care. During this period, agencies such as UNICEF and WHO that had championed the primary health care approach shifted their focus to vertical programmes, such as Universal Immunization Program and Child Survival and Safe Motherhood Programme, among others. In India, primary health care almost became synonymous with disease-specific national health programmes with curative content.

The policy discourse in India progressively shifted towards the community needs assessment approach, and eventually the Reproductive and Child Health Programme was launched in 1997. The National Health Policy 2002[34] recognised that the Government had neither the administrative nor the financial capacity to attain the Alma Ata goals by itself. The policy called on the Government to create an enabling environment through policy, regulation, outsourcing, concessions and subsidies to the private sector. In 2005, the broader, sector-wide reform agenda was implemented under the National Rural Health Mission (NRHM). Over the six years of implementation of NRHM, much ground for movement towards UHC has already been created.

A timeline of major health system reforms in India and their highlights is attached in Annexure III.

c) Need to provide adequate hospital beds

With respect to secondary and tertiary care, India lags behind most other countries in the number of hospital beds per thousand population, despite having a higher absolute number of hospital beds than most other countries. According to the World Health Statistics,[6] India ranks among the lowest in this regard, with 0.9 beds per 1000, far below the global average of 2.9 beds (Table 4). According to the latest National Health Profile (2010),[35] India has a current public sector availability of one bed per 2012 persons available in 12,760 Government hospitals, which is approximately 0.5 beds per 1000. This includes Community Health Centre (CHC) beds, but excludes Primary Health Centres (PHCs) and medical colleges.

TABLE 4: HOSPITAL BED CAPACITY, BY COUNTRY

Country	Beds/ 1000 Population
Sri Lanka	3.1
China	3.0
Thailand	2.2
Brazil	2.4
USA	3.1
UK	3.9
India	0.9
Nicaragua	0.9
Togo	0.9
Indonesia	0.6

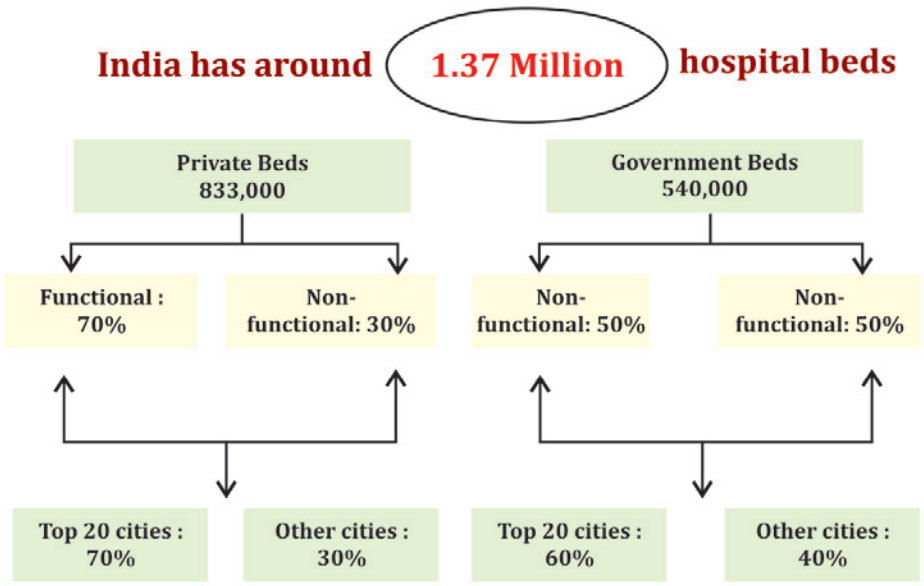
Source: World Health Statistics (2011)[6]

An alternative analysis of the availability of in-patient capacity, undertaken by Healthcare Management and Consultancy (HOSMAC), presented the following findings.[36]

- The availability of public (government) hospital beds in rural India varies widely, from just 1 per 4471 persons in central India to 1 per 1650 persons in southern India.
- On average, urban India has 1 private sector hospital bed per 422 persons. There are regional variations: western India has more hospital beds than central India. Central India has the fewest private sector hospital beds in the country.
- Although the inadequacy of beds in rural India forces people to travel to the nearest urban centre for health care, almost 80% of the patients seeking care across the country in private institutions belonged to middle-income and low-income groups, with 50% of all patients in northern and central India belonging to the lower-income category.
- Private sector utilisation is high for institutional and non-institutional care alike, across all income groups and regions. However, the utilisation rate of any hospital depends upon multiple factors, such as chosen doctor practicing in the facility, the image and reputation of the institution, affordability and convenience of access to infrastructure.
- Patients almost invariably depend upon their doctors to make the right facility choice for them, because of persistent information asymmetry.

Figure 1 indicates how many of the beds available in the system are truly functional. A study by Technopak[37] estimates that almost 50% of the total public sector beds are currently nonfunctional, primarily because of health human resource constraints.

FIGURE 1: DISTRIBUTION OF FUNCTIONAL HOSPITAL BEDS



Source: Mehta and colleagues [Technopak] (2007)[37]

d) Need to deliver health care to urban poor

According to the 2011 Census, 377 million Indians live in urban areas, and the urban population is expected to increase considerably by 2021. Rapid urbanisation in the country has also resulted in an increase in the number of urban poor, many of whom live in slums and transient squatter settlements. As indicated by Agarwal (2011),[38] in 2004-2005, 80.8 million urban dwellers (25.6%) were below the poverty line. The United Nations projects that if urbanisation continues at the present rate, 46% of the total population will be in urban regions of India by 2030.[39]

Delivering health care in urban areas is especially challenging. The health of urban populations is systemically and often simultaneously influenced by several social determinants: the physical environment, migration, unhealthful spatial planning, violence, poverty, social exclusion, governance, economic policy and human security. Historically, urbanisation in India has been unplanned, leading to inevitable shortfalls in water, sanitation, housing and infrastructure. Although the Jawaharlal Nehru National Urban Renewal Mission has attempted to address issues related to urban infrastructure issues, urban health requires immediate attention, especially in the context of migration and urban poverty.[41]

Significant intra-urban inequalities in the country have caused the urban poor to suffer disproportionately from a wide range of diseases and health problems. Families with the lowest incomes in urban areas are most at risk for adverse health outcomes; this is especially so for maternal and child health indicators. Ineffective outreach and a weak referral system limit the access of urban poor to health care services: they are 'crowded out' by inadequate urban public health delivery systems where the burden of disease is found to increase on a social gradient of wealth. The lack of economic resources curtails access to available secondary and tertiary private facilities. In addition, social exclusion coupled with inadequate information and a lack of prescribed standards, even at the primary health care level, puts the urban poor at a greater disadvantage than their rural counterparts.[38]

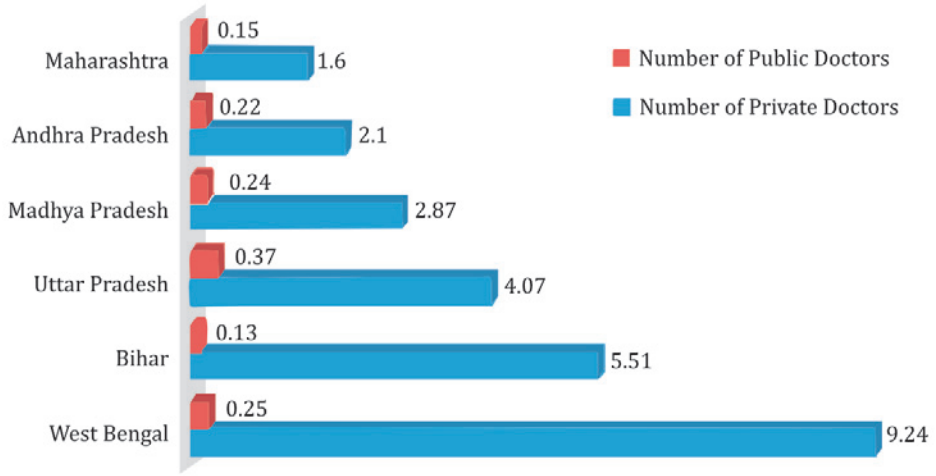
According to the National Family Health Survey III (2005-06), the under-5 mortality rate among the urban poor, at 72.7, is significantly higher than the urban average of 51.9.[41] More than 46% of urban poor children are underweight, and almost 60% of poor children do not receive complete immunisation before completing their first year.[38] Poor environmental conditions in slums, along with a high population density, make this population especially vulnerable to lung diseases like asthma and TB. The health system planning process in urban areas is more complex, as capacity building for public health activities needs to be addressed by local urban bodies. Primary health care access and delivery of services to the urban poor have been sorely neglected, and the possibility of partnerships with the non-governmental sector, which has a large urban presence, needs to be explored very closely.[39]

Implementation of the National Urban Health Mission, complemented by the integration of urban local bodies, is required to strengthen the urban public health system and to effectively address multiple dimensions of urban health.

e) Need for oversight and accreditation of service providers

Given the shortcomings of the public health system, at large, India's mostly unorganised, poorly regulated private sector has stepped in to fulfill unmet health needs. In urban areas, according to the National Sample Survey data cited by HOSMAC, 81% of patients choose private non-institutional care and 62% choose private institutional care.[36] A survey conducted in 1600 villages across 19 states under the Medical Advice, Quality and Availability in Rural India project (2009-10)[42] examined the availability of medical providers to average rural households. As Figure 2 indicates, almost 90% of the providers in rural India are private providers, whose training may be formal or informal.[43]

FIGURE 2: AVAILABILITY OF HEALTH CARE PROVIDERS WITHIN A VILLAGE TO THE AVERAGE VILLAGE POPULATION



Source: Kulkarni N K.(2011)[43]

Middle-class consumers are now exercising greater choice in health care services. Where possible, they opt for convenience and access over cumbersome and over-crowded public health systems and are willing to pay an out-of-pocket cost. When patients do seek care at a public health facility, there is no guarantee of 'free service,' and user fees, drug costs and corruption impose a financial burden that then makes private health care appear attractive. In a recent survey, [44] 30% of patients in government facilities said they had

had to pay bribes or use influence for basic hospital rights such as out-patient appointments, clean bed sheets and better food.

As Radwan et al. (2005) indicate,[16] one of the biggest problems of India's expanding private sector is the lack of oversight or regulation by the public sector. Absence of licensing and accreditation procedures leads to health services of widely variable quality, a skew towards urban-centric provisioning, unethical health care practices and corruption in the access and provision of care.[17] An appallingly large number of health care providers and facilities from the private and unorganised sectors are exploiting the lack of regulatory mechanisms and causing poor health outcomes. Private providers range from highly skilled clinicians to totally unqualified quacks. As many as a million unregistered, untrained providers may be practicing in India today, earning the livelihood and status associated with highly qualified doctors.[45]

Despite these deficiencies, this sector continues to be the first choice of health care for most of rural and urban India.[45] Thus, any solutions proposed for Universal Health Coverage must keep this reality in mind while addressing the human resource gaps between current availability and what will be needed. The new system must eventually bring these providers into the health system through suitable training, accreditation and regulation after removing those who are fraudulent and dangerous.[44]

f) Need for strong financial management system

The country's health budgeting and costing processes have a direct effect on health financing mechanisms.[46] The present classification system for health budgets in the country makes it virtually impossible to trace the movement of funds and maintenance activities. The aggregation of budget heads is a constantly moving process, making trend analysis very difficult. Several variations exist across the states in budget lines and fund management, with information asymmetry leading to ineffective and often fraudulent fund management. Given the enormous number of autonomous bodies dealing with this process and the lack of uniformity in their accountability structure, the ability to calculate real costs for the system is a daunting task.

In addition, already weak systems of financial management are administered by personnel with little understanding of financial mechanisms, creating issues in oversight. Poor utilisation of technology and information system continues to bog down health systems, leaving room for unwarranted discretion, fraud and major delays in fund movement across the system.

g) Need to objectively measure and manage quality of care

In an independent assessment of Rajasthan, Bihar, Uttar Pradesh and Andhra Pradesh in 2009, Gill reported on health care quality in terms of both tangible and intangible components.[47] Whereas the former was assessed through quantifiable measures of health care infrastructure, human resources and availability of medicines, the latter was assessed mainly by measuring patient perception.

Tangible components - electricity supply, quality and quantity of water supply, adequacy of facility infrastructure, distance travelled to health facilities, wait time to be seen by a provider, availability of free medicines, cleanliness of environment, to name a few - contribute to quality of care. The southern state of Andhra Pradesh performed significantly better than the other states on almost all the questions related to infrastructure and patients' satisfaction with their treatment. Patients' dissatisfaction, where present, correlated with the above-mentioned infrastructure inputs: when the tangible components of care were unfavourable, patients' perceptions were negative. Dissatisfaction was reported by 50.9%, 77.2% and 61.4% of participants in Uttar Pradesh, Bihar and Rajasthan, respectively (details are indicated in Annexure IV).

h) Need to address referral services and connectivity issues

Table 5 demonstrates the need for additional investments to be made in ensuring transport and referral connectivity across the nation. Almost a third of the districts lack some form of referral service. Many lives are lost each day because vulnerable populations cannot get to a facility offering any level of health care.[48]

Lack of clear referral norms and logistical complications very often result in denial of care at health care facilities, causing unsatisfactory clinical outcomes.[21]

TABLE 5: STATE-WISE PROGRESS OF REFERRAL SERVICE AVAILABILITY

Action Point		India	High Focus, Non North-East (NE)	High Focus, NE	Non High Focus, Large	Non High Focus, Small
			(10)	(8)	(10)	(7)
Districts equipped with:	MMU under NRHM	461	219	87	147	8
	Any other referral service	472	182	61	204	25
MMUs operational in state/UT under		1787	648	98	1033	8
ERS vehicles operational in state/UT		4764	2058	326	2369	11
Ambulances functioning in state/UT (at PHCs, CHCs, SDHs, DHs)		8826	3353	1031	4273	169

State-wise progress, 1.03.2011.

Source: Ministry of Health and Family Welfare (MoHFW) (2011)[8]

CHC =community health centre; DH = district hospital; ERS = emergency referral services; MMU = mobile medical unit; NRHM = National Rural Health Mission; PHC = primary health centre; SDH = sub-district hospital

i) Need to address inter-sectoral issues

Social determinants play a crucial role in enabling Universal Health Coverage and reducing overall health care costs. To bring about equity in health care provisioning for UHC in India, the public health system needs to address multiple issues of population, geographical spread, poverty, malnutrition, regional disparities, capacity constraints, poor sanitation and the lack of inter-sectoral convergence.[29, 49] The role of political will in ensuring inter-sectoral convergence, a necessary condition for UHC, cannot be over-emphasised.[50]

4. Recommendations

Recommendation 1: Optimise the health care delivery architecture by providing adequate infrastructure, equipment, drugs, human resources and technology support to respond adequately to Universal Health Coverage entitlements at primary, secondary and tertiary levels (see Figure 3). Prioritise efforts on the under served, tribal and inaccessible areas and the disabled population groups.

a) Village level: At the village level, the goal would be to create a paradigm of good health, wellness and development within the community. A village health team would ensure appropriate focus on primary health care, which should be linked to curative teams at the sub-centre level. We recommend that the village team comprise two community health workers (CHWs), who would have monetary and non-monetary incentives and receive generic training with specific competencies, plus one Anganwadi worker and a Sahayaka. Function-time profiles for CHWs were drawn based on evidence gathered by SEARCH Gadchiroli. The following six health care components are envisaged for a CHW:

- maternal and newborn health (7 activities, 62 hours per 1000 population per month);
- sexual and reproductive health, including adolescent health (5 activities, 63 hours per 1000 population per month);
- child health and nutrition for children, adolescent girls and women (7 activities, 49 hours per 1000 population per month);
- communicable disease control and sanitation (7 activities, 60 hours per 1000 population per month);
- chronic disease control (5 activities, 60 hours per 1000 population per month); and
- gender-based violence prevention, mental health and health promotion activities (8 activities, 60 hours per 1,000 population per month).

In addition to those preventive, promotive and basic curative activities, CHWs should play lead roles in social mobilisation and community participation. Currently, part-time volunteers called accredited social health activists perform such functions, each covering on average a population of 1000 people. With the recommendation for doubling the number of CHWs and deploying CHWs in high-need urban habitats, the total estimated number of CHWs is 20 lakhs.The auxiliary nurse midwife (ANM) at the sub-centre should provide outreach to village health teams, and trained traditional birth attendants may also be called on for support.

The village team should seek to maintain free, 24x7 telephone and internet connectivity to its jurisdictional health sub-centre. A demarcated area should publicly display educational and behavioural change messages and information on community meetings. The village health and sanitation committees set up under NRHM should be expanded to include the village patwari, the chowkidaar, and the school teacher in addition to the existing members.[b]

b) Sub-Health Centre (SHC) level: The SHC would provide curative services as close to the community as possible. Each SHC should cover a population of 5,000 (3,000 in tribal and inaccessible areas) or a Gram Panchayat (using mixed criteria of location, travel time, population, disease profile, health indicators and epidemiology, etc.). Each block would typically have about 20 Sub-Health Centres, but coverage should be expanded where feasible.

Each SHC should have one fully functional observation bed to evaluate, stabilize and monitor a pregnant woman if needed. The SHC should be staffed with a mid-level practitioner with a Bachelor of Rural Health Care (BRHC) degree or equivalent training, two ANMs, one male health worker and one multi-task helper for lab work, store upkeep and dispensing.

The SHC should be located in a Government building with full capability to electronically feed health and wellness data into a web-based health management information system. The SHC should undertake line listing of beneficiaries (household registration of populations in catchment areas) and should be the locus for training of CHWs and volunteers. The SHC would be the custodian of local untied funds, undertake and oversee daily out-patient

[b] Present composition of VHSC: The Village Health and Sanitation Committee would consist of Gram Panchayat members from the village; CHW, Anganwadi Sevika, ANM; SHG leader, the PTA/MTA Secretary, village representative of any community-based organisation working in the village, and a user group representative. The chairperson would be the Panchayat member (preferably a woman or SC/ST member), and the convenor would be the CHW.

services and list its jurisdictional families for services. Fully functional SHCs should be in place in accordance with recommended norms by 2020.

c) Primary Health Centre level: The PHCs should be the first level of access to the services of allopathic doctors. As the coverage of Sub-Health Centres (managed by the BRHC cadres) expands, the PHCs should become the second port of call and are expected to be functional on a 24x7 basis. PHCs should cover an average population of 30,000 (20,000 in tribal and inaccessible areas). A block may typically have four PHCs. Coverage may be expanded as needed for UHC.

We recommend that a PHC have no fewer than six functional beds, and more as needed. In addition to the BRHC and various administrative staff, the PHC would have general-duty medical officers (holding degrees of Bachelor of Medicine and Bachelor of Surgery) and teams of five nurses along with allied health providers, including two pharmacists, two lab technicians, an accounts assistant, and a data entry operator. A qualified provider should provide dental services once a week at each PHC. The staff from the corresponding CHC would ensure full availability of services at the PHC through rotational staffing as determined by patient load.

24/7 electricity, telephone, mobile phones and computers with internet connectivity should be available at the PHC. The PHC should also be the hub for local communications and reporting, storage and distribution of drugs and supplies, adolescent and school health services, report consolidation in electronic form and performance measurement and monitoring and evaluation of village and sub-centre functions.

d) Community Health Centre level: The CHCs would staff essential specialists, offer in-patient services, and act as 24x7 functioning referral centres for more advanced care. The CHC would provide emergency obstetric care, appropriate pediatric specialist care, surgical services, a sick newborn unit, trauma care, a well-equipped lab, AYUSH services and connectivity for higher-order diagnostics.

One CHC should be located in each block (typically for a population of one lakh), and each CHC should have no fewer than 30 beds by 2017. As needed, all CHCs should expand to 100 beds by 2025. Each CHC should have a direct referral relationship with all PHCs in its jurisdiction and should work as the gatekeeper tohigher levels of services. The office of the block medical officer could be co-located at the CHC. A Rogi Kalyan Samiti will ensure the involvement of the Central Statistics Office and guarantee that the core package of services is available at every CHC.

e) District health services: Under the envisioned UHC framework, the District Hospital (DH) becomes a major centre of health care delivery and health professional training, both of which will be attuned to the needs of that district while conforming to the national standards. With an adequately equipped and suitably staffed DH, around 90% of the health care needs of the people within that district should be met; only a small number would need referral to the higher-level tertiary care centres. This would require an upgrade of district hospitals and sub-district hospitals as a high-priority activity, over the next five years, alongside the strengthening of primary health care services.

District health services would have three pillars; the clinical care pillar under the Civil Surgeon, health HR development under the District Health Knowledge Institute, and a public health pillar under the District Public Health Officer. The District Health Knowledge Institute (DHKI) may be mandated to run a BRHC college, nursing school, ANM training centres, district training centres for miscellaneous training and a resource centre equipped with computers, information resources and telemedicine capability. This may be managed through a partnership with universities. The public health pillar would be a purely government function, but delivery of health service could include special facilities created with pro-poor government-private contracting.

The district programme management unit at the DHKI should support the public health arm and be responsible for management information systems, financial management reports and district health

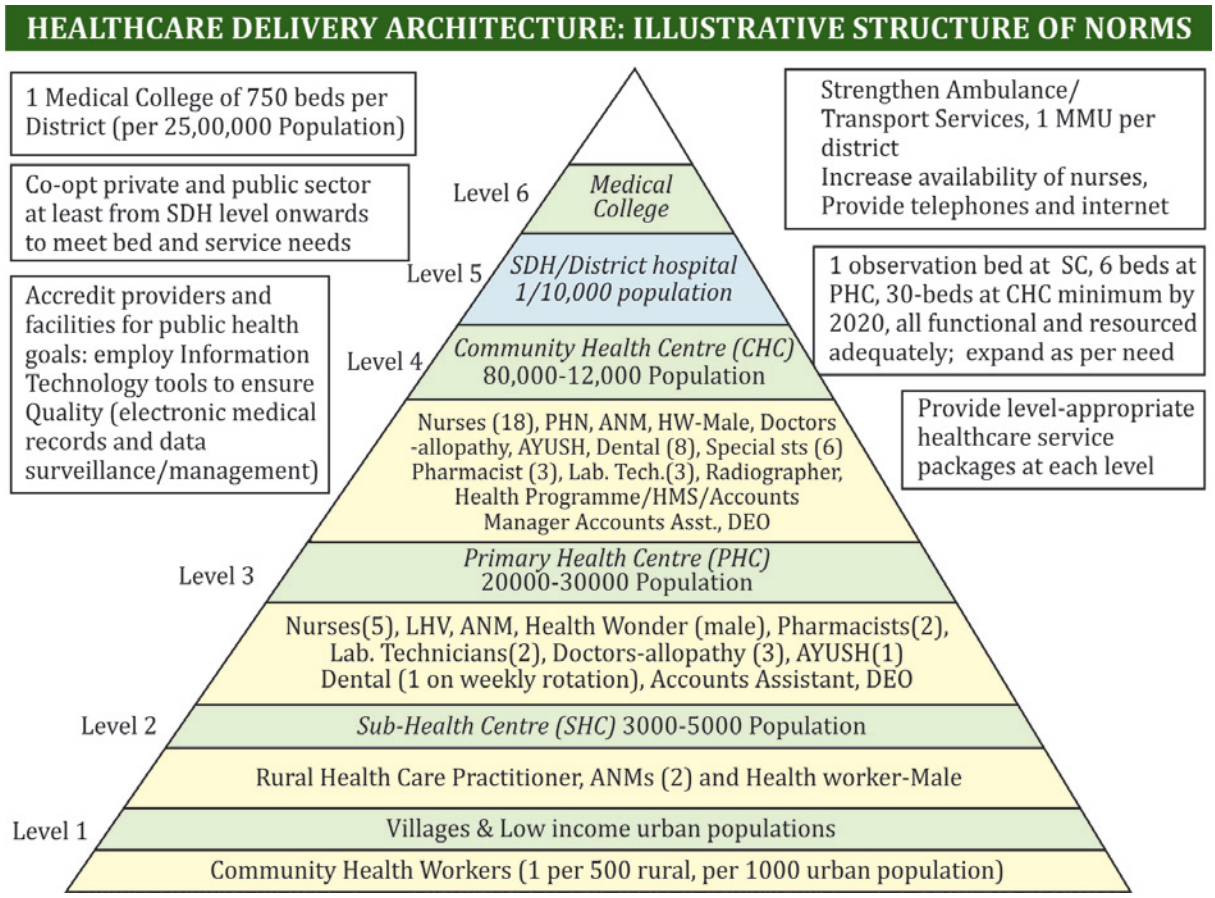
reports. It should develop an integrated district health action plan containing a long-term vision and annual prioritisation, and seek appropriate approvals. This arm, at the district level, should also publish annual district health accounts.

The district level health facility should be a 24x7 functioning referral centre and training school for BRHC, CHWs, ANMs and staff nurses. Larger DHs could also be medical college complexes. The district public health officers and programme managers should be qualified public health experts, and the other government providers (medical and allied health providers) should be managed under a district cadre. Every district should have a fully functioning DH in place by 2020.

f) Establish referral protocols and transport connectivity to and between facilities in every district by 2020. Every district should have at least one fully equipped, fully staffed Mobile Medical Unit (MMU) and an adequate number of ambulances in place by 2020. All MMUs and ambulances should be fully equipped with basic life-support drugs and devices and phone connectivity to higher-order referral centres, up to medical colleges. Staff in MMUs should be trained to stabilize and manage basic emergencies, especially normal deliveries and cardiopulmonary resuscitation.

In vulnerable areas, MMUs should have all basic diagnostic equipment, supplies, medicines and staff capabilities to perform minor surgical procedures, in addition to life-saving capabilities.

FIGURE 3: NORMS AT PRIMARY, SECONDARY, AND TERTIARY LEVELS



Source: HLEG Secretariat

g) Evaluate underserved and inaccessible districts and their existing functional health facilities and increase number and type of new health care institutions.

The vulnerability index is a simple yet practical tool to estimate health care delivery need based on access. The index should take into account variables such as the percentage of tribal and hilly areas, seriousness of political extremism and related security issues, average travel time to health care facility by foot or other modes of transport, density of health workers given the population density and geography, frequency of natural disasters, and difficulty of the terrain. The decision to establish new health facilities should prioritise areas deemed inaccessible and underserved, based on several criteria that extend beyond merely the population size.[21,48] A sample tool is attached as Annexure V.

h) Ensure that health and supportive services for persons with physical and mental disability are integrated at all levels into UHC.[51]

Some promising interventions currently in place address mental and physical disability in the country. These include programmes on improved nutrition to address iron, vitamin A and iodine deficiencies; efforts to improve reproductive, maternal and child health care; and road-traffic initiatives to prevent accidents leading to disability. Poor performance indicators in these areas present major obstacles to the overall prevention of disability in India.[22-24] Reasonable physical access measures should be created to afford disabled people better access to health care facilities.

Failure to integrate mental health into the broader public health agenda only increases the social exclusion of people living with mental illness. There is thus a need to combat the stigma associated with mental illness through awareness-building activities, which need to be expanded beyond current levels. This should be coupled with inter-sectoral collaboration and better capacity-building efforts. Moreover, self-help and psychosocial support groups need to be encouraged and empowered. Psychosocial counseling should be made available and accessible for other patient groups and vulnerable populations as well (e.g., HIV/AIDS counseling, women, the disabled, the elderly). The goal would be to systematically integrate mental health services into primary care, in accordance with WHO recommendations.[26] All disability-related interventions should be resourced adequately and evaluated frequently to measure progress towards goals.

i) Address informal provider quality

At a minimum, every unqualified or informal provider should be made aware of when not to prescribe or treat and instead refer a patient to the closest higher-level facility. If managed well, these providers could potentially support the system at the ground level, provide forewarning in case of mass disease breakouts, and help with community awareness. Formerly unregulated private sector providers could be integrated into the health system at the primary health care level through appropriate training, accreditation and licensing. Those providers who wish to upgrade their skills by applying for BRHC or other health courses could be supported by the village and district leaders, with incentives such as a position in the village health and sanitation committee, among others.

Recommendation 2: Earmark resources for health service entitlement packages at each level to include timely preventive, promotive, curative and rehabilitative interventions.

To develop an entitlement package of health care services that would truly have universal reach, we examined national and international research on eight existing UHC packages.[52-57] Prevalent public health issues in local communities, particularly those in underserved areas such as *Gadchiroli* in Maharashtra, *Ganiyari* in Bilaspur, Jharkhand and *Kalyansingpuri* in Odisha, were considered. Insurance schemes such as the *Rashtriya Swasthya Bima Yojana*,[58] the *Arogyashri* scheme in Andhra Pradesh, the *Kalaingar* scheme in Tamil Nadu and the *Apka Swasthya Bima Yojana*[59] from

Delhi were also examined. Where available, incidence data from these health insurance schemes were reviewed.

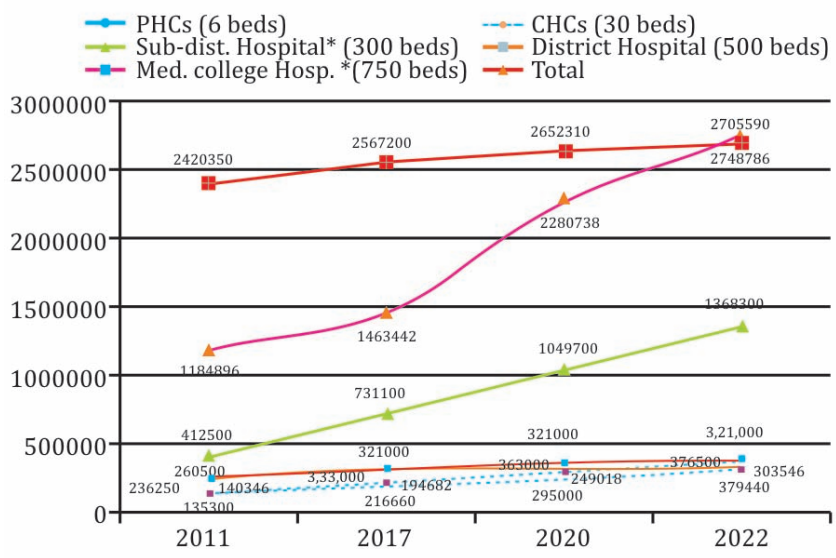
The packages recommended by this report have been developed and provisioned as follows:

All preventive and promotive aspects of health care, such as antenatal checks, screenings, counseling, minor curative services and prescriptions, should be guaranteed at the Sub-Health Centre (SHC) and then appropriately referred to the closest PHC. The packages have been labeled on the basis of the recommended levels of care such that services required at the village would constitute a *level 1 package*, services at the sub- centre would be a *level 2 package* and services at the PHC would consist of a *level 3 package*. The *level 4 package* has a combination of primary and secondary care services for which primary health care components are available at levels 1 to 3 and secondary care is guaranteed at the CHC level. Finally, the *level 5 package* includes secondary and tertiary level services that would be guaranteed at the DH level upwards.

The aim of this approach is to ensure a specific package of services at every level, with enough overlap to ensure care continuity. Designed to be flexible and progressive, the packages reflect depth of coverage across a range of interventions and include management and rehabilitation for various conditions. Quality standards and care protocols need to be developed and followed for all package components. A list of exclusions of health events at various levels will also have to be developed, based on desirability and necessity criteria.

It is important to note that the recommended entitlement package is intended to be illustrative rather than prescriptive. These are examples, and the services included are not exhaustive. We recommend that an expert committee set up by the Ministry of Health and Family Welfare periodically determine the essential health package for UHC. (Detailed illustrative packages and corresponding levels of facilities are enlisted in Annexure VII.)

FIGURE 4: PROJECTIONS FOR ACHIEVING PROVISION OF 2 BEDS PER 1,000 POPULATION BY 2022



Source: HLEG Secretariat

Recommendation 3: Expand functional bed capacity to 2 beds per 1000 population by 2022

Based on population projections and required HR-to-population ratios, we estimated the number of hospital beds that would be required by 2022. The exercise included sensitivity analyses of estimates for 1.5 beds and 1 bed per 1,000 population norms.

Given a population of 1,353 million by 2022, the HLEG estimates that 27.05 lakh beds will be required to achieve 2 beds per 1000 population, shaped by progressive increases in bed functionalization at various facilities (see Figure 4). Based on the population norms discussed in Recommendation 1, the size and spread of India's population will require a physical infrastructure of 3,14,547 SHCs, 50,591 PHCs, 12,648 CHCs,4,561 SDHs (201-300 beds) and 642 DHs (301-500 beds).

These basic infrastructure norms and hospital bed projections account for greater coverage in tribal and inaccessible areas, which account for about 25% of the total population,[20] and assume that the private and public sectors will together provide public hospital beds, starting at least at the sub-district level.

a) Leverage public-private partnerships (PPPs) for health system reform through statutory regulation and innovative models.

Several experiments suggest that contracting out health care services can improve care in secondary and tertiary levels.[60]

Given that the private sector provides 80% of health care services in India and low-income populations currently choose private over the public care, despite unaffordable prices, India's model for UHC must involve the private sector in its delivery design.[61] The success of such an arrangement will depend upon the public sector's ability to incentivise private providers to be contracted into the public scheme while holding them accountable for quality and service provision at the same time, which requires a particular set of institutional characteristics (see Box 2).[49,62]

Although building PPPs will increase capacity in the health system, the private and public sectors are not naturally compatible. Vested and often competing interests between parties impede progress, and different operational norms and priorities increase delays. To ensure successful PPPs, we must do the following:

- adequately synchronize the public and private sectors to achieve cooperative operability by plugging existing gaps in health systems policy documents, with clear delineation of procedures, protocols, regulations, incentives and mechanisms to support the partnerships;[61]
- enable government functionaries to structure, regulate and monitor PPPs;
- prevent vested interests (of either party) from creating legal bottlenecks that delay progress or defeat the public purpose of the partnership; and
- address evidence-based apprehensions about the model, 60,61,63 such as the adherence of PPPs to national health programme protocols, the accountability of health providers in the private sector and weak or ineffective regulation of the private sector.

The above issues notwithstanding, the governments of Tamil Nadu, Gujarat, Karnataka and Andhra Pradesh have demonstrated that PPPs can contribute to expansion of health care coverage. A 2010 KPMG study[64] has shown that the Aravind Eye Center and Narayana Hrudayalaya - two successful PPPs - improved care quality and efficiency while also reducing cost per client. An illustrative list of PPP models for primary, secondary and tertiary levels of care is provided in Annexure VI.

The High-Level Expert Group favours contracting-in of the private sector to deliver the National Health Package (NHP), through mechanisms described in the Chapter on Health Financing and Financial Protection.

Box 2: Illustrative Model

The World Bank Report on Brazilian Health care notes the following characteristics of publicly- held private institutions:

1. Essentially public institutions but legally independent from government
2. Legal obligations/mandate specified accountability embedded in government-controlled board structure
3. Direct preservation of public mission

Additional accountability arrangements:

1. Management contract (with robust monitoring and enforcement)
2. Performance-based payment system
3. Independent audit by regulators and/or external monitors

All staff employed by hospital (not government)

1. Selection of managers by board, usually from private sector
2. Generally subject to civil service system
3. Examples of successful models are available globally, such as Colombia (ESEs), NYC, UK Foundation Trusts, to name a few
4. Co-operative hospitals in some States of India also provide examples

Source: Forgia and Couttolenc (2009)[65]

b) Private sector providers, beds and facilities should be contracted into district health systems and subsequently linked to district accountability mechanisms, such as health councils, to meet rapid capacity increases that UHC will require.

Considering the projected growth trajectory of public and private sectors in India, the HLEG recommends a target lower than the current global average of 2.9 beds per 1000 population.[6] The HLEG also anticipates that a comprehensive primary health care approach to universal care with emphasis on early interventions, prevention, curative and promotive health practices, as well as the growing technology-aided trend towards shorter hospital stays and more day care, will ultimately reduce the requirement of hospital beds. A norm of 2 beds per 1000 population should therefore suffice. A recent Technopak study indicates that developments in high-tech diagnostics and interventions will drive a shift in health care delivery from predominantly in-patient settings to predominantly out-patient settings.[37] The study predicts that 75% of all surgical procedures in India in 2020 will be conducted in out-patient ambulatory surgery centres. If out-patient procedures cost 47% less than their in-patient counterparts - as some calculations suggest - this shift could theoretically double the reach of health system resources.

Recommendation 4: Position norms for quality assurance of facilities and services and leverage use of standard operating procedures, technology and management information systems in monitoring and continually improving standards of care.

Progressively, all public (and co-opted private) health facilities should undergo a licensing process valid up to three years determined by regular accreditation surveys to ensure compliance with the Indian Public Health Standards, as a baseline standard as well

as additional stipulations of being contracted in (following state norms, either as sole NHP providers or adopting the 75% in-patient/50% out-patient NHP provision requirement).[66] This process should become universal by 2017.

a) Identify public facilities that do not have the resources to meet prescribed quality guidelines and ensure shortages are appropriately corrected. The facility's accreditation status should be prominently visible to the public.

We recommended that all public and private facilities responsible for delivering the UHC package should adhere to the Indian Public Health Standards (IPHS). This will be the starting point of large-scale commitment to quality assurance in public health care delivery.

b) Adopt electronic medical records by the year 2020. Form a state-level accreditation agency and a central coordinating body to oversee operations and administrative protocols of health care facilities. This body would be called the National Health and Medical Facilities Accreditation Unit (NHMFAU), under the National Health Regulatory and Development Authority (NHRDA).[c]

A key feature of the Universal Health Coverage plan would involve efficient use of health systems and management information systems to be employed at all levels of health care.

NHMFAU should be mandated to oversee the following:

- Definitions of standards for health care facilities to qualify for different levels of the pyramid. Health care facilities will be required to receive NHMFAU accreditation every three years, based on a score on how well the facility meets the standards of health care set for their level of care. The score will provide the health care facility with an objective score of performance and comparison with peer facilities. There will also be a process to redefine the universal health entitlement packages according to the needs assessed by a structured review of patient volumes and disease burden.
- Adoption of health information systems and defining standards for use of resources and health management systems infrastructure. NHMFAU will promote use of health systems management information systems and will define stages of use organised over time. Stage I will cover years one to two after introduction of health management information systems, Stage II will cover years three, four and five after introduction, and Stage III will cover criteria after five years. Monitoring protocols and surveillance protocols will be developed and implemented.
- Establishment of criteria and a process to certify vendors' health system management technology that can support meaningful use criteria. NHMFAU will work on defining a process for vendor certification according to meaningful use criteria and vendor product applicability to diseases of national priority.
- Information documentation, use and exchange among health care centres. NHMFAU will develop a standards and interoperability framework to harmonize existing standards and improve sharing of standards across different organisations and federal agencies, making it easier to broaden interoperability through shared standards for data and services.
- Clinical interoperability of information to enable seamless transition of patient data between health care facilities. Best practices will be defined and disseminated.
- Knowledge and feedback cell. Drawing from international best practices,[67] NHMFAU would be responsible for analysing system bottlenecks and process breakdowns to the last level of detail on an ongoing basis, analysing group trends where possible, and working with the leadership and stakeholders at each level to continually correct issues.
- Definition and promotion of standards of patient safety, privacy and ethical use of patient data. NHMFAU will develop an accreditation process, standards and monitoring protocol to ensure patient privacy and ethical use.
- Flow of information between allied agencies and health care facilities. NHMFAU will develop procedures to monitor exchange of information with public health agencies, research organisations,

regulatory authorities and educational institutes.

- Information analysis, coordination of health care strategies and work towards real-time epidemiology.
- NHMFAU will work with other facilities and serve as a regional information exchange hub to allow for epidemiological analysis and real-time surveillance services.
- Promotion and documentation of health care innovations in health care facilities. NHMFAU will be mandated to document innovations in the health care delivery seen in different facilities and develop a national database of health care innovations that are known to improve patient care.

The governing body of NHMFAU at the state level should include representatives from the health systems management cadre at the district level, community participation from CBOs and NGOs and public health officials.

Recommendation 5: We recommend an urban UHC system that offers the defined package of services at each level and that addresses the health needs of urban slum-dwellers, the urban poor and the urban middle class. Cities and towns should have the flexibility to design such a system that includes community based urban nurse practitioners, appropriate service delivery channels and provider. Special focus shall be paid to population density, better transport and network connectivity, increased provider coverage (especially in the private sector), greater access to human health resources and greater health-seeking behavior.

a) The new urban health system must have clearly designated and closely linked primary, secondary and tertiary health care facilities, with a defined package of services at each level.

The location of urban health centers and their coverage areas should be mapped spatially so that effective access can be determined. For underserved rural areas, a vulnerability analysis should be undertaken, particularly in slums, to prioritise health care services and delivery at appropriate facilities. A sample health vulnerability assessment tool is provided as Annexure VIII.

Facilities should be designated into tiers or levels of care (I, II, III), transfer protocols created and technical and administrative protocols standardised.[68] This would reduce the huge burden on the larger tertiary-care facilities, which often end up serving a disproportionate amount of out-patient-related primary care needs of the urban population. A tier 1 facility could deliver all aspects of the entitlement package at a PHC level and below (private clinics, dispensaries), tier 2 would be equivalent to a rural CHC or DH (private nursing homes, maternity homes), and tier 3 could focus on higher-order secondary and tertiary-care services (medical colleges, super-specialty public and private hospitals). Tables 6 and 7 present the norms for the urban family welfare centres and urban health posts as proposed by the National Urban Health Mission (NUHM).[69]

[c] A detailed comparative review of three major facility quality criteria setting agencies was performed. These were the Joint Commission International (JCI), the National Accreditation Board for Hospitals and Health care providers (NABH) and the Indian Public Health Standards (IPHS). IPHS has a set of base quality standards, but these are not necessarily accreditation criteria, unlike the JCI or NABH. Accreditation criteria to certify health care facilities should be developed.

TABLE 6: STAFFING FOR URBAN FAMILY WELFARE CENTRES		
Category	**Population Coverage**	**Staffing Pattern**
Type I	10,000 - 25,000	1 ANM; 1 FP field worker (male)
Type II	25,000 - 50,000	1 FP Ext. Edu. or LHV in addition to the above
Type III	Above 50,000	1 MO (preferably female), 1 ANM, 1 storekeeper-clerk

Source: Ministry of Health and Family Welfare (2010)[69]
ANM = auxiliary nurse midwife; MO = medical officer, LHV =Lady Health Visitor

TABLE 7: STAFFING FOR URBAN HEALTH POSTS		
Category	**Population covered**	**Staffing Pattern**
Type A	Less than 5000	1 ANM
Type B	5,000 - 10,000	1 ANM, 1 multiple worker (male)
Type C	10,000 - 20,000	1 ANM, 1 multiple worker (male)
Type D	25,000 - 50,000	1 MO (female), 1 PHN, 3-4 ANMs, 3-4 multiple workers (male), 1 Class-IV woman

Source: Ministry of Health and Family Welfare (2010)[69]
ANM = auxiliary nurse midwife; MO = medical officer; PHN = public health nurse

b) The HLEG endorses the goals envisioned by the National Urban Health Mission to improve the efficiency of public health systems in cities by strengthening primary urban health care and infrastructure and designated referral facilities through the following criteria:

- The NUHM initiative should provide flexibility to states to choose which model suits the needs and capacities of regional actors to best address the health care needs of the urban poor. While strengthening public sector health services, states should also be free to choose from a range of partnerships with other categories of providers to ensure adequate coverage and quality of services.
- For strengthening primary public health systems, NUHM proposes a broad framework for rationalising available resources and human resources, improving access through communitised risk-pooling mechanisms and enhancing the participation of the community in the management of health care service delivery through a community link volunteer (an urban social health activist). The HLEG proposes utilising community health workers and public health nurse practitioners to perform these functions.
- The NUHM also advocates the establishment of Rogi Kalyan Samitis, ensuring effective participation of urban local bodies and making special provision for including the most vulnerable amongst the poor along with the development of an e-enabled monitoring system. The quality of the services provided should be constantly monitored for improvement (IPHS/revised IPHS for urban areas).[69]

- All services delivered under the urban health delivery system should be preferentially targeted to the most vulnerable urban populations (slum dwellers, migrants, the working poor and homeless).
- The urban health delivery system should ensure inter-sectoral convergence by various local urban governing bodies with strong emphasis on accountability and transparency in urban governance.
- The architecture of the urban health delivery system may need to be substantially different from the rural health delivery system. The requirements of tier II and tier III cities will also be substantially different from the needs of tier I cities or metropolises. It would be therefore necessary to design several menus and models for the various cities in the country. It is also critical to set up better systems for the transfer of patients between health care facilities, to be coordinated by the rural and urban health departments in surrounding towns and cities.
- It is important to acknowledge the diversity of available infrastructure and facilities in cities along with flexible city-specific urban planning by urban municipalities. Synergies with other programs with similar objectives like Jawaharlal Nehru National Urban Renewal Mission, Swarna Jayanti Shahari Rozgar Yojana, and Integrated Child Development Services (ICDS) to optimise outcomes is essential.
- The NUHM proposes to measure results at different levels with long term as well as intermediate term view, an approach endorsed by the HLEG

Recommendation 6: Structure transparent, performance-based systems of budgeting and IT-enabled financial management directed by qualified financial professionals with corresponding accountability and audit protocols.

a) Position financial management teams at appropriate levels, supported with integrated professional development system inclusive of training, mentorship, continuing education, refreshers and long- term engagement.

Day-to-day bookkeeping and accounting procedures should be strengthened and periodic financial review processes instituted. Protocols for concurrent audit (both financial and performance audit), reconciling financial and fiscal progress against plan and periodic public disclosure should be established. Appropriate vigilance mechanisms are needed at all levels. Respective health care facility managers should review utilisation of funds against services provided and make mid-course corrections as necessary.

Evidence from Ontario, Canada, shows that such a process helps health system managers understand the financial and physical line-item of resources spent and services demanded, reconfigure resources based on staff availability or even decide to close down a service entirely. They can also regulate the prescription of drugs or diagnostic tests that are found to be unwarranted or excessive.[70]

b) Rationalise delegation of financial power rules.

The utilisation of funds at any level of care must be accompanied by the appropriate sanction or order detailing how they are to be to be disbursed to ensure accountability and transparency. This will significantly improve the fund absorption capacity in the system and reduce the turnaround time of financial reporting.

c) Establish a robust financial information system that is accessible to public and provides real-time data on government expenditure.

A strong financial management system is useful in providing timely and accurate information to policy makers and implementers at all levels and greatly improves the quality of decision-making. An exemplar is Brazil, which demonstrated great results in implementing an IT-based financial information system before Universal Health Coverage was announced as a public entitlement.[71,72] The main

objective of the system is to capture even the smallest public transactions electronically, thereby ensuring transparency, accurate record keeping, accountability and public oversight at all times.

d) Adopt cutting-edge technologies to establish standardised procurement, logistics and supply chain protocols, similar to the Tamil Nadu Medical Supplies Corporation model.

Taking lessons from the banking industry, the Tamil Nadu Medical Supplies Corporation (TNMSC) has transformed the drug distribution system in the state over the past decade. Stringent quality control to keep out spurious drugs and a robust inventory management system, aided by the smart use of technology and a tightly controlled demand-supply cycle for drugs at each health facility, are the hallmarks of the Tamil Nadu model.[73]

Transparency in the process at all times and zero tolerance for supplier complaints contribute greatly to its success.[74]

A central drug procurement proposal is already being developed so that this success can be replicated nationwide. This centralisation process should learn from both the strengths and weaknesses of the models implemented in Tamil Nadu and other states so that ultimately, a best-fit model is implemented across the country.

Recommendation 7: Establish legal provisions, policy frameworks and changes to health governance structures to define decision-making responsibilities and authorities between sectors.

We recommend the establishment of inter-sectoral empowered governance structures at each administrative level as follows:

- A sanitation and health committee at the village level that comprises existing members as well as an ANM from the health department, an Anganwadi worker from ICDS, a schoolteacher from the education department and village patwari from the revenue department.
- Appropriate block-, district- and state-level structures consisting of corresponding-level representatives handling collateral social determinants of health, such as rural development, Panchayati Raj, education, agriculture and environment.
- At the national level, a standing committee with a dedicated secretariat, comprising senior representatives from all relevant departments, to oversee the implementation of UHC. The existing Central Council for Health and Family Welfare should oversee the role of its secretariat.

The governance reforms necessary for UHC are essential but also the most difficult to implement. Strong stewardship and effective governance are critical to ensuring UHC. It is crucial to develop standards for the health directorates and health departments at central as well as state levels to develop adequate capacity and expertise to steer the difficult task of governance reforms.

Governance structures and reforms may not have a large budgetary footprint. However, appropriate delegation of financial power is required, along with financial vigilance and accountability. Over the Twelfth Plan period, the details of the accreditation agency must be worked out through wider discussions. This agency should be set up with an appropriate legal mandate to undertake discussions on other legal and policy components. Community oversight, ensured through publicly mandated and mentored initiatives, is imperative to ensure progress (see chapter on Community Participation and Citizen Engagement).

a) Reconfigure national health programmes[75] to ensure collaborative vertical efforts alongside health system strengthening at horizontal levels.[76] Where gaps exist,institute appropriate additional NHPs to ensure focused efforts in addressing unmet health needs.

The NHPs were established with the goal of combating public health challenges with the largest epidemiological footprint. The strategy of deploying

narrowly defined, vertical programs to meet the biggest health challenges has been in keeping with the globally accepted public health theory of the past decades. These programmes are completely under the management and jurisdiction of the central government, while their ground-level implementation is through the health care delivery systems of the individual states.

Health system reforms undertaken in India in recent years have improved the efficiency of the vertical disease control and eradication programs. However, it may be necessary to reconfigure programme design to facilitate faster realisation of the benefits of systemic corrections. Expanding the role of CHWs and other community- based institutions in the programmes, adoption of decentralised procurement of supplies and medicines, development of cross-linked training programmes, informational and educational campaigns and management information systems across several NHPs can help improve the efficiency and optimise the deployment of resources. At the same time, the need for integration of several health programmes and the launch of NRHM as a unifying platform make it necessary to ensure greater linkages between the existing programmes.

The Government has expanded the range of the NHPs substantially to include oral health, stroke management, cardiovascular disease, diabetes and mental health, but several other areas of public health are vying for focused intervention. As these needs are being addressed, care must be taken not to fragment the health system but rather to consolidate it through the UHC design.

5. Implications of recommendations for stakeholders

a) For policy makers

- Planners, parliamentarians, administrators and technical experts will all need to jointly evolve methods to reprioritise and reallocate the deployment of developmental funds in service of the goals of UHC.
- They will also need to reconfigure governance structures and functions and ensure comprehensive intersectoral communication, cooperation and prioritised decision-making.
- Inter se responsibilities between the centre, state and local self-government institutions will have to be redesigned to ensure the desired outcomes.

b) For the Government

- Strengthening of health directorates, including adequate resourcing, will be essential.
- Sturdy oversight and monitoring mechanisms should be established and appropriate corrective measures taken to ensure accountability at all levels and enhance the credibility of public systems amongst the people.
- The real delegation of administrative and financial powers down to the village level institutions is the acid test of an empowered health system.
- Administrators should be more proactive and, in general, much more open to accepting new technologies in the dynamic and rapidly evolving health care sector.

c) For the community

- The concept of UHC invites communities to play a lead role in ensuring equitable and accessible care.

  Communities need to be conscious of their rights, articulate their concerns and actively participate in the change process.
- UHC, when achieved, will lead to a better quality of life for the citizens of India and improve our human development index ranking. Citizens will have to commit to health-seeking behaviours and demand opportunities to make positive changes in lifestyle, actively contributing to the goal of achieving health for all while protecting their personal health.

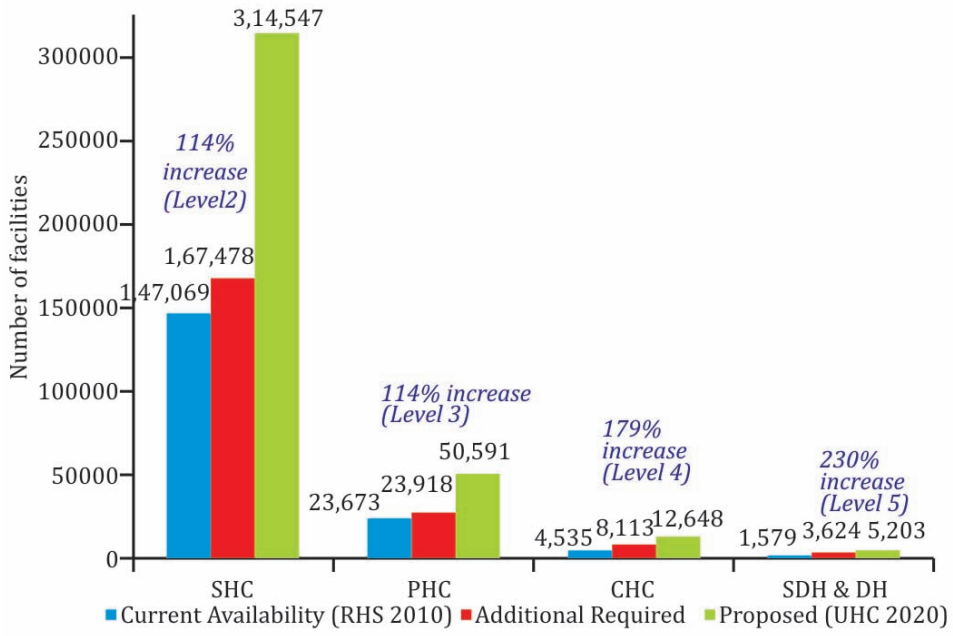
6. Financial implications of key norms

We recognise that the Planning Commission will need to increase investment significantly over the next few plan periods to achieve and implement UHC. Based on the nature of our suggested reforms and in line with our core philosophy of primary health care, we recommend prioritising spending at the sub- centre and DH level.

In the initial phase, priority should be given to vulnerable populations so that fully functional subcentres are in place according to the population norms and every district has a functional sub-district or district hospital by 2020.

As described earlier, based on our new norms, we estimate the requirement of 314,547 SHCs, 50,591 PHCs, 12,648 CHCs and 5203 sub-district and district hospitals combined. Figure 5 presents the increase in number of facilities required at each level. Figure 6 is our recommendation for a phased approach with a focus on bridging the sub-centre and sub-district hospital gap more aggressively in the Twelfth Plan period.

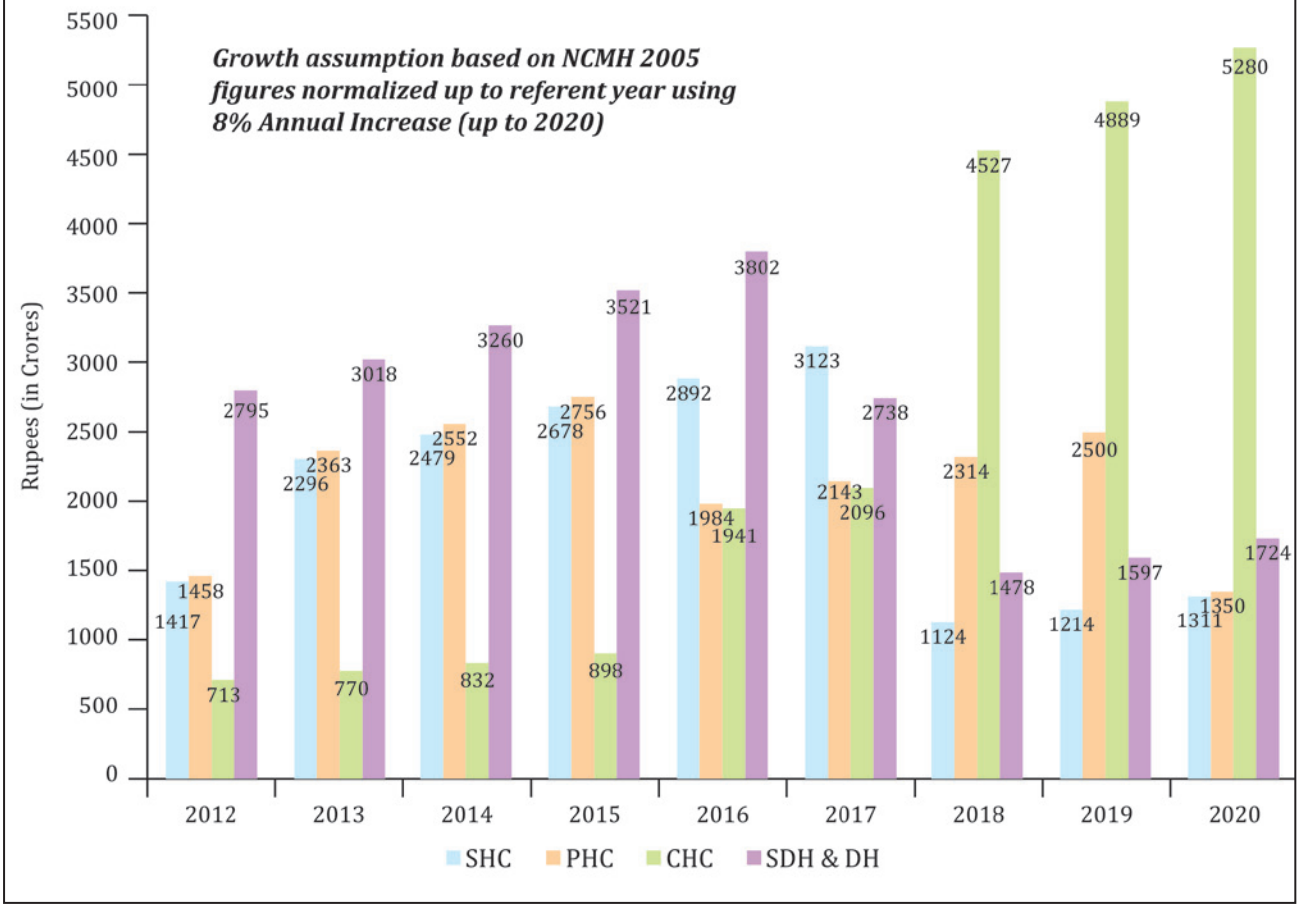
FIGURE 5: PERCENTAGE INCREASE IN PUBLIC INFRASTRUCTURE REQUIRED ACHIEVING UHC BY 2020



Source: HLEG Secretariat

Figure 6 shows the trend in increase in capital costs until 2020 for the recommended phasing of the facilities discussed above. To calculate the total costs, the NCMH assumed an 8% increase every year from 2005 onwards.

FIGURE 6: PHASING PLAN FOR INFRASTRUCTURE INCREASE BETWEEN 2011 AND 2020



Source: HLEG Secretariat

Figure 7 and Table 8 show the corresponding trend in operating expenses for these facilities. The graph reveals a spending pattern that echoes the overall vision of a robust and dominant primary health care system. An annual increase of 15% has been estimated in order to account for the increase in manpower norms at each level.

FIGURE 7: PHASED PROJECTION OF OPERATING COSTS FOR ALL FACILITIES (BASED ON PERCENTAGE INCREASE IN FACILITIES)

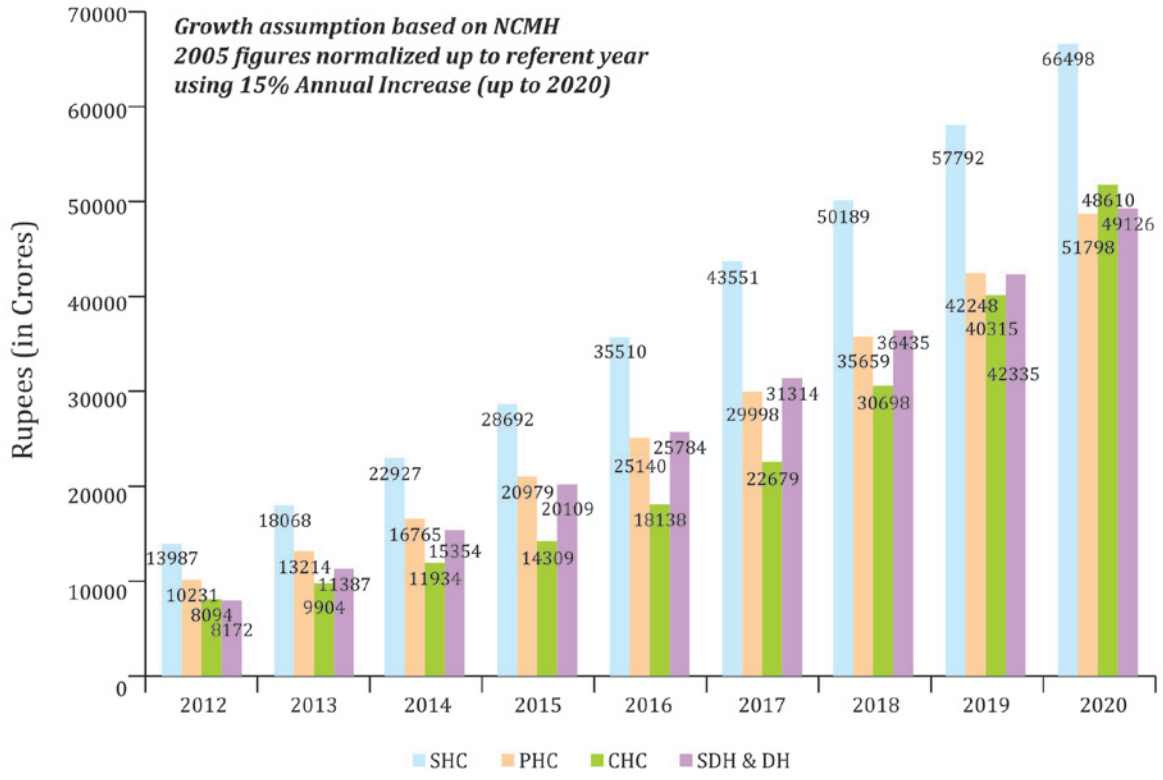


TABLE 8. RELATIVE PERCENTAGES OF ANNUAL OPERATING EXPENDITURE AT CORRESPONDING FACILITY LEVELS

Year	SHC	PHC	CHC	SDH & DH
2012	34.55%	25.27%	20.19%	19.99%
2013	34.37%	25.13%	18.84%	21.66%
2014	34.23%	25.03%	17.82%	22.92%
2015	34.12%	24.95%	17.02%	23.91%
2016	33.96%	24.04%	17.34%	24.66%
2017	34.15%	23.52%	17.78%	24.55%
2018	32.81%	23.31%	20.07%	23.82%
2019	31.63%	23.13%	22.07%	23.17%
2020	30.78%	22.50%	23.98%	22.74%

Source: HLEG Secretariat

a) Per capita estimations for the entitlement package

In the NCMH package (2005) of health services, out-patient services at PHCs and in-patient services at CHCs and DHs was examined46 and estimates for 2011-12 and 2020 were extrapolated. Using the cost inflation index calculator for the period between 2005-06 and 2011-12, the NCMH figures were made current. An average inflation rate for this period was computed at 9%, and the current costs were then subjected to a compounded annual increase of 9% until 2020.

The NCMH packages, computed using the standard treatment guidelines methodology, are fairly comprehensive for the purposes of gross estimates at the primary and secondary care level. Tertiary-care data were obtained primarily from insurance agencies (including RSBY) and analysed but subsequently rejected as possibly inaccurate.

We computed an out-patient per capita cost of Rs. 289, an in-patient per capita cost of Rs. 1159 at the CHC level and an in-patient per capita cost of Rs. 2398 at the DH level by the year 2020. All assumptions are based on the NCMH methodology, including a 70% utilisation rate of services, where indicated.

TABLE 9: ESTIMATED PER CAPITA CALCULATION FOR ESSENTIAL HEALTH CARE PACKAGE

Standard treatment guidelines-based costing of basic universal package	2005 values (NCMH)	(Rupees) 2011-12 (based on CII factor)	2020 (annualised using average CII rate from 2005-2011)
Per capita OP cost at PHC (level 3)	90	133	289
Per capita IP cost at block CHC (level 4)	310	490	1159
Per capita tertiary care services (DH, level 5)	699	1104	2398

CHC = community health centre; CII = cost inflation index; DH = district hospital; IP = in-patient; OP = out-patient; PHC = primary health centre

Source: HLEG Secretariat, based on figures from the National Commission on Macroeconomics and Health (2005)[46]

Disclaimer on costing calculations: All calculations for the purposes of this paper are based on assumptions that have been stated, including data gaps that exist in the source documents, and modeled appropriately. We recommend that the numbers be viewed in light of the overall framework and evaluated for the underlying logic rather than numerical precision alone. Additional sensitivity testing with corresponding changes in assumptions may be applied to any of the models

The estimates above clearly indicate disproportionately higher per capita cost at higher levels of care, emphasising the need for investing heavily in primary and preventive care. Consequently, the dependence on higher-order tertiary care services that involve expensive hospital stays and specialised curative services, in many cases, would be reduced.

It is important to state that the costing exercise above cannot provide an accurate national cost per capita for the health care package proposed; rather, these are merely estimates to enable the planners to earmark appropriate levels of funding over the next two plan periods. Several detailed modelling exercises will have to be undertaken across a country-wide cross-section of blocks or districts to customise the packages specific to local disease burden and delivery challenges, among other variables.

7. Summary

It is widely acknowledged that economic growth in India has not adequately translated into the desired changes in the health and quality of life indicators of its citizens. Such outcome indicators as IMR, MMR, immunisation rates, antenatal care coverage, and major process indicators of institutional delivery are still far from satisfactory. We acknowledge the gap between the health needs and aspirations of the citizens and the health care delivery system's ability to respond adequately. Access to quality health services on an affordable and equitable basis in many parts of the country remains an unfulfilled aspiration. Much ground still needs to be covered in malnutrition, sanitation and access to drinking water. The country has yet to design and implement a comprehensive umbrella of financial protection to cushion poor people from health-related catastrophic events.

The diversity and complexity of existing health systems in India point to some key issues for developing and understanding physical and financial norms for health services at the ground level. For one, community health requirements and the resources needed to meet them vary greatly. Second, there remains a dearth of human resources for health and physical infrastructure, including hospital beds, drugs and diagnostics. Health care provision by the organised private sector is virtually absent at the primary level, which highlights the need for providing adequate public resources to build a public sector health system. Finally, a large proportion of the population's first point of contact for treatment is the private sector; there are limits to partnerships with this sector in the context of rational drug use, ethical practice, skills upgrade and regulation.

The journey towards UHC will require the judicious adoption of creative and new initiatives and methods. Public as well as private stakeholders must create capacity and phase in their interventions. The early gains expected from these changes justify their continued support to ultimately achieve UHC.

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Annexures

ANNEXURE I: CROSS-COUNTRY COMPARISON OF MOVEMENT OF KEY INDICATORS FROM 2001 TO 2011

	China		Chile		Brazil		Thailand		India	
	UHC expected in 2011		UHC since 1981		UHC introduced 1988		UHC since 2001			
Indicators	**2001**	**2009**	**2001**	**2009**	**2001**	**2009**	**2001**	**2009**	**2001**	**2009**
Population	1.27 billion	1.33 billion	15.6 million	16.8 million	176 million	193 million	62.9 million	66.7 million	1.03 billion	1.17 billion
Birth rate	13	14	16	15	20	16	16	12.95	25	22
Death rate	6	7	5	5	6	6	8	9	8	7
Infant mortality rate per 1,000	22 (2005)	17	8 (2005)	7	22 (2005)	17	14 (2005)	12	57 (2005)	50
Under-5 mortality rate per 1,000	25 (2005)	19	9 (2005)	9	26 (2005)	21	16 (2005)	14	77 (2005)	66
Maternal mortality ratio (adjusted) per 100,000 live births	44 (2005)	38	26 (2005)	26	64 (2005)	58	51 (2005)	48	280 (2005)	230

Source: The World Bank. World Bank-Data, Indicators. [Internet] ND [cited 2011 Apr 30]. Available from: http://data.worldbank.org/indicator/SH.STA.BRTC.ZS/countries/BR-XJ-XT.

ANNEXURE II: SELECTED HEALTH STATUS OUTCOMES IN INDIA & MAJOR INDIAN STATES

State	Life Expectancy at Birth, average for (SRS based Abridged life table 1998-02) (years)[1]	Neonatal Mortality 2005-06 (per 1000 live births	Infant Mortality Rate (per 1000 live births) (Source: SRS 2009)[2]	Under Five Mortality Rate, (Source: NFHS 2005-06) (per 1000 live births)[3]	Total Fertility Rate, (Source: SRS 2008)[4]	Under weight children, (%) (Source: NFHS 2005-06)[3]
India	62.5	39	50	74.3	2.6	48
Andhra Pradesh	63.5	40.3	49	63.2	1.8	42.7
Assam	57.9	45.5	61	85.0	2.6	46.5
Bihar	60.8	39.8	52	84.8	3.9	55.6
Gujarat	63.4	33.5	48	60.9	2.5	51.7
Haryana	65.2	23.6	51	52.3	2.5	45.7
Karnataka	64.5	28.9	41	54.7	2.0	43.7
Kerala	73.5	11.5	12	16.3	1.7	24.5
Madhya Pradesh	56.9	44.9	67	94.2	3.3	50.0
Maharashtra	66.2	31.8	31	46.7	2.0	46.3
Odisha	58.5	45.4	65	90.6	2.4	45
Punjab	68.5	28.0	38	52.0	1.9	36.7
Rajasthan	61.1	43.9	59	85.4	3.3	43.7
Tamil Nadu	65.2	19.1	28	35.5	1.7	30.9
Uttar Pradesh	59.1	47.6	63	96.4	3.8	56.8
West Bengal	63.9	37.6	33	59.6	1.9	44.6

Sources:

1. *Registrar General of India. Sample Registration System Bulletin. [Internet] 2001 [cited 2011 Apr 30];35(2):1-4. Available from: http://www.censusindia.gov.in/vital_statistics/SRS_Bulletins/SRS_Bulletins_links/Bulletin_2001_Vol_35_No_2.pdf.*
2. *Registrar General of India. Sample Registration System Bulletin, Sample Registration System. [Internet] 2011 Jan [cited 2011 Mar 15]; 45(1):[1 p.]. Available from:http://www.censusindia.gov.in/vital_statistics/SRS_Bulletins/SRS%20Bulletin%20-%20January%202011.pdf*
3. *International Institute for Population Sciences [IIPS] and Macro International. National Family Health Survey (NFHS-3), 2005-2006. Volume I. Mumbai: IIPS; 2007.*
4. *Registrar General of India. Sample Registration System Bulletin. 2008. New Delhi: Registrar General of India; 2008*

ANNEXURE III: TIME LINE OF HEALTH SYSTEM REFORMS IN INDIA

1946 **Highlights**	**Bhore Committee** 1. Integration of preventive and curative services at all administrative levels 2. Short Term- Primary Health Centres for 40,000 population 3. Long Term (Three million Plan) - Primary Health Centres with 75 beds for each 10,000 - 20,000 population 4. Formation of Village Health Committee 5. Provision of Social Doctor 6. Inter-sectoral approach to health services development 7. Three months' training in preventive and social medicine to prepare social physicians
1951-55 **Highlights**	**Community Development Programme** 1. Multipurpose program to cover health and sanitation (through the establishment of primary health centres and subcentres) 2. Covered other sectors including agriculture, education, transport, social welfare and industries 3. For each Community Development Block (CDB) comprising of 100 villages and a population of one lakh, one Primary Health Centre was created
1956-61 **Highlights**	**Mudaliar Committee** 1. Limit the population served by a primary health centre to 40,000 2. Improve the quality of health care provided by these centres 3. Provision of one basic health worker per 10,000 population
1967 **Highlights**	**Jungalwalla Committee** Integration of services, organisation and personnel from the highest to the lowest level
1973 **Highlights**	**Kartar Singh Committee** 1. To ensure proper coverage, establishment of one primary health centre for every 50,000 population 2. Division of each primary health centre into 16 sub-centres, each for a population of 3,000 to 3,500 3. Staffing of each sub-centre by a team of one male and one female health worker 4. Provision of one health assistant to supervise the work of 3-4 health workers
1975 **Highlights**	**Shrivastav Committee** 1. Creation of bands of para-professional and semi-professional health workers from within the community 2. Development of a "Referral Service Complex" by establishing linkages between the primary health centre and higher level referral and service centres

1977 Highlights	**Rural Health Scheme** 1. Training of community health workers, reorientation training of multipurpose workers and linking medical colleges to rural health launched 2. To initiate community participation, the Community Health Volunteer - Village Health Guide (VHG) Scheme launched 3. The VHG to be a person from the village, mostly women, who would be imparted short term training and small incentives for work
1978 Highlights	**Alma Ata Declaration** 1. Launched the concept of Health for all by the year 2000 2. Provision of first contact services and basic medical care within the framework of an integrated health services
1980 Highlights	**Health For All by 2000 - Committee report** 1. Formulation of a comprehensive national health policy through an inter-sectoral approach (including environment, nutrition, education, socio-economic, preventive and curative dimensions) 2. Set health targets to be achieved by 2000 AD by substantially increasing existing health services and manpower
1983 Highlights	**National Health Policy** 1. Provision of universal, comprehensive primary health services 2. Shift of focus from the development of health systems and infrastructure for primary health care and ensuring health equity to vertical interventions based on technical justifications and cost-effectiveness analysis 3. To improve child survival, use of a selective approach of GOBI-FFF
2000 Highlights	**National Population Policy** Development of a one-stop integrated and coordinated service delivery at the village level for basic reproductive and child health services through a partnership of the government with voluntary and non- governmental organisations

2002 Highlights	**National Health Policy 2002** 1. Increase access to the decentralised public health system by establishing new infrastructure in deficient areas and upgrading the infrastructure of existing institutions 2. Set aside an increased sectoral share of allocation of the total health spending to primary health care 3. Goals: i. Eradicate polio and yaws by 2005 ii. Eliminate leprosy by 2005 iii. Eliminate Kala Azar by 2010 iv. Eliminate lymphatic filariasis by 2015 v. Achieve zero level growth of HIV/AIDS by 2007 vi. Reduce mortality by 50% on account of TB, Malaria, other vector and water-borne diseases by 2010 vii. Reduce prevalence of blindness to 0.5% by 2010 viii.Reduce IMR 30/1000 and MMR 100/lakh by 2010 ix. Increase utilisation of public health facilities from <20% to >75% by 2010 x. Establish an integrated system of surveillance, national health accounts and health statistics by 2005 xi. Increase health expenditure by Govt. as a % of GDP from existing 0.9% to 2% by 2010 xii. Increase share of central grants to constitute at least 25% of total health spending by 2010 xiii.Increase the state sector health spending from 5.5% to 7% of the budget by 2005 xiv. Further increase the state sector health spending to 8% of the budget by 2010
2005 Highlights	**National Rural Health Mission** 1. Key Components: i. Provision of a female health activist in each village ii. Formulation of a village health plan through a local team headed by the health and sanitation committee of the Panchayat iii. Strengthening of rural hospitals for effective curative care, making them measurable and accountable to the community through the IPHS iv. Integration of vertical health and family welfare programmes v. Strengthening of primary health care through the optimal utilisation of funds, infrastructure and available manpower 2. Key Approaches: i. Communitization emphasizing community involvement ii. Flexible financing for increased monetary autonomy iii. Capacity building to empower multiple stakeholders for efficient health delivery iv. Human resource management to generate more manpower v. Equipping health personnel with adequate multiple skills

3. Core Strategies:
   i. Train and enhance the capacity of Panchayati Raj institutions to own, control and manage public health services
   ii. Promote access to improved health care at household level through the village-level worker (Accredited Social Health Activist)
   iii. Health plan for each village through the village health committee of the Panchayat
   iv. Strengthening sub-centre through better human resource development, clear quality standards, better community standards, better community support and an untied funds to enable local planning and action and more Multipurpose workers
   v. Strengthening existing primary health centres through better staffing and human resource development policy, clear quality standards, better community support and an untied fund to enable the local management committee to achieve these standards
   vi. Provision of 30-50 bedded CHC per lakh population for improved curative care to a normative standard
   vii. Preparation and implementation of an inter-sector district health plan prepared by district health mission, including drinking water supply, sanitation, hygiene and nutrition
   viii. Integrating vertical health and family welfare programmes at national, state, district and block levels
   ix. Technical support to national, state and district health mission, for public health management
   x. Strengthening capacities for data collection, assessment and review for evidence base planning, monitoring and supervision
   xi. Formulation of transparent policies to deploy human resources to health
   xii. Developing capacities for preventive health care at all levels to promote healthy lifestyles, reduction in the consumption of tobacco and alcohol, etc.
   xiii. Promoting the non-profit sector particularly in under-served areas
4. Supplementary strategies:
   i. Regulation for private sector including the informal rural medical practitioners to ensure the availability of quality service to citizens at a reasonable cost
   ii. Promotion of public-private partnerships to achieve public health goals
   iii. Mainstream Indian system of medicine (AYUSH) to revitalize local health traditions
   iv. Reorient medical education to support rural health issues including regulation of medical care to medical ethics
   v. Effective and visible risk pooling and social health insurance to provide health security to the poor by ensuring accessible, affordable, accountable and good quality hospital care

ANNEXURE IV: PATIENT PERCEPTION OF QUALITY OF SERVICE DELIVERY OFFERED AT PHFs (PUBLIC HEALTH FACILITIES - SHCs, PHCs AND CHCs)

Have you come here for a medical problem before and not received treatment?	No, % of Total	Yes, % of total (If so, why? See columns to right - % of total who mention specific reason/s)	Staff absent	Centre shut	No medicines	No facilities	Long wait	Other-Corruption*
Andhra Pradesh (76)	67.10%	32%	22.40%	5.30%	11.80%	2.60%	10.50%	1.30%
Uttar Pradesh (114)	57%	43%	37.70%	5.30%	26.30%	1.80%	17.50%	6.10%
Bihar (136)	39%	61%	49.30%	0.70%	55.90%	1.50%	24.30%	8.80%
Rajasthan (57)	64.90%	35.10%	26.30%	1.80%	35.10%	0%	0%	3.50%

Are you satisfied with your visit today?	No, % of total (if so, why? See columns to right- % of total who mention specific reason/s for dissatis-faction)		Staff absent	Centre shut	No medicines	No facilities	Long wait	Other- Pay for Diagnostics / Post Natal
Andhra Pradesh (76)	25%		5.30%	0%	11.80%	1.30%	14.50%	2.60%
Uttar Pradesh (114)	50.90%		26.30%	0%	43%	3.50%	9.60%	0.90%
Bihar (136)	77.20%		24.30%	0%	74.30%	4.40%	35.30%	0.70%
Rajasthan (57)	61.40%		12.30%	0%	57.90%	7.00%	1.80%	1.80%

Are you satisfied with your visit today?	Yes, % of total (if so, why? See columns to right- % of total who mention specific reason/s for satis-faction)		Staff present	Centre timings good / 24 hours	Free medicines	Good facilities	No wait	Other-Delivery
Andhra Pradesh (76)	75%		23.70%	0%	71.10%	11.80%	3.90%	0%
Uttar Pradesh (114)	49.10%		14.90%	2.60%	18.40%	5.30%	0.90%	13.20%
Bihar (136)	22.80%		0%	0%	10.30%	0%	0.70%	13.20%
Rajasthan (57)	38.60%		12.30%	0%	5.30%	7.00%	10.50%	10.50%

** 'Other-Corruption' refers to reasons like staff calling patients around back of PHF to charge them for consultation and medicines.*
'Other-Pay for Diagnostics / Post Natal' refers to having to pay for diagnostics (AP) and demand for 'diet' i.e. food and longer time in centre post-delivery (UP, Bihar, Rajasthan).
'Other-Delivery' refers to good for institutional delivery.
Source: Gill K. A Primary Evaluation of Service Delivery under the National Rural Health Mission: Findings from a Study in Andhra Pradesh, Uttar Pradesh, Bihar and Rajasthan. Working Paper 1/2009. New Delhi: Planning Commission of India; 2009 May.

ANNEXURE V: VULNERABILITY INDEX CALCULATOR: A SAMPLE TOOL

Vulnerability Scoring of PHCs and CHCs							
Indicator		**Vulnerability - Zero**	**Minimal Vulnerability**	**Moderate Vulnerability**	**High Vulnerability**	**Extremely Vulnerable**	**Max Score**
1	Distance from Block Hqrs.	> 1	1 to 10 Km	10 to 20 Km	20 to 30 Km	> 30 Km	4
		0	1	2	3	4	
2	Distance - PHC/CHC to High Way/ MDR (Public Transport)	On Road	Upto 2 Km	2 to 5 Km	5 to 10 Km	>10 Km	3
		0	0	1	2	3	
3	Connectivity to FRU/ Hospital	All weather connectivity all 12 months	Connected but occasionally disconnected	Not connected < 3 months	Unconnected >3 to <6 months	Unconnected with Black Top Road	3
		0	0	1	2	3	
4	Availability of Transport	Bus Transport Available 2 or more / day	Public Buses Available 1/ day	No Buses, Other Public transport available	Can Access with private transport	No Accessibility by transport	3
		0	0	1	2	3	
5	Availability of Govt. Housing and Others	Very Good Condition	Good Condition	Average condition	Very poor condition	Not Available	3
		0	0	1	2	3	
6	Availability of Rented Housing and Others	Not required	Easily Available	Can be Located	Difficult to find	Not Available	3
		0	0	1	2	3	

7	SHCs of PHC Not Connected by Black top Road (%)	Zero	0 to 20	20 to 40	40 to 60	>60	4
		0	1	2	3	4	
8	SHCs Not Connected by all weather roads	Zero	0 to 20 (%)	20 to 40 (%)	40 to 60 (%)	>60 (%)	4
		0	1	2	3	4	
9	Average Population per villages	> 750	500 to 750	250 to 500	100 to 250	< 100	3
		0	0	1	2	3	
10	Farthest SHC served by PHC/CHC	< 2 Km	2-5 km	5-8 km	8-10 km	> 10 km	
		0	0	1	2	3	3
11	Left Wing Extremism						
	a. Law and Order assessment by Dist. Administration	No Risk	Less Risk	Moderate Risk	High Risk	Extremely Risky	4
		0	1	2	3	4	
	b. Perception of Medical Staff	No Risk	Less Risk	Moderate Risk	High Risk	Extremely Risky	3
		0	0	1	2	3	
12	Tribal Blocks	Plain Area	Agency (notified forest)	25% villages under LWE	26-50% villages under LWE	>75% villages under LWE	10
		0	2	4	6	10	
	Total						50

Source: HLEG Secretariat

ANNEXURE VI: ILLUSTRATIVE PPP OPTIONS IN INDIAN HEALTH CARE SERVICE DELIVERY

Primary health care level	
Management of block level hospitals. Example: In Odisha, PHCs have been successfully contracted out.	• Government could handover management of primary health care centres (30 bedded block level hospitals and primary health care centres providing out-patient and day care services) to private/NGO partners under lease agreements (with or without government staff). • Government could provide financial assistance (partial) for up gradation /equipping through channeling grant assistance from multiple donors and negotiate fee agreements with private partners for various services provided to the poor by the health care services provided by the centre to a declared list of poor residents in the catchment area of the health centre.
Diagnostic Centres Examples: The government of Uttar Pradesh is using a private partner to provide round-the-clock laboratory tests at a government hospital	• Government could partner with private players to set up and operate a network of diagnostic centres in a state (hub and spoke model) covering their hospital with appropriate range of diagnostic services on a fee for service basis and profit sharing agreements. • Poor can be protected by government agreeing to pay on their behalf. • Space can be given to the diagnostic services within the hospitals or these centres can be set -up in the hospital campus or adjoining areas. These agreements would need to be for an appropriate length of time (10-30 years) with suitable exit clauses.
Partner with government to provide emergency transportation and trauma care service networks Example: EMRI 108 services are functional in state like Gujarat, Rajasthan, MP	• Private players could partner with government to provide emergency transportation and trauma care service networks in States including 24-hour toll free helpline and ambulance and trauma care mobile team attached with emergency wards in private and public hospitals. • The partnership can extend to management of emergency wards in public hospitals to provide seamless trauma response and care services. • Government could provide start-up financial assistance through funding of infrastructure with private sector partner having the responsibility to maintain and upgrade the infrastructure through user fees agreed with government and possibly having a variable fee structure to cover the poor. • Government in this case too could pay for the services on behalf of the poor to keep the service financially healthy.

Operate a network of fair price pharmacies	• Private pharmaceutical manufacturers/distributors could partner with government to set-up and operate a network of fair price pharmacies for generic drugs (essential drugs lists) operated from within/outside the public hospital facilities. • Prices of drugs and supplies to be agreed by both partners and the agreements run on profit sharing basis. • Government could invest in the infrastructure such as warehouse and space for the pharmacies and hand them over to private partners to manage, maintain and operate under lease agreements.
Market contraceptives and maternal and child drugs and supplies Example: As a pilot project in 98-99, HLFPPT was selected to undertake contraceptive social marketing	• Private distribution and rural marketing companies could partner with the government to related market contraceptives and maternal and child drugs and supplies at agreed prices. • Government could part fund the promotion/distribution related costs with the rest including profits recovered through sales.
Secondary and tertiary levels	
Outsource specialized procedures and services	• Private sector partners/hospitals under agreement specifying service package, quality standards and costs (Diagnosis Related Groups - DRG Models of Australia and Germany) • Support services such as diagnostic services could be outsourced to specialized providers meeting quality standards. • Government could partner with private hospitals to provide medical services patients and reserve/ guarantee a certain number of patients/beds per day /month under fixed/variable price agreements.
Upgrade public-private partnerships	• PPPs to upgrade/establish and operate specialised treatment services/ wards and facilities (including diagnostic services) within public hospitals on profit sharing basis. • The services fees to be negotiated annually and a variable fee structure could apply to cover the poor. • Service packages to be agreed with specifications of quality standards and related fees. • PPPs on profit sharing basis

Government support to private sector	• Government could financially support private sector partners to set -up hospitals (UK Model) and participate in the management board of the hospital to protect the interest of the poor. The private partner may have lease rights for a certain period of time (30 years to perpetual depending on the level of financial participation and investment by both partners.
Investment	• Government could invest in land and building of a new hospital and private partners could bring in the equipment and be given the exclusive management role with government participating in the governing board. • The partnership can be in the form of a joint venture or a management consortium with voting rights of both partners protected. • Government could participate in fixing fees for various medical services provided to the poor and could even pay the joint venture a fixed price per poor patient treated in such hospitals.
Hospital management	• Government could hand over the management of an existing public hospital (with or without government staff) to a well-established private partner under a partnership agreement with the responsibility of investing in the hospital for its-up gradation/expansion and management. • Government could be an active partner in the governing board with day-to-day executive function in the hands of the private partner. Interest of poor could be protected through fees fixation and government picking up the bill on behalf of the poor.

Source: Bhandari D .Public Private Partnership in Health Care- Policy framework and emerging trends in India. Indian Society of Health Administrators 2008;07(21):26-31.

ANNEXURE VII: CRITERIA FOR HEALTH VULNERABILITY ASSESSMENT IN SLUMS

	Extremely vulnerable slums	Moderately vulnerable slums	Less vulnerable slums
SLUM STATUS	Unauthorized settlement i.e. slums not recognized (situated along roadside, on private land)	Land belongs to local authorities and possibility of sanction/leased land	Own land or authorized quarters or a registered slum
HOUSING	House is Kuchcha (made with mud, thatch, or other low quality materials) with weak structure; high density in the area; no separate place for cooking; minimal ventilation	Semi-pucca (made with partly low quality and partly high quality material); relatively better than the earlier category	Permanent structure, ventilation present; separate space/veranda for cooking
BASIC SERVICES			
Toilet	No toilets and defecation in the open by adults and children	Bathing in the open, use of common toilets for defecation; children's use of toilets is low	Majority have bathing and toilet facilities within their homes
Water	No water supply in the slum. People travel far for water	Number of public water taps disproportionate to the need in the slum and irregular water supply	Many public taps with supply of water at regular intervals
Drainage	No drains, or drains are clogged, un-cemented roads	Open drains, narrow but cemented lanes	Majority of the slum areas have underground drains and paved roads (cemented)
Electricity	No electricity or tapped illegally	Pay to the landlord for point wise or otherwise	Metered individual electricity connections
EMPLOYMENT PATTERN			
Pattern	Amount below INR1,000 per family per month; daily wage earner with irregular pattern	INR1,000-2,000 earning per household; daily wage but regular self Employment	>INR 2,000 earning per house- hold; majority service class
Occupation hazard	Majority are in hazardous work, such as ragpicking, sex work, garbage recycling	Vendors, semi, and unskilled laborers engaged in odd jobs	Private or government job holders, petty traders, shopkeepers, etc.

CREDIT			
Loaning/ savings	Loans from unorganized sector through mortgage or with rates of interest higher than 10%; no savings	Loans from landlords or money lenders at lower rates of interest. Irregular savings	Loans from organized community group/ institutions; saving regularly at bank, self-help groups
STATUS OF HEALTH AND HEALTH SERVICES			
Morbidity	High incidence of illnesses, malnutrition, and mortality among children	Better conditions than previous category	Lesser morbidity and mortality among children
Services	Extremely low immunization among children; home deliveries by untrained dais	Irregular immunization; majority of deliveries are institutional	Complete immunization; all deliveries are institutional
Health facility	No public health facility within 2-3 km; visit faith healers, store keepers, and quacks for treatment	Visit quacks and qualified doctors; government facility used only for prolonged illnesses	Visit qualified doctors for all ailments; dispensary or government facility nearby
DEVELOPMENTAL SUPPORT			
Government NGO/CBO	No government or non-government programmes; limited community- based efforts	ICDS and other programmes present but function irregularly; NGO/CBO activities sporadic	Relatively better supported by government and NGO efforts
EDUCATION			
Children and adults	Majority of children work and are not enrolled in schools; illiteracy among Adult	Children enrolled in schools but dropout rates are high; adults have functional literacy	All children are enrolled in school, absence of child labour; all adults have primary education
GENDER STATUS	Low gender status (seen in high incidence of domestic violence, limited choices over fertility)	Seen as improvement over the extremely vulnerable category	Equitable gender status (seen in improvement over earlier category)
IDENTITY PROOF	Majority do not have any documents (ration cards, voter ID, caste certificate	Some have ration cards voter ID, caste certificate	Majority have requisite papers

Source: Agarwal S, SatyavadaA, PatraP, Kumar R. Strengthening functional community_provider linkages: Lessons from the Indore urban health programme. Global Public Health. July 2008;3(3):308-25.

Annexure VIII HEALTH SERVICE ENTITLEMENTS

HEALTH SERVICE ENTITLEMENTS: ILLUSTRATIVE LIST PROPOSED AS PART OF UNIVERSAL HEALTH COVERAGE					
Inst.	**Village (+ outreach)**	**Sub centre**	**PHC**	**CHC**	**SDH/DH and other higher-level institutions**
Package	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5 and above**
Reproductive Health and Sexual Health	• Antenatal care (home visits, screening, health education and counseling) X 3 • IFA, calcium, multi-micronutrient • Height, Weight and Blood Pressure • Nutritional supplement to mother/ counseling • Delivery assistance (attend, assist, accompany) • Post natal home visits + Home-Based New Born Care + postpartum health • Common sexual/ urinogenital problems, common reproductive and obstetric health issues	• Urine test, Blood test • Intrauterine growth of foetus • Abdominal/ Per vaginal examination • Breast examination • Identify high risk pregnancy • Identify danger signs and timely referral • HIV testing	• Normal delivery, Post-delivery care • Abortion first trimester, and post-abortion care • Controlled cord traction, manual removal of placenta, identification and treatment of RTI/ STI • General OBS/GYN complications • Bi manual compression of uterus • Syphilis testing, HIV treatment • Active management of third stage of labour • Treatment of Syphilis (women and partner) • Treatment of hypertension in pregnancy	• Management of ectopic pregnancy • Parenteral administration of anticonvulsants • Delivery with malpresentation, Puerperal Sepsis, Severe Anemia • APH, PPH, Eclampsia, Obstructed labour, Caesarean sections • Abortion (septic), Uterine evacuation for management of incomplete abortion • Essential/ Emergency Obstetric Care with blood transfusion services • Uterine evacuation for pregnancy beyond first trimester	• Treatment for PID, Bleeding if unknown origin • Hysterectomy • Management of prolapsed cord, Uterine prolapses, Infertility • Management of Obstetric Fistula • Management of Abortion related complications • Management of Shock • Infertility/complicated pregnancy with pre-existing conditions • Counseling after sexual abuse and/or rape
Child and Adolescent Health	• Home Based Newborn Care, Early and Exclusive Breastfeeding • Immunization Growth monitoring • Sick child (counseling, management and referral) • Home visit for children aged 0-2 years for counselling on breastfeeding, complimentary feeding, seeking early care • 5-14 year olds: counselling on handwashing, tobacco, deworming, dental hygiene • Menstrual hygiene, health education and other common sexual health issues in adolescents	• Post natal care, Immunization • Acute Respiratory Infection (ARI), Diarrhoea Management • Dysentery, Malnutrition Management • Deworming • HIV testing and prevention for parent to child transmission • Identification and referral for congenital malformations to referral centres • Anaemia prevention • Screening for mental disorders and counseling • IMNCI/ HBNC • Managing Hypothermia (KMC) and referral	• Newborn Resuscitation, managing infections • Nutritional Rehabilitation Centers	• Childhood diseases/ health conditions • Birth Asphyxia, Neonatal Sepsis, Low Birth Weight (LBW) • Artificial feeding for LBW/ preterm babies • ARI: Severe Pneumonia, IV rehydration treatment for diarrhoea • Treatment with antibiotics and Oxygen support, Sick New Born Care Unit (L1) • Management of newborns/ children with danger signs (IMNCI/ HBNC referrals) • Management of measles/ referral of complicated cases after proper pre-referral treatment, Management of neonatal jaundice • Managing Hypothermia using warmers	• Child Health, very low birth weight • Management of severe cases using ventilators/ incubator • Management of Neonatal tetanus • Treatment of meningitis/ case management of severely ill children • Surgery for congenital malformations
Family Planning	• Information, Education and Communication (IEC) • Condoms, Oral contraceptives • Counseling services	• Emergency Contraceptives	• Female Sterilization • Vasectomy • IUD insertion and removal	• Family Planning package including services from Level 1 to 3 • Management of complications and appropriate level referral	• Recanalization • Surgical Interventions for associated complications
Disease Control Programs	• Health Education • Sanitation • Chlorination of water • Malaria prevention and treatment • Filaria	• Directly Observed Treatment, Short course (DOTS) • MDT for Leprosy • Treatment of filariasis • Referral services	**Blindness** • Blindness due to refractive error and low vision **Leprosy** • Paucibacillary, Multibacillary **Tuberculosis** • New Sputum Positive, New Sputum Negative • Default/ Failure/ Retreatment, Extrapulmonary, DOTS **Vector Borne Diseases** • Malaria, Dengue, Filaria, Kala Azar RDK • Distribution of mosquito nets, Gumbushi fish	**Blindness** • Cataract surgery **Tuberculosis (TB)** • DOTS Plus in MDR TB • Inpatient management • X-ray for smear negative • Algorithms of treatment for AFB (-) • Preventive therapy for children in contact with TB patients **Vector Borne Diseases** • Malaria: complicated • Management of pregnant women with malaria	• Toxic Shock and severe drug reactions, complications from communicable diseases and complications from super-infections.
General and Oral health	• Health Education, Self reporting/ Case detection • Follow up of chronic cases, IEC • Home visits/ counseling • Preventive and Promotive activities • Sanitation and Hygiene • Treatment of common minor illnesses • Referral/assistance in seeking care • Oral health counselling, IEC/BCC	• School health • Fever and other common ailments • Treatment of Urinary Tract Infections (UTI) • Treatment using oral antibiotics, Antihelmintic drugs • Snake bite, dog bite, skin disorders • Screening for priority preventable diseases • Deworming, Oral Health screening & preventive	• AYUSH • Referral services • Infection prevention • Management of local endemic diseases/ surveillance/ reporting • Minor injuries • Disability support • Minor Oral Health procedures • Fractures, wounds, minor procedures	• Imaging services, Blood Transfusion services • Chronic otitis media, Occupational therapy • Speech therapy, Orthopedics: diagnosis • Physiotherapy, Accidents/ major injuries, trauma • Disability treatments, Minor oral health surgeries • General surgeries, Laparoscopic surgery • Geriatric care	• Production of Orthotics, fitting and training • Skull and facial surgeries Specialized Services • Major injuries and emergencies (50%) • Essential plastic surgery disability management • Major Oral Health surgeries • Specialist surgeries • Chronic pain management
Diabetes	• Health Education • Diabetes check (screening and monitoring)	• Therapy for Diabetes Mellitus (without insulin)	• Therapy for Diabetes Mellitus (with insulin)	• Treatment of uncontrolled diabetes and complications	• Treatment of uncontrolled diabetes and complications requiring specialist care
Mental Health	• Health Education • Mental Health counseling • Screening and referral • Exercise and Yoga • Alcohol, substance abuse issues • Gender Based Violence and its impact on health	• Mental Health counseling • Detection of common mental disorders, geriatric problems including dementia • Post violence, physical abuse, trauma care • Drug distribution and follow up	• Common Mental Disorders, mood/ bipolar disorders • Child and Adolescent psychiatric disorders	• Schizophrenia • Mental disorders not requiring hospitalization	• Mental disorders requiring hospitalization
CVD	• Health Education • Weight, Blood Pressure • Tobacco Prevention	• Hypertension treatment (with diet and exercise; with one drug) • Evaluation of chest-pain	• Treatment of Congestive Heart Failure • Hypertension treatment (with two drugs) • Early treatment of Myocardial Infarction	• Non-invasive management of Myocardial Infarction • Medical management of Rheumatic Heart Disease	• Intensive care • Invasive management of Myocardial Infarction • Cardiac Surgery • Interventional Cardiology
Chest /Respiratory	• Health Education	• Acute Respiratory Tract Infections and Pneumonias	• Chronic Obstructive Pulmonary Disease, Asthma	• Respiratory conditions requiring hospitalization	• Respiratory conditions requiring intensive care
Cancer	• Health Education • Tobacco Prevention	• Screening and referral • Monitoring symptoms	• Cancer detection (lab samples), Breast and cervix examination	• Chemotherapy, Cancer detection (specialized)	• Cancer surgery, Radiation therapy • Palliative care
Neurology	• Health Education and counseling	• Early detection and referral • Health Education and counseling	• Early detection and referral • Epilepsy • Early treatment of stroke • Post-stroke rehabilitation	**Clinical Services** • Neurology (medicines, diagnostics) • Non-invasive treatment of stroke	• Neurosurgery • Epilepsy (with hospitalization) • Stroke Units

High Level Expert Group Report on Universal Health Coverage for India

SECTION III

Chapter 5

Management and Institutional Reforms

1. Background

The New Public Management (NPA) of the 1980s and 1990s sought to redefine the role of the government, from direct service provision alone to include stewardship, oversight and regulation. While NPA's successes and weaknesses are now better understood in the light of experience, it played a useful role in highlighting the importance of effective management of both public and private systems. Managing well is now seen as crucial to successful coordination of multiple resources, diverse people, and complex processes, as well as negotiating with stakeholders to achieve desired policy and program objectives and outcomes.

Assessments of health systems in both high- and lower-income contexts regularly cite poor coordination of resources and dysfunctional management structures and processes as serious constraints. In turn, better management capacity is seen to contribute significantly to effective implementation and achievement of desired goals and results.[1] In India, improved management and better regulation overall would go a considerable way towards meeting the need for synergy and convergence of efforts from both the public and private sectors to ensure Universal Health Coverage (UHC).

While the public health sector needs to be strengthened to assume multiple roles of promoter, provider, contractor, regulator and steward, the role of the private sector also needs to be clearly defined and regulated. At the peripheral level, systemic reforms must ensure effective functioning in the villages and urban local areas. Good referral systems, better transportation, improved management of human resources, supply chains and data, along with upgraded facilities are essential at the higher levels, especially for secondary care.

2. Limitations in Management of Health Care Delivery

a) Inadequate Focus on Public Health - Both Preventive and Promotive

Health provision includes a mix of different kinds of economic goods that entail differing incentive structures and behaviour on the part of both providers and clients.[2] These are:

i. public goods that are non- rivalrous and non-exclusionary, that is, preventive services
ii. merit goods that have both private and public benefits, like immunization
iii. private goods including curative services

Public health - preventive and promotive services - falls largely within the ambit of public and merit goods. But, as compared to curative services, public health has not been accorded sufficient importance by policies and programs in India. In part, this could be because private and merit goods are easier to measure and therefore easier to manage. While this is also true for some public goods such as immunization, TB control and vector control, broader public health functions such as policy-making, health surveillance and health awareness are more complex and difficult to measure.[2]

Public funding for health services in India has largely gone to medical services, with policies and strategies giving priority to curative services.[3] Public health services have been neglected, or limited to narrowly defined, single-focus programs. Fiscal

incentives for states to implement such single-focus, centrally sponsored programs may actually have led to the erosion of public health systems more broadly.

The amalgamation of medical and public health services has in many instances decreased career incentives for public health work.[4] There has been no real focus on developing public health leadership and encouraging sub-national levels to train and promote human resources in the area of public health. "Weaknesses lie, inter alia, in workforce planning: projecting future workforce needs and developing strategies for meeting these needs."[5] In addition, separation of public health engineering from health services and amalgamation of all male grassroots staff have resulted in the elimination of environmental health services.[4]

In the private sector, which is the main player in service provision, incentives are tilted towards curative services and medical education.[3] This sector has few incentives to provide public goods and its interests result in under provision of merit goods.[2]

This focus on provision of curative care, with less or at times negligible emphasis on preventive and promotive care, not only results in poor health outcomes but can also dampen prospects for economic development.[4] The mix of health functions-including preventive, promotive, curative, and rehabilitative services - warrants much more attention and rigorous management processes to avoid over-emphasis of curative care at the expense of preventive and promotive services.

b) Lack of Public Health Regulation (including Standard Guidelines) and their Enforcement

Regulatory and legal frameworks are essential building blocks for strengthening the health system and gearing it towards universal healthcare delivery. Such frameworks deliver by putting in place mechanisms that "reduce exposure to disease through enforcement of sanitary codes, ensure the timely follow up of health hazards, and monitor the quality of medical services and products (including drugs)."[3,5] The government needs to put in place a set of "laws, administrative rules, and guidelines issued by delegated professional institutes" that are binding on the organisations and individuals that are part of the health system.[3]

The experience of Ministry of Health and Family Welfare (MoHFW) in implementing and monitoring legislation and enforcing regulations has raised some concerns.[5] The Ministry lacks a focal point for public health services, and the lack of a Public Health Act has led to the neglect and erosion of such services.[4]

The Clinical Establishment Act, the National Accreditation Board for Hospitals and Healthcare Providers (NABH) and the Indian Public Health Standards (IPHS)—under National Rural Health Mission—are attempts to define standards for healthcare facilities. However, these compartmentalized initiatives may have led to further fragmentation of an already segmented industry. The problem lies in not having a single, unified system to establish standards (for structures, processes about quality, rationality and costs of care, treatment protocols and ethical behaviour) applicable to both the public and the private sector; and to monitor the functioning of health facilities and compliance with established standards. Such a system is essential for ensuring accountability of these institutions and organisations.

In addition to the inadequacy of the overall regulatory and legal framework, it has been argued that, with regard to the "private health providers and insurers, the Indian government has adopted a laissez-faire policy. The rapid growth of the private sectors-which has occurred in the absence of any kind of public regulation, mandatory registration, regular service evaluations, quality control, or even self-regulation-has raised many concerns, most of which focus on quality of care."[3,6,7] Ad hoc and piecemeal engagement of private providers by the public sector through widely varying Public Private Partnerships (PPPs) has raised serious concerns about the quality of the services provided, and the ability of the public sector to design and manage PPPs effectively.

c) Poor Use of Data and Poor Monitoring and Evaluation (including Performance Monitoring)

Monitoring and Evaluation (M & E) has been an area of weak performance by the government as accountability has essentially been understood as a matter of enforcing bureaucratic controls.[2,8] The government does collect health profiles of various states, but does not effectively use this information for decision-making. Information quality is not adequately evaluated and there are seldom any audits of information systems. There is poor adherence to data collection protocols which are then rarely reviewed. The inputs and suggestions of the public system's own evaluation unit are not heeded, indicating the superficial nature of this unit and its authorities.[5] In addition, the epidemiological surveillance system is not designed to incorporate the findings and views of external researchers or community level organisations and experts, who often have valuable information and may not have vested interests in the findings. There is a neglect of inputs from the private sector and NGOs even though private providers provide the bulk of ambulatory services in India.[5] Evaluation of health services is done with little emphasis on assessing equity in health provision. There is widespread indifference when it comes to using evaluation records for promoting equitable access or improving outreach activities.[5]

Data collection, compilation and analysis need to be structured in a manner that can enable real-time monitoring, process corrections, evaluation, surveillance and monitoring with clear-cut guidelines on what is to be collected, when and how it is to be collected and who collects, analyses and uses it.

d) Inadequate Attention to Quality of Health Care Services

In India, the quality of health care services provided by both public and private sectors remains largely an unaddressed issue, despite widespread critiques by health researchers and NGOs, and some pilot work done by UNFPA in a few states, and a more recent attempt by the NHSRC to develop and promote systematic guidelines and manuals. Current policies and processes for health care are inadequate to ensure health care services of acceptable quality and to prevent negligence or malpractice. "India lacks national or regional structures charged with conducting routine quality assessments."[3]

Systematic health-care quality assessments and controls are desperately needed to overcome major hurdles such as the "under use of key public health services and supply- induced over-utilization of new technologies."[3] A national-level accreditation body needs to be established that can assess facilities based on standard guidelines and protocols for provision of quality care and management of their own resources (human, infrastructure and logistics).

e) Poor Personnel Management

Human Resource Management (HRM) is another neglected area. The "effectiveness of recruitment and retention policies" is seldom evaluated by the MoHFW.[5] Also, there is a near absence of an effective performance management system in the government, with almost no real processes for identifying and harnessing leadership potential. Support for addressing HRM issues at the sub-national level is even weaker.[5] Better defined human resource policies for assessing workforce needs and support for their development are clearly needed. Systematic appraisal of existing human resources, based on the growing needs and demand of the population, is also critical for future planning.[9]

Lack of managerial autonomy is a significant human resource issue affecting performance but conflicting views exist. A study from India reported the opinion of district managers who said more autonomy will help them do their job better, while their superiors felt that they had given enough powers to their managers.[10]Managerial autonomy, especially in personnel matters, favours development of a positive organisational climate and improves performance.[2,11] Equally important is the fact that performance

management systems in India have traditionally focused on inputs rather than concentrating on results and outcomes. In an internal study of the performance management systems implemented by the Indian government, the Second Administrative Reforms Commission says the following on the conventional performance management system in government:

"Traditionally governance structures in India are characterized by rule-based approaches. The focus of the civil services in India is on process-regulation. With such focus on processes, systems in government are oriented towards input usage - how much resources, staff and facilities are deployed in a scheme, program or project and whether such deployment is in accordance with rules and regulations. The main performance measure thus is the amount of money spent; and the success of the schemes, programs and projects is therefore generally evaluated in terms of the inputs consumed."[12, 13]

f) Weak Management of Logistics and Supply Chains

Effective management of logistics and supply chains is an important ingredient of an effective health system. The existing policies and operational procedures for procurement, supply and utilization of drugs, as well the various medical products and devices are far from streamlined. Details of the various issues are dealt with in the chapter on Access to Medicines, Vaccines, and Technology.

g) Overly Centralised Financial Management

Although a process of growing modernization and computerization of financial management is under way, major challenges remain. Among these, an important one is in the handling of centrally sponsored schemes in which the central government designs the scheme and provides funds (conditional or unconditional) to the states. The central government usually covers a substantial part of the costs initially and the states put in their funds later. Even though these schemes are not binding on the states, "the fiscal leverage of the large initial central contribution makes them attractive."[4] Nevertheless, states often do not respond adequately, and the challenges this poses are not minor ones.

h) Poor Accountability to Patients and Communities

Communities and users of health services can report on their experiences with various health services by voicing their opinions and providing public feedback. However, no amount of choice, control or input from the community is useful unless users have reliable and accurate information on the services they are supposed to be monitoring. For example, the Indian government publishes a service charter that promises a set of minimum standards from government service delivery agencies. But no information is provided on what needs to be done if the standards are not being met, thereby giving no real incentive to service providers to perform.[2,14] The existing information-asymmetry problem in health needs to be overcome by putting much more information about services and service providers out in the public domain. The key purpose of disseminating information is to bring about general awareness of expected standards of service delivery and provider performance.

Partnerships between government and NGOs and researchers are critical to the successful evaluation of services at clinical and community level. Often, there is lack of converging evaluation efforts between governmental and non-governmental entities in assessing access and barriers related issues in health services. The health sector is only now waking up to the concept of community co-management of public services, whereas the education sector has long been benefited from such arrangements.[5]

Raising public awareness and building social participation is critical for the success of a public health system. Amongst other things, it builds constituencies and public support for policies and programs, generates compliance with regulations, and helps alter personal health behaviour.[5]

3. Management Reforms in the Indian Health Sector - Experiences to Date

Since the start of the economic reforms in the 1990s, there have been various initiatives to reform and support the development of the health sector, both at the centre and in different states. Many of these health-sector reforms at the state level have been influenced by donor agencies.[15] They generally include diverse initiatives to improve the management of the public health system and to support the development of public-private partnerships (PPPs). Efforts to improve management and regulation of the private sector-informal, private or corporate - have been generally much weaker and poorly funded, if at all. The challenges posed to Universal Health Coverage by a largely unregulated private sector, large and small, have been consistently raised by civil society. However, they have received less attention from funding agencies.

The advent of the National Rural Health Mission (NRHM) in 2006 led to a number of experiments in different states aimed at decentralising financial management and raising the autonomy of health providers at sub-state and sub-district levels. Increased availability of untied funds and attempts to engage local communities through various modes of social participation have ranged from the setting up of Rogi Kalyan Samitis in hospitals to attempts at strengthening village level health planning through Village Health and Sanitation Committees, as well as increasing the role of elected panchayats in supporting health care provision.

Hospital Development Committees (or societies) have been formed in some states with representation from the local community, and these have been given powers and responsibilities to monitor the functioning of health institutions. These committees have functional autonomy and have been entrusted with rights and responsibilities with the intent to improve the functioning of public hospitals through better management and service delivery to patients. While these attempts have had mixed success, they have generated a data base of experience on the basis of which reforms can evolve further. It must be noted that many of these reforms have tended to be more effective for curative services and are a less appropriate platform for public health and preventive and promotive services.

One area where there is promise of significant systemic improvement is in the procurement of drugs and medical supplies. The well-documented success of the Tamil Nadu Medical Services Corporation Ltd (TNMSC), which pioneered a system of centralized procurement and supply, is now being emulated in a significant number of states.[16] TNMSC's information technology- enriched procurement and distribution system has beenshown not only to improve the matching of demand and supply for drugs and medical supplies, but also to check leakages and corruption. The end result has been increased availability of drugs to patients in the public system. In addition, centralized procurement of generics significantly reduces the cost of drugs that have been a major contributor to cost escalation in health care, particularly in the last three decades.

Another area of attempted management reforms has been in relation to the health work-force. Workforce management policies that are intended to improve health service providers' morale and professional satisfaction have been tried in some states. The attempted measures have ranged from educational to regulatory ones.[16]Some relate to retention of the workforce or to high priority or underserved areas through the provision of both monetary and non-monetary incentives and more rational transfer policies.

However, policy measures to improve the working and living conditions of health workers and to rationalize the deployment of personnel have not been a strong part of reforms. Again, the positive Tamil Nadu experience of creating a separate public health cadre leading to improved public health functions, has not (unlike the case of drugs logistics) been followed by other states. Under NRHM, some attempts have been

made to hire consultants to fulfill basic administrative needs, such as accounting and information technology (IT), and to reduce the burden of these tasks on medical officers in the PHCs and CHCs. While the presence of these contract employees is generally appreciated by medical officers, they do not yet provide the significant and integrated approach to management that is needed by both public health and health services.

An ongoing, frequently voiced concern of senior health managers is the concern not to create new cadres of permanent health workers who may become difficult to discipline and may have low productivity.[16]Consequently, the NRHM has tended to make new appointments on contractual terms, usually of one to three years duration.

However, excessive reliance on 'hire and fire' threats to ensure workforce performance belongs to an earlier generation of approaches to worker management. In more recent times, improved systems of performance management and review are starting to be implemented that involve workers in management and focus on quality improvement and incentivisation at both individual and group levels. A change in mindset towards more modern and creative approaches to worker management is clearly needed.

A fourth set of changes relates to drawing the private sector into health provision for the public system. A variety of PPPs have been tried in the last two decades in order to implement improved management methods into the public system by devolving public services to private contractors. While the contracting-out of ancillary services such as laundry, cleaning, food provision, and diagnostic testing have been going on for quite some time, the recent thrust has been to engage the not-for-profit sector as well as profit-making contractors to provide other specific services. Private providers have been drawn in to provide health services, as in the Chiranjeevi scheme in Gujarat and NGOs and charitable trusts have taken up the responsibility of managing and upgrading the infrastructure of some of the public health facilities in seven states (Arunachal Pradesh, Assam, Bihar, Meghalaya, Madhya Pradesh, Orissa and West Bengal). The effectiveness of many of these partnerships has not been evaluated and their general replicability to address the issue of providing good quality services in hard to reach areas has not yet been proven.[17]

The lessons from many of these partnerships include the need for government health-sector managers to have the capacity to manage private contracts and the ability to effectively define and enforce the obligations of the private sector and NGO providers as well as the government functionary.[18]

A review of various reports by the MoHFW and other stakeholders working in the health arena provides a reasonable understanding of the implementation of the different reforms cited above. However, there is still a paucity of evaluative evidence to present a strong case on the effectiveness of many of these reforms. An in-depth understanding of the mechanism of implementation of these reforms can serve as the scaffolding on which to build the future framework of management reforms in health for India. In the meanwhile, we have drawn from the existing evidence as well as the experiential knowledge of health managers to make the following recommendations.

4. Recommendations for Management/Regulatory Reform

Key Assumptions

The management / regulatory reforms recommended here are premised on the overall assumption that Universal Health Coverage (UHC) will be implemented through a tax-based system, with both public and contracted-in private providers who will be integrated into the system. It will be cashless at the point of service. All patients will get the same services in the UHC system, with smart entitlement cards to facilitate both patient and service monitoring. In integrating both public and contracted-in private providers within a single system, it is necessary to move beyond ad hoc PPPs towards a better-regulated and managed

system through new institutions and systematic capacity building in both sectors to design and manage contracts.

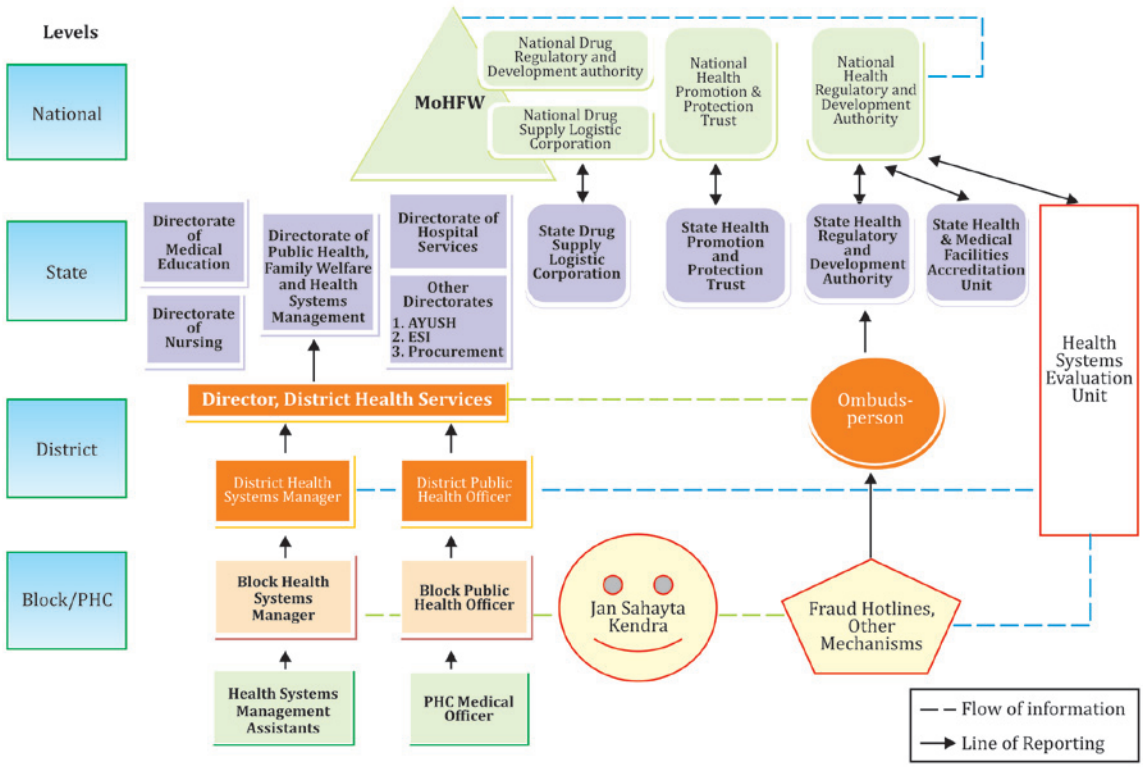
Management and regulatory improvements will therefore be required at the overall system level. In addition, reforms are also being recommended to improve the functioning of both public sector and private health institutions, as well as to smoothly integrate contracted-in private health institutions into the new UHC system. While all the recommendations below apply to the public sector institutions, some do not apply to either the contracted-in private providers or to the non-UHC private providers. A summary of the scope of the recommendations is given in the following table.

The following diagram gives a snapshot view of the recommended organisational framework and the placement of the National Health Regulatory and Development Authority, HSEU along with other bodies described in later recommendations.

TABLE 1. SUMMARY OF THE SCOPE OF THE MANAGEMENT/REGULATION RECOMMENDATIONS

		Public Sector	UHC Private Sector	Non-UHC Private Sector
1.	National Health Regulatory and Development Authority (NHRDA)	√	√	√
a)	System Support Unit (SSU)	√	√	√
b)	National Health and Medical Facilities Accreditation Unit (NHMFAU)	√	√	√
c)	Health System Evaluation Unit (HSEU)	√	√	√
2.	National Health Promotion and Protection Trust (NHPPT)	√	√	√
3.	Health System portal	√	√	√
4.	Drugs and Medical devices Regulatory and Development Authorities	√	√	√
5.	Accountability to patients / community	√	√	√
6.	Health Systems Management and Public Health cadres	√	No	No
7.	Performance Management	√	No	No
8.	Drugs Supply Logistics Corporations	√	Can opt in	No

FIGURE 1. PROPOSED ORGANISATIONAL FRAMEWORK



Recommendation 1: Establish a National Health Regulatory and Development Authority (NHRDA) statutorily empowered to regulate and monitor / audit both the public and the private sectors, and ensure enforcement and redressal.

The NHRDA will be linked to the Ministry of Health and Family Welfare (independent, similar to the Office of Governor, RBI vis a vis the Ministry of Finance) and will have strong statutory powers to regulate, monitor/ audit and ensure enforcement and redress for all providers. This authority will be supported at the state level by State Health Regulatory and Development Authorities (SHRDAs) with corresponding powers. The entry of states into the UHC system will be predicated on their setting up SHRDAs with powers determined uniformly across all states.

This regulatory and development body will be responsible, inter alia, for:

i. overseeing and enforcing contracts for public and private providers in the UHC system accreditation of all health providers

ii. formulation of Legal and Regulatory norms for facilities, staff, scope, access, quality and rationality of services, and costs of care with clear norms for payment

iii. standard treatment guidelines and management protocols for the for the National Health Package so as to control entry, quality, quantity, and price

iv. development and enforcement of patients' charter of rights including ethical standards and institutions of a grievance redressal mechanism

v. evolving and ensuring adherence to standard protocols for treatment with involvement of professional organisations

vi. establishing and ensuring a system of regular audit of prescriptions and inpatient records, death auditand other peer review processes

The following three Units are envisioned under the

NHRDA:

i. **The System Support Unit (SSU):** This Unit should be made responsible for developing standard treatment guidelines, management protocols, and quality assurance methods for the UHC system. It should also be responsible for developing the legal, financial and regulatory norms as well as the Management Information System (MIS) for the UHC system.

ii. **The National Health and Medical Facilities Accreditation Unit (NHMFAU):** This Unit should be responsible for the mandatory accreditation of all allopathic and AYUSH health care providers in both public and private sectors as well as for all health and medical facilities. This accreditation facility housed within the NHRDA will define standards for health care facilities and help them adopt and use management technologies. A key function of this Unit will be to ensure meaningful use of allocated resources and special focus should be given to information technology resources. There should be corresponding state-level data consortium and accreditation agencies (State Facilities Accreditation Unit) under the National FAU to oversee the operations and administrative protocols of health care facilities.

iii. **The Health System Evaluation Unit (HSEU):** This monitoring and evaluation unit should be responsible for independently evaluating the performance of both public and private health services at all levels – after establishing systems to get real time data for performance monitoring of inputs, outputs and outcomes.

The diagram below illustrates the division of functions and responsibilities of the three Units under the NHRDA.

The offices of ombudspersons at multiple levels, supported by an investigative staff and with statutory (including suo motu) powers, will constitute the outreach arm of these regulatory bodies. Fraud hotlines and other mechanisms will be set up to enable the community to reach out to these offices. Community participation mechanisms, such as Jan Sahayata Kendras, that will link citizens/users with these structures, are contained in the recommendations of the Chapter on Community Participation and Citizen Engagement.

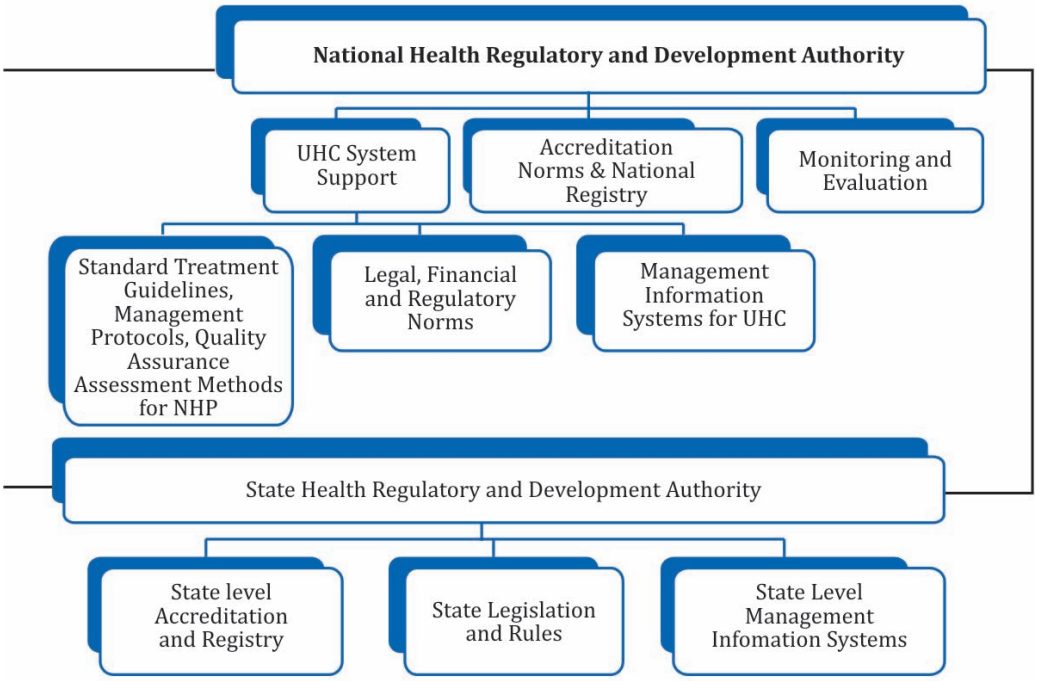
Rationale

Regulation of the public and the private sector to ensure provision of assured quality control, scope and pricing of services is an essential management reform in the context of UHC. A structured regulatory framework that can monitor and enforce essential healthcare regulations to control entry, quality, quantity and price is necessary. Saltman and Busse (2002) posited health-sector regulation as fulfilling two different purposes, historically driven policy objectives versus managerial mechanisms.[19] While regulatory activity deriving from broad social and economic policy objectives tends to be normative and value-driven in nature, such value-driven decisions tend to change relatively rarely, usually as a consequence of major historical events, such as wars, the end of dictatorships, or political revolutions. The emergence of the National Health Service in the United Kingdom and similar systems in Spain and Portugal, or, of the Unified Health System (SUS) in Brazil after the fall of dictatorships, are some examples. Such changes make it possible to put in place a broad umbrella of values and goals for regulation overall.

The second type of regulatory activity is concerned with the specific regulatory mechanisms through which decision-makers seek to attain different types of policy objectives. These management mechanisms are technical and focus on micro-level activities at the level of the sub-sector, facility or institution.

Bennett et al (1994) provide a framework of healthcare regulation identifying various mechanisms, for example, entry to market, quality and safety, quantity and distribution, price, public information and advertising, through which regulators attempt

FIGURE 2. NATIONAL AND STATE HEALTH REGULATORY AND DEVELOPMENT AUTHORITIES



to fulfill health policy objectives.[20] Teerawattananon andcolleagues later adapted this framework to describe health sector regulation in Thailand.[21]

What is clear from the different approaches to regulation cited above is that regulatory systems in health can be highly complex and that care must be taken to mesh policy goals and objectives to institutional mechanisms.

Recommendation 2: Mandate the accreditation of all health care providers (public and private, allopathic and AYUSH), and registration of all clinical establishments by the National Health and Medical Facilities Accreditation Unit (NHMFAU) of the NHRDA.

All public and private health providers must be accredited by a special unit, the National Health and Medical Facilities Accreditation Unit (NHMFAU), part of the National and State Health Regulatory and Development Authorities. All clinical establishments must be registered under the Clinical Establishments Act. Accreditation—based on benchmarks and standards for quality of services, performance, facilities, infrastructure, manpower, machines and equipment and drugs—will be mandatory for all providers.

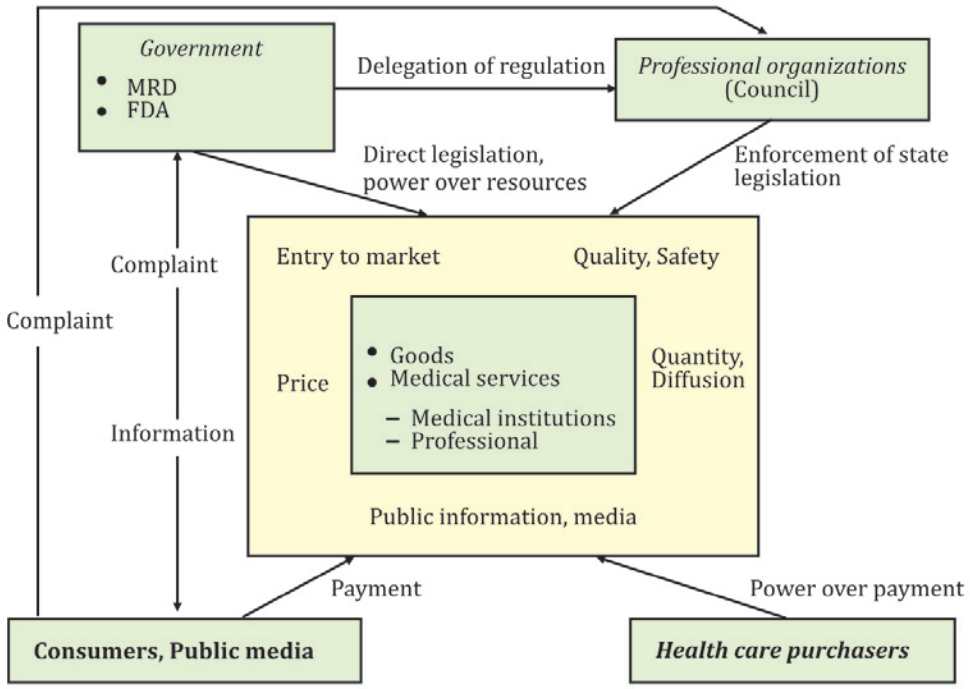
The NHMFAU will be mandated to do the following:

- Define standards for healthcare facilities to qualify for different levels of the healthcare pyramid. Healthcare facilities will be required to receive NHMFAU accreditation every three years and will receive a score on how well they meet the required standards. The score will provide each healthcare facility with an objective score of performance and comparison to peer facilities. There will also be a process to adjust the health entitlement packages as per the needs assessed by structured review of patient volumes and disease burden.
- Provide implementation support to health care providers to help them adopt, implement, and use certified Health Systems Management

TABLE 2. HEALTH SECTOR MANAGEMENT MECHANISMS
Regulating quality and effectiveness: assessing cost-effectiveness of clinical interventions; training health professionals; accrediting providers
Regulating patient access: gate-keeping; co-payments; general practitioner lists; rules for subscriber choice among third-party payers; tax policy; tax subsidies
Regulating provider behaviour: transforming hospitals into public firms; regulating capital borrowing by hospitals; rationalizing hospital and primary care/home care interactions
Regulating payers: setting rules for contracting; constructing planned markets for hospital services; developing prices for public-sector health care services; introducing case-based provider payment systems (e.g. diagnostic-related groups); regulating reserve requirements and capital investment patterns of private insurance companies; retrospective risk-based adjustment of sickness fund revenues
Regulating pharmaceuticals: generic substitution; reference prices; profit controls; basket-based pricing; positive and negative lists
Regulating physicians: setting salary and reimbursement levels; licensing requirements; setting malpractice insurance coverage

Source: Saltman and Busse (2002)[19]

FIGURE 3. CONCEPTUAL FRAMEWORK OF HEALTHCARE REGULATION



Source: Bennett et al (1994)[20]

(HSM) technology. NHMFAU will gather data and conduct research to identify best practices on implementations of certified health systems management technologies and provide templates for effective use to healthcare facilities.

- Establish criteria and a process to certify vendor HSM technology that can support meaningful use criteria. NHMFAU will work on defining a process for vendor certification, according to meaningful use criteria, and the vendor products for their applicability to diseases of national priorities.

Rationale

A robust system of accreditation and certification will be essential to address the inherent problem of information asymmetry in the health sector, the growing complexity that comes with the development and implementation of technology and finally, the major health problems that India faces today, including the co-existence of infectious and non-communicable diseases and the mix of multiple public and private providers. Such a system will have to be IT-enabled so that technology can be harnessed to ensure quality and accountability.

Recommendation 3: Establish a system to independently evaluate the performance of both public and private health services.

The recommended Health System Evaluation Unit (HSEU) is envisaged as an autonomous body, set up under the National and State Health Regulatory and Development Authorities, whose specific objective is to evaluate and guide the delivery by the health system at all levels of both the public and the private sector. This performance monitoring will use several methods including systematic data collection of health care delivery components (including preventive and promotive services) through predetermined indicators. Establishment of feed-back loops would support use of this data for evidence-based planning.

Other methods include innovative IT solutions that will help monitor the quality of health care delivery on a routine basis. The HSEU will use technology (IT platforms are detailed further in Recommendation 4 below) for data capture, processing, storage, reporting and analysis. The data will be collected on an ongoing basis and random checks will be performed as well. The aim is to evaluate the content and quality of the delivery of public and private health care systems. The main sources, required for an integrated evaluation system include inter alia the collection of information on the status - scope, quality, access, effectiveness and responsiveness - of health care delivery (both public and private health care providers), proper functioning of diagnostic services, specific surveys related to Quality of Care (QoC) and financial monitoring. Relevant analysis from project and policy evaluation will highlight the outcomes of previous interventions, and the strengths and weaknesses of their implementation. This may be used to improve both the design and functioning of the existing system.

The HSEU will have operational units at the peripheral (block), district and the state levels with connections to the central observatory, the National Health Regulatory Development Authority (NHRDA). The HSEU units will be staffed by public health specialists and data management experts and will draw on external expertise as well as youth or older volunteers who can support the gathering of data and evidence. Each unit at the block and district levels would work in close partnership with civil society partners and community support mechanisms as well as the local ombudsmen of the State Health Regulatory and Development Authority (SHRDA). Such participatory engagements with the community will help foster local ownership.

The HSEU will be set up as an integrated, functionally responsive system at different levels rather than as a single hierarchical unit. Decentralization of the decision-making process will ensure timely and effective response to evidence needs and opportunities. In the context of decentralization and health sector reform, demands for monitoring the performance of the health sector necessitate clarity on planned targets and measurement of results. These

processes require explicit standards for measuring performance, clearspecifications of the relationship between inputs and outputs, and use of valid indicators to compare actual achievements with planned targets and outcomes.

One of the main challenges for the HSEU system will be institutionalizing the process so that it reaches alllevels, the center, state and periphery. The other challenge will be to ensure participatory engagement by multiple stakeholders and convergence with other relevant sectors such as nutrition, water and sanitation.

Rationale

A system for continuous evaluation needs to be set in place to inform managers, decision-makers and policy makers on the links between inputs, outputs and outcomes of health services and programs. Currently, program evaluations in the public health sector are stand-alone, not independent of program or service implementers, and rarely based on outcomes. The proposed HSEU is envisaged to fill this gap. HSEU will provide a basis for accountability in the use of development resources. Commitment, ownership as well as capacity building of the HSEU are important for a robust, efficient and effective health system.

Recommendation 4: Establish a National Health Promotion and Protection Trust (NHPPT) to play a catalytic role in facilitating the promotion of better health culture amongst the people, the health providers and the policy-makers.

This will be an autonomous entity at the national level with chapters in the states and will draw upon the strengths and experiences of similar efforts nationally and internationally. The NHPPT would be responsible for:

- Facilitating the promotion of a culture of good health among citizens, providers of health services and care in the public and private sector, policymakers and opinion leaders, the media and stakeholders in health. This would be brought about by providing funding and technical support for new, continuing, and additional projects on the Social Determinants of Health (SDH) with key collaborators and stakeholders; and by developing policies and institutional frameworks that serve to act on SDH and promote good health through policies on tobacco usage, alcohol and processed food by drawing on local context and examples from international best practices.
- Dissemination of health information on a variety of issues and diseases from the policy arena, research projects, civil society initiatives and other sources. This would also include information on the health system and accountability mechanisms via linkages with the HSEU and the National and State Health Regulatory and Development Authorities. Dissemination would also occur through the Jan Sahayta Kendras and health assemblies (see chapter on Community Participation and Citizen Engagement), and health promotion events at the grassroots level, by a variety of means including interpersonal communications, group and community outreach and mass communications, as appropriate. The idea of a television channel dedicated to health (akin to the Lok Sabha channel) may also be considered at the national and/or state level. Dissemination would include information to the public about new health products, healthy behaviours, relevant health promoting entitlements policies, as well as warnings against harmful products and behaviours, and policies. Health information will be made available in natural and human-made disasters and other emergency situations.
- Examining the health implications of other sectors including health impact assessments, thereby creating enabling environments for health. The details are discussed under the recommendations on Social Determinants of Health (SDH).
- Collaboration with international partners on information-sharing related to SDH to ensure that the best practices, policies, and lessons from the global context are appropriately disseminated to Indian policymakers, practitioners and the public.

Rationale

The focus of health services in both the public and private sector has been on curative care with less or at times negligible emphasis on preventive and promotive care. Apart from provisioning all aspects of care, it is the responsibility of the public health authorities "to anticipate, monitor and avert health threats of all kinds." In other countries, specific agencies address issues as such occupational health and environmental health in the United States and most European countries have agencies to monitor water supply, solid waste and sewage disposal, housing, food supply and others that may impact health.[4]

We believe that a beginning needs to be made in this direction through the establishment of a Health Promotion Trust that can facilitate and catalyze public awareness about key social determinants of health, provide technical and expert advice to the ministry of health. It will also conduct key assessments and disseminate knowledge about the impacts of non-health sectors and policies on the health of people.

Recommendation 5: Establish a Health System portal to strengthen the use of information technology for better performance by both public and private sectors.

Information technology will be used as a major enabler for performance management including financial management through real time data flow to the HSEU, and through entitlement cards that will capture patient history and treatment. This will ensure full tracking of patients, portability of information, and lead to the creation of a central database with state wings, which in turn will provide information relevant for management of the health system such as health facility utilization rates. The system must guarantee data protection and patient privacy and ensure that ethical considerations in data collection, analysis and use are built in and enforced.

It will also be the backbone for other management innovations such as the use of electronic banking for financial management, the functioning of the HSEU and the NHRDAs and SHRDAs. IT-based monitoring systems for real time tracking of services like the use of entitlement cards by the patients and use of e-banking for transfer of funds will be applicable to both the public sector and the "contracted in" private sector as a measure of management control. In addition, the various regulatory bodies will also use IT- enabled systems to ensure that non-UHC private providers comply with regulatory requirements.

The institutional home for IT in the health system will be NHMFAU (mentioned previously in Recommendation 2), which will also do the following:

- Oversee adoption of health information systems and define standards of meaningful use of resources and health management systems infrastructure. NHMFAU will promote use of health systems management information systems and will define stages of meaningful use with stages organized over time. Stage I, meaningful use, will cover one to two years after introduction of health management information systems, Stage II will cover two to five years after introduction and Stage III will cover criteria after five years of introduction of health information management systems. Monitoring protocols and surveillance protocols will be developed and implemented. NHMFAU will oversee use of health systems management portal and its meaningful use.
- Oversee information documentation, use and exchange between healthcare centers. NHMFAU will develop a Standards and Interoperability framework (S&I framework) to harmonize existing standards and improve sharing of standards across different organisations and federal agencies, making it easier to broaden interoperability through shared standards for data and services.
- Ensure clinical interoperability of information to enable seamless transition of patient data between healthcare facilities. Best practices will be defined and disseminated to ensure optimal use of NHEC.
- Define and promote standards of patient privacy and ethical use of patient data. NHMFAU will

develop an accreditation process, standards and monitoring protocol to ensure patient privacy and ethical use.

- Ensure that allied agencies can send and receive information from healthcare facilities. NHMFAU will develop procedures to monitor exchange of information with public health agencies, research organisations, regulatory authorities and educational institutes.
- Work to enable information analysis, coordination of health care strategies and work towards real-time epidemiology. NHMFAU will serve as a regional information exchange hub to allow for epidemiological analysis and real-time surveillance services.
- Promote and document healthcare innovations in healthcare facilities. NHMFAU will be mandated to document innovations in the healthcare delivery seen in different healthcare facilities and develop a national database of healthcare innovations within the healthcare systems. NHMFAU will also conduct surveys of technology innovations in their area and exchange this information with other NHMFAU facilities.

Rationale

The use of IT is essential for effective management of the evolving UHC system. Given that the system is intended to cater to the needs of a billion people, and will have to navigate the complexities of a federal governance structure, multiple health systems, and a combination of public and private providers, effective use of IT is an absolute requirement to ensuring that the system is able to meet people's current and growing and changing needs. While the system cannot be introduced in one go, it will have to grow and evolve as the UHC itself evolves. A commitment to using IT and building up the capacity of the health system to use it well has to be made at the highest level.

Recommendation 6: Strengthen the Drugs and Medical Devices Regulatory Authority and expand its scope to include the Development function so as to better regulate the pharmaceuticals and medical devices sector.

This national level body will be responsible for providing a regulatory framework for the development, production, import, export, and use of pharmaceuticals and medical devices. Details are discussed under the recommendations in the chapter on Access to Medicines, Vaccines and Technology.

Recommendation 7: Engage the private sector for provision of health care through a well-defined "contracting in" mechanism, so as to harness the power of the formal private sector but with adequate checks and balances.

A well-defined "contracting in" mechanism is a pathway through which private-sector contributions may be effectively engaged for progress on universal coverage. "Contracting is a purchasing mechanism used to acquire a specified service, of a defined quality and quantity, at an agreed on price, from a specific provider, for a specified period."[22]

A stronger partnership between the government as a purchaser and the private sector as a provider would be the guiding principle for these public-private partnerships. Private providers being contracted-in for UHC would have to ensure that at least 75 per cent of outpatient care and 50 per cent of in-patient services are offered to citizens. These providers will be reimbursed at standard rates as per levels of services offered, and the NHRDA/SHRDAs would provide the strong regulatory framework and oversight necessary to supervise the contracted-in private sector. Accreditation through NHMFAU would ensure quality of care, rational interventions and medications, safeguarding of patients' rights and ethical practices. The Health System Evaluation Unit, along with its strong linkages to community monitoring through the office of the ombudsperson, would assess how

various inputs are deployed by the provider and track both immediate as well as longer-term outcomes. More details and the rationale are discussed under the recommendations in the chapter on Health Financing and Financial Protection.

Recommendation 8: Ensure strong linkages and synergies between management / regulatory reforms and accountability to patients and communities through systematic and institutionalized efforts.

The interface between the recommendations in this chapter and in the chapter on Community Participation and Citizen Engagement must be institutionalized through the establishment of strong links between the Jan Sahayata Kendras (detailed in the chapter on Community Participation and Citizen Engagement), and the hotlines and offices of health ombudspersons in the NHRDAs and SHRDAs. These must be clearly worked out, adequately funded and well resourced. They must also be linked to the HSEU's ongoing monitoring and evaluation mandate in order to ensure that community experiences are effectively reflected in the HSEU's monitoring and evaluation work and thereby in design changes and improvements.

Rationale

There is increasing awareness in the government of the need for community involvement not only to ensure voice and accountability to citizens but also to improve the performance of public systems and delivery of services. Under NRHM, there have been laudable attempts to strengthen community participation in planning and monitoring of health service provision. Nonetheless, one of the unresolved challenges is that community involvement often is disconnected from the rest of the system, with the feedback loops remaining weak or non-existent.

We propose filling this gap by linking citizen voice and redressal mechanisms to the accountability mechanisms being built in through the national and state regulatory authorities.

Recommendation 9: Introduce a specialized state level Health Systems Management Cadre and All India and state level Public Health Service Cadres in order to strengthen the management of the UHC system and also give greater attention to public health.

The setting up of separate Health Systems Management (HSM) and Public Health cadres that are well integrated with other departments and functionaries is recommended to address both the management and public health related inadequacies in the present system and to incorporate principles of professional management into decision-making in health institutions. This will give a strong thrust to the public health function-the preventive and promotive aspects of health-while also strengthening management.

The qualifications and experience of these proposed cadres have to be thought through carefully to determine appropriate levels so that they will mesh smoothly with the existing medical professionals. At the lower levels, these cadres will have a background in health management and / or public health, while at higher levels, they will have experience and credentials in both. The proposed cadre structure is as follows:

Proposed Health Systems Management Cadre						
Level	**Designation**	**Career Pathway**	**Qualifying Criteria**	**Reporting to**	**Functions**	**Remarks**
Primary Health Center	Health System Management Assistants		Bachelor's Degree in Management	Block Health Systems Manager	• HR • IT • Finance Work in coordination with the Medical Officer (PHC)	Lateral entry possible for peripheral health workers/ paramedical staff fulfilling qualifying criteria
Block (Block Program Management Unit)	Block Health Systems Manager		Master's in Business Administration (MBA) with specialization in Health Management plus work experience (for defined time period)	District Health Systems Manager	• HR • IT • Finance • Community participation, • Quality assurance • PPP functions Work in coordination with Block Public Health Officer	Lateral entry possible for medical officers; AYUSH/ nursing / BRHC professionals fulfilling qualifying criteria
District (District Program Management Unit)	District Health Systems Manager		Master's in Public Health plus work experience (for defined time period)	Director, District Health Services	• HR • IT • Finance • Community participation • Quality assurance • PPP functions • Planning • Procurement and logistics management Work in coordination with District Public Health Officer	

Proposed Health Systems Management Cadre						
	Director, District Health Services		Work experience (for defined time period) as District Public Health Officer/ District Health Systems Manager	Director, Public Health, Family Welfare and Health Systems Management	Supervision of all services • Preventive • Promotive • National Health Programs • Curative (at District Hospital / Sub-district Hospital / CHC/ PHC level) • Trainings	Overall in-charge for the district. Will supervise the curative, public health, management services and the District Health Knowledge Institute
State (Directorate of Public Health, Family Welfare and Health Systems Management)	Deputy Directors, Joint Directors, Directors		Work exp erience (for defined time period) as District Health Systems Manager / District Public Health Officer/ Director, District Health Services			

Proposed Public Health Cadre						
Level	**Designation**	**Career Pathway**	**Qualifying Criteria**	**Reporting to**	**Functions**	**Remarks**
Primary Health Center (PHC)	Medical Officer	↓	MBBS, Induction training	Block Public Health Officer	• Preventive • Curative • Promotive Work in coordination with the Health System Management Assistants	
Community Health Center (CHC)	Medical Officer	↓		Block Public Health Officer	• Preventive • Curative • Promotive Work in coordination with the Block Health Systems Manager	Medical Officers from CHC may follow the curative services pathway and move to sub-district/district hospitals
Block	Block Public Health Officer	↓	Master's in Public Health plus work experience (for defined time period) at primary health care level	District Public Health Officer	• Preventive • Promotive • Supervision of curative services (at CHC/PHC level) Work in coordination with the Block Health Systems Manager	Lateral entry possible for qualified public health professionals with experience (AYUSH / nursing / BRHC / Epidemiologists etc.)
District	District Public Health Officer	↓	Work experience (for defined time period)	Director, District Health Services	Supervision of all services • Preventive • Promotive • National Health Programs • Curative (at CHC/ PHC level) Work in coordination with the District Health Systems Manager	

Proposed Public Health Cadre						
	Director, District Health Services		Work experience (for defined time period) as District Public Health Officer/ District Health Systems Manager	Director, Public Health, Family Welfare and Health Systems Management	Supervision of all services • Preventive • Promotive • National Health Programs • Curative (at District Hospital/ Sub-district Hospital/CHC/ PHC level) • Trainings	Overall in-charge for the district. Will supervise the curative, public health, management services and the District Health Knowledge Institute
State (Directorate of Public Health, Family Welfare and Health Systems Management)	Deputy Directors, Joint Directors, Directors	↓	Work experience (for defined time period) as District Health Systems Manager / District Public Health Officer/ Director, District Health Services			

The Health Systems Management Cadre will be responsible both for improving the management of institutions as well as working with the Public Health Cadre to strengthen the public health functions. Health Systems managers will be expected to provide significant management inputs for managing public sector service provision as well as the contracted-in private sector. (Oversight of these contracts would rest with the N/SHRDAs but their day to day management would be with the Health Systems managers).

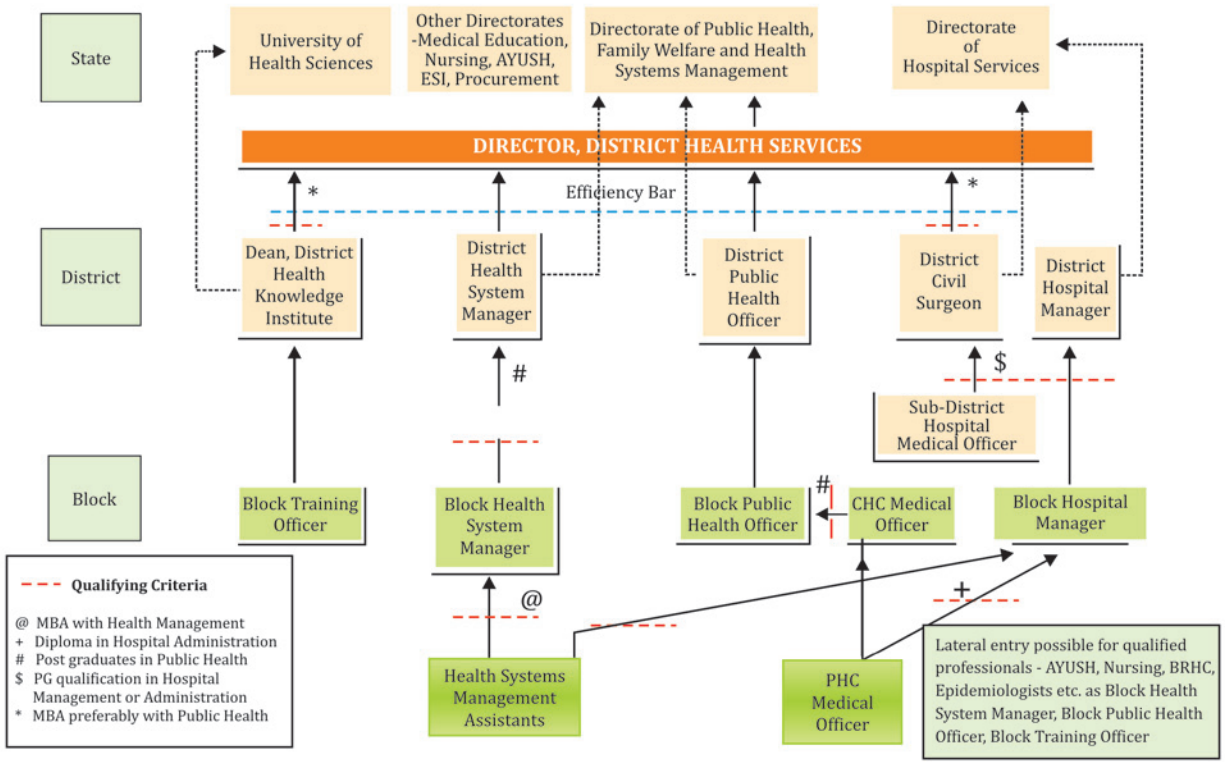
A major function of the HSM cadre will be to improve the quality of the functioning of health institutions by applying modern management methods in all areas. This will be especially important in the areas of facilities and service quality improvement. They will be responsible for implementing quality assessment, improvement and quality assurance for public sector health institutions, assisting them at district and sub- district levels to achieve quality certification and accreditation and to sustain these once achieved. These functions would thus improve accountability in the system and move towards more timely and effective responses to the needs of the beneficiaries of public health services. In addition, the cadre would take over much of the managerial functions that are currently over-burdening medical personnel in areas such as IT, finance, HR, planning and communication. The appointment of appropriately trained hospital managers at sub-district, district hospitals and medical college hospitals would improve the managerial efficiency and also enable medical officers and specialists to concentrate on clinical activities.

The responsibility for implementing public health functions would rest primarily with the All India Public Health Service Cadre starting at the block and going up to the state and national level. The Block Public Health Officer would be in-charge at the block level and will supervise the preventive, promotive and curative services at the PHC and CHC levels. The medical officers at these facilities would report to him. Public health function at the lower level would be conducted jointly by the health service providers at the sub-centers and PHCs, together with the Health System Management Assistants. The latter would also obtain some public health experience in this way. This cadre will be an All India cadre. The medical officers will be recruited at the State level and following a fixed duration of service within the state, will be eligible for all India transfers.

The Director, District Health Services will be the overall in-charge for the district. His role will be critical to effectivelysupervising the curative, public health, management functions and the District Health Knowledge Institute in the district. At the state level, there will be a separate Directorate of Public Health, Family Welfare and Health Systems Management (DPH/FW/HSM) in addition to the Directorate of Hospital Services, Medical Education and others. The role of this Directorate (DPH/FW/HSM) would be to recruit, support and oversee the management of the health system, implement performance improvement measures and strengthen public health services. It would be staffed by professionally trained health system managers and public health professionals who are promoted to the Directorate after a number of years of experience of planning, management and oversight of public health services at lower levels in both rural and urban areas.

Figure 4 presents an illustrative management structure showing the different strands of health professionals that could evolve at different levels of the health care delivery system. The organogram also shows the career paths for different cadres of health professionals with options both for promotion as well as shifting streams for advancement of careers.

FIGURE 4. CAREER PATHWAYS - DISTRICT AND STATE LEVEL



Rationale

Since the early years following the establishment of the three- tier health service provision system within the public sector, concerns have been raised about its quality, scope and reach. The UHC is to be built upon a unified system including both public and private providers, but in order for the public-sector institutions to be able to hold up their end, there will have to be a serious, concerted attempt to improve theirperformance in a variety of ways.

Two major gaps currently exist in this regard - inadequate attention to the preventive and promotive aspects of health (the public health function), and weak management brought on by loading managerial functions onto medical officers from the PHC level upwards, who have almost never received management training or credentialing. While the spine of the health services in the states will always be the medical professionals within it, it is essential to fill both these gaps in creative and innovative ways drawing on the growing availability of people with management credentials and experience as well as with public health degrees (although in smaller numbers). Tamil Nadu

state has made significant advances in this regard by passing a Public Health Act, and providing incentives and career pathways as well as providing higher level leadership in public health. There is considerable evidence to suggest that, as a strategy, this has had significant payoffs in terms of improved public health.[23] However, although Tamil Nadu has been able to go a considerable distance in improving public health, its performance could probably improve significantly by systematic incorporation of modern management methods for handling human resources and logistics, strengthening quality assurance, further integration of IT, and strategic and medium term planning. The creation of a separate program management unit at the block, district and state level under the NRHM has also helped to increase management skills especially at the lower levels. However, currently these units function largely as a support cadre to the rest of the Health Department, and as contract staff in support functions, there are no attractive pathways for this important function.

It is important to note that, given the shortage of trained doctors at every level, it would be a misallocation of scarce resources to divert them to non-medical functions such as management including the management of public health, as is currently being done. Furthermore, as one moves to the higher levels of the health system at the district, state and national levels, clinical credentials are needed less and less as tasks and roles become more and more linked to management, oversight and planning.

The absence of dedicated staff has led to considerable 'ad hoc'ism' in the management of health institutions and an inability to diagnose and correct management failures of which there are many. Nowhere is this more visible than in the area of quality assurance. Although there is wide acknowledgement that the quality of public-sector health facilities (from sub-centres to multi-specialty hospitals) and services leaves a great deal to be desired, the challenge of quality is even now only being addressed in a very limited way.

Both NHSRC and UNFPA are making important attempts to introduce quality assurance into the system. Again, the absence of a cadre whose training and job descriptions include quality assurance means that these attempts are likely to remain limited in their ability to actually transform the public-sector health institutions and system in a sustained way towards improved quality. If the UHC is to move forward with a balanced combination of well-functioning public and private institutions, this will not be enough.

There is, therefore, an urgent need to revamp HR planning for the public-sector health system by focusingon the best ways to focus on neglected aspects of public health, strengthen management inputs from the lowest levels up to the top, and combine clinical, public health and management functions in more organic ways that generate attractive career pathways for all three.

Recommendation 10: Require the use of performance management methods to improve functioning of staff and personnel in public sector institutions.

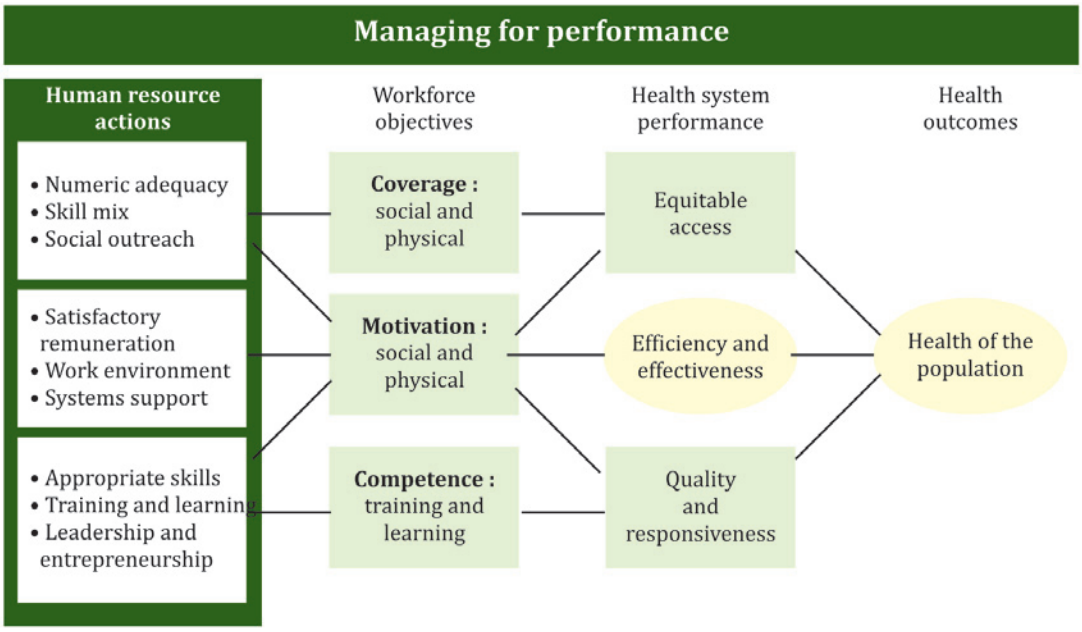
An important function of the Health System Management cadre will be performance management of the human resources in the public health sector. The HSM cadre's responsibilities would include recruiting, inducting, training, and setting up apprenticeships for newly hired personnel; defining clear-cut career pathways; instilling dedicated and committed attitude through pro-active, coordinated mentoring and motivation programs; team building and providing autonomy and flexibility for executing responsibilities. The cadre would also be in charge of ongoing input-output assessments; adequate and timely monitoring; supportive supervision; performance appraisals and responsive feedback on assessments; and incentives, including those based on the vulnerability index (e.g., higher payments for hard-to-reach locations). Staff performance would also be supported by better working conditions and clearer systems for supervision and accountability (detailed by the sub-group working on Human Resources for Health).

Rationale

A growing emphasis on managing for results and obtaining value for money invested has heavily influenced health-sector performance assessment in a big way over the last two decades. Although 'results-based management' has limitations-especially in diverting attention away from qualitative improvements and becoming a mechanical strait-jacket when clumsily applied-the need to get the most return for the investment of public funds is growing. When well used, performance management methods can help to focus attention on the relation between inputs, processes, outputs and outcomes in the health sector.

"Performance management is best defined as the development of individuals with competence and commitment, working towards the achievement of shared meaningful objectives within an organisation that supports and shares their achievement."[24]In an ideal environment, these individuals are considered members of a team.[25]

FIGURE 5. MANAGING FOR PERFORMANCE



Source: Joint Learning Initiative (2004)[26]

Performance management can be an invaluable tool for assessing the performance of individuals and groups or teams, and rewarding or sanctioning behaviour. The field of human resource management has evolved by leaps and bounds in the private sector. While examples of the use of outdated and exploitative methods are still plentiful, there are also new approaches to performance assessment that are built on more enlightened approaches and are mutually beneficial.

Health-sector managers in India (like their counterparts in other sectors) are very wary of creating regular staff positions on a large scale for fear of ending up with yet another category of workers who will have job security but without requirements for delivery. This wariness has led to reliance on contract and piece-rate workers, such as the ASHAs, on the assumption that job insecurity is the only method to ensure worker performance.

Modern human resource management methods suggest, however, that fear is only one possible goad to ensure work, and not necessarily the best one. Workers who function out of fear are typically poorly motivated to deliver more than the bare minimum, will not take risks or innovate, and cannot be trusted to work in teams. This insight was the basis of the labour system pioneered on a large scale in Japanese industry, where workers are viewed as critical contributors to quality and performance management in the system as a whole.

Modern performance management tools use a combination of methods that include both monetary and non-monetary incentives and individual and group rewards. As noted by Seagall (2000) [27] "In a situation where health workers get a respectable wage, acceptability of non-material rewards is much higher as employees value them more in the long term; these include peer recognition, a sense of making a contribution to the overall impact of the service, and solidarity with fellow workers."

The use of such tools does not mean that workers who slack off or shirk responsibility go scot-free, but effective HR management is not primarily based on fear. Instead it harnesses many other motivations that lie behind worker behaviour and starts from the presumption that most workers would like to do a decent job and be recognised for it. Those who attempt to beat the system can then be dealt with as they deserve without basing the entire HR system on the lowest common denominator.

Recommendation 11: Set up National and State Drugs Supply Logistics Corporations in order to strengthen the management of logistics and supply chains.

National and state-level utilities will be set up to ensure a transparent structure for bulk procurement and supply of adequate, rational, low cost, generic essential drugs down to the lowest levels which will be managed through an IT enabled system similar to the Tamil Nadu Medical Services Corporation Ltd., (TNMSC). All providers under the UHC (public and contracted-in private providers) will access generic drugs through this system, thereby ensuring significant cost savings and removing leakages from the drugs procurement and distribution system. This is discussed in detail in the chapter on Access to Medicines, Vaccines and Technology.

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Chapter 6

Community Participation and Citizen Engagement

1. Preface

Community participation (in the delivery, accountability and increased convergence of health and related services)[a] is underpinned by three principles, the foremost of which is that it serves social goals that extend beyond the ambit of Universal Health Coverage. Successful citizen participation represents the deepening of democracy and the equitable empowerment of people and can play a transformative role in society. The second principle is that communities are not simply recipients of care; they have powerful capacities to create and promote health by means of social and familial support networks and the application of local health knowledge. This does not, however, absolve state and non-state health services of their responsibility to protect and provide health. Thirdly, participation is necessarily process-intensive and long-term. To be successful, participatory interventions often require sustained investment and support over significant periods of time.

a) Relevance for Universal Health Coverage

Participatory approaches have been widely reported to have a positive impact on health outcomes.[1-3] Participation of communities, local elected bodies and Civil Society Organisations (CSOs) is also a prerequisite for successful implementation of Universal Health Coverage (UHC) and has been shown to be essential for:

- reducing information asymmetries and increasing awareness of entitlements and rights;[4]
- engendering inclusive and equitable access to health care;[5] and
- strengthening health services to be accountable and responsive to community needs.[6]

Participatory approaches also contribute to:

- increased uptake and quality of health services;[4]
- financial protection for individuals and communities accessing health care;[7]
- improving health behaviour and health awareness in communities;[8] and
- strengthening social capital and deepening democratic processes.[9]

[a] Note: Our interpretation of communities extends beyond geographically demarcated and homogeneous entities to multilayered networks and allegiances along the lines of gender, caste, income, ethnicity and belief. Urban communities are now an increasingly large share of the population and have distinct, evolving configurations different from those of rural communities. Vulnerable or at-risk groups with special health needs are frequently marginalized but may also constitute 'special-interest communities', such as people living with HIV/AIDS, disabled people, and single or widowed women. Civil society organisations encompass diverse groupings of organisations representing civil society, including grassroots community groups, faith-based groups, membership-based organisations of the poor, professional associations, voluntary organisations headed by social activists or professionals, and international organisations. It is erroneous to assume all have similar interests or can perform similar roles.

2. Situational Analysis

A number of national and provincial policies and laws address the participation of communities, NGOs and Panchayati Raj institutions (PRIs) in the delivery, accountability and increased convergence of health care and related services. Annexure 1 summarizes existing policies and schemes. In addition there are also several schemes and initiatives led by civil society organisations, which have met with variable success. We review the evidence on the successes and failures of these different schemes and policies in the Indian context, list the gaps in community involvement in health care, and then briefly review the global literature.[b]

a) Notable Successes

i. Civil society organisations: Their engagement in participatory health governance and community monitoring through the National Rural Health Mission (NRHM) has been shown to have a positive effect on constructive community mobilization and capacity for claiming health rights, and has also supported demand for better services. It has had a demonstrable impact on the quality of services, service utilization, coverage and health outcomes.[10,11,12] Participatory governance and oversight initiatives have also led to heightened awareness of health system functions in the community and improvement in the performance of and support for peripheral health staff. [10,11,12,13,14]

ii. Community health worker (CHW) approaches: The Accredited Social Health Activist (ASHA) programme and other initiatives have improved outreach with community members and provided a link between the health system and the community.[15] Although the accounts are anecdotal and self- reported, CSO initiatives involving CHWs have noted improvements in the health status of communities[16] and in access to health care services, especially for marginalised groups.[17,18] CHW functions in providing services, community mobilisation and facilitation of inter-sectoral linkages have also been shown to be have been successful, at scale.[19]

iii. Panchayati Raj institutions: PRIs have supported and undertaken inter-sectoral activities promoting health in domains such as water and sanitation, behaviour change, delivery of services in related government programs and garbage disposal.[20,21] Evidence from Kerala now shows that constructive action by local people, including elected representatives and people's organisations, has made services and programmes more responsive to local health needs and priorities and has strengthened overall performance.[6,22]

iv. Community-based health insurance: These schemes have been tried in different parts of India, with varying success. Evidence suggests that they can reduce out-of-pocket expenditures and catastrophic expenditures on health and improve access to care for vulnerable groups.[23,24,25,26]

b) Notable Operational Deficits

i. Village health and sanitation committees and Rogi Kalyan Samitis: The success of these systems of participatory governance has been limited. They are insufficiently decentralized financial and management structures with opaque governance

[b] A note on "evidence" in the context of community participation for health: The complexity and context-specificity of participatory processes often makes it difficult to measure their impact, and to generalize findings across settings. Conversely, evidence generated in particular contexts may not automatically translate to different settings, even when conducted rigorously through "gold-standard" methodologies. Valid evidence on participation cannot be seen as restricted to the biomedical research paradigm - cogent les- sons are often found in rigorously conducted case study research. Further, an approach of analytic generalization (what conditions led to the success of an intervention? what were the processes through which successful interventions were undertaken?) may often be more relevant than direct generalization (which intervention worked? which did not?).

processes, leading to weakened organisational capacity. They also suffer from poor awareness of roles and nonprioritization of health agendas.[27]

ii. CHW performance and affiliation: Having a single CHW for a geographical unit sometimes creates an excessive burden on the individual. CHW performance is linked to sustained support from the formal health system with which s/he is affiliated, as well as quality of training, but both of these are frequently inadequate.

iii. Inadequate awareness of health entitlements: Efforts to enhance public awareness about available health services and associated health rights have had limited success.

c) Gaps in Policy Design for Community Participation

i. Legal frameworks for community participation in health governance: There is inadequate articulation in the law to support mechanisms of community participation in planning and administering health services.

ii. Grievance redressal mechanisms: Grievance redressal is not supported by credible institutional mechanisms that are accessible for the poor, and there is little explication of corrective and punitive measures.[13]

iii. Attention to urban areas: No urban equivalent of a framework for participatory health governance or community monitoring has been instituted at scale, and cities lack community health workers.

d) Evidence from the International Literature

Various citizen participation interventions in low- and middle-income countries have been demonstrated to have a positive impact on health behaviour and outcomes and systems performance. Notable among the participatory planning approaches that have been implemented at scale are those of Thailand and Brazil (Annexure 2). To facilitate local health planning, implementation and monitoring, the role of both the local elected bodies and civil society has been critical.[13,28,29,30] The success of participatory planning platforms globally depends upon the central role of civil society organisations and upon adequate investment of time and resources in capacity building. NGOs play critical roles in handholding and training and as interlocutors between communities and governments.[11,31] Community health workers appear to improve equitable access and enhance the impact of public interventions for maternal and child health, malaria, and tuberculosis.[5,32,33] Community financing approaches have selectively been successful in providing financial protection for individuals and communities, especially when built into pre-existing cooperative movements or self-help group initiatives.[34,35]

3. Recommendations for Community Participation and Citizen Engagement

Recommendation 1: Strengthening institutional mechanisms for community participation in health governance and oversight at multiple levels (rural and urban).

a) Transformation of existing Health Committees (or Health and Sanitation Committees) into participatory Health Councils at five levels: 1) village / mohalla; 2) block / taluka / town / MLA constituency; 3) district / city; 4) state; and 5) the national level.

We propose the transformation of the existing system of Health Committees into Health Councils at all levels - from the village and urban settlement level to block, district, state and the national level. The membership of these Councils needs to include representatives of non-governmental actors (such as Community Based Organisations (CBO), membership organisations,

women's groups, trade unions and health providers), who should constitute at least 50% of the Council's strength. The composition of the reconstructed Councils will ensure representation of all members of the previously constituted Health Committees, including members of the Gram Panchayat or other elected representative for the concerned geographical unit, and of frontline health workers (such as ANM, AWW and CHW). In instances where Health Committees do not previously exist, new Health Councils should be instituted with roles and functions identical to those of the transformed Health Councils.

The process of reconstitution and transformation will expand the role and functions of the erstwhile Committees (now Councils), while ensuring that their existing functions are not adversely affected. The enhanced role of the transformed Councils will include drawing upon the perspectives of the different groups represented within and evolving recommendations by consensus, on health plans and budgets for further implementation by designated executive agencies. The Councils will also exercise oversight on performance of the health plan, with monitoring of selected health indicators every six months, and will also track the extent and areas of budget expenditure. The Councils will thereby bring the strengths of broader representation as well as more frequent monitoring to the existing mechanisms of planning and review. Over a period of time, Councils should be encouraged and empowered to take on greater and more direct roles in the operational and financial planning of health services for the mandated geographical units.

Specific additional functions of the transfromed Health Councils (in addition to those already mandated to existing Health Committees) should be:

i. To organize periodic health assemblies.

ii. To ensure that relevant documentation (i.e., annual report, finance report, action plan, and disaggregated data from community monitoring) is tabled at the time of the assembly, to record the minutes and synthesize the proceedings of the assemblies; to convey the summarized proceedings of the assembly to health authorities; to take cognisance of 'action taken' by authorities in response to the assembly proceedings.

b) Organizing of periodic Health Assemblies from village to national levels.

Health Councils will organise annual Health Assemblies at different levels (district, state and national) to enable community review of health plans and their performance as well as record ground level experiences, which call for corrective responses at the systemic level. The needs and priorities identified by the community as well as articulated grievances of sub-optimal or inequitable performance of health services would enable the Councils to provide constructive feedback to policymakers and health system managers. It will also provide an opportunity to health system managers to explain, to the community, the constraints which prevented a prompt response to all the stated needs. Data from the annual report, finance report, action plan and community monitoring will be presented to the Assemblies, for review and feedback. By organising such Health Assemblies, the Health Councils will serve as a bridge between the executive agencies responsible for design and delivery of health services and the wider community which is the intended beneficiary of such services.

Participatory governance, review and oversight process envisioned through the assembly activities and council or committee functions will be supported by requisite legal sanction, financial investment and continuous capacity building. Academic institutions will be engaged to provide capacity building for the members of the Councils, and research institutions will be engaged to synthesize the proceedings of assemblies and prepare policy briefs. The impact of health assemblies will be evaluated. CSOs with the appropriate capacity and commitment should be engaged for the training of council or committee members.

Rationale

The aforementioned mechanisms and strategies are recommended with a view to making health planning and review more responsive to the voices of communities, to promote involvement of communities and other stakeholders, such as health providers and people's representatives in health decision-making, and to enhance transparency of governmental policy processes. Although the model of health assemblies has not been tested at scale in India, there are notable examples of the success of community monitoring under NRHM (Annexure 2), and the Brazilian and Thai experiences of participatory governance have reported widespread success. The proposed configuration of assemblies is an adaptation of the Thai model (Annexure 3).

Recommendation 2: Increasing the number of community health workers to two workers per village and equivalent urban administrative unit.

a) **Two Community Health Workers (CHWs)** should be deployed in each village and equivalent urban setting (mohalla). The CHWs may be either two women, or one woman and one man.

b) **CHW functions:** providing preventive, promotive and basic curative care in a role complementary to health staff; educating and mobilizing communities for promotion of a healthy lifestyle; enhancing appropriate utilization of services; participation in health campaigns; and claiming of health entitlements. The two CHWs will operate as a team, sharing tasks and functions related to six core health components, as follows:

   i. maternal and newborn health;
   ii. sexual and reproductive health;
   iii. child health and nutrition for children, adolescent girls and women;
   iv. communicable disease control and sanitation;
   v. chronic disease control;
   vi. gender-based violence, mental health and health promotion.

c) **CHW affiliation:** CHWs should be de facto members of, and answerable to, the village or mohalla Health Council.

d) **CHW compensation:** CHWs will be guaranteed fixed compensation or payment (estimated at Rs 1500 per month), in addition to performance based incentives (estimated at a maximum of Rs 1500 per month). Emoluments should be routed through and approved by the village or urban Health Council or Panchayat. Performance-based incentives should be calculated transparently and provided by the health department.

e) **CHW career and mentoring:** CHWs should be provided the opportunity to pursue training as auxiliary nurse midwife or male health worker, if performance is excellent. CSOs with the appropriate capacity and commitment should be engaged for training CHWs, using existing health service personnel as resource persons. A mentoring scheme should be introduced to provide an internal support system and career guidance for CHWs.

Rationale

The number of locally selected community health workers is currently inadequate to support the load of basic preventive, promotive and some curative care in the community.[36] A work-time analysis by SEARCH Gadchiroli supports the engagement of a minimum of two full-time workers per geographical unit. Further, mentoring, lateral linkages and teamwork between CHWs are shown to have a positive impact on performance, as highlighted by the Advisory Group for Community Action.[32,37] Incentives have been shown to enhance performance for technical interventions, and respectability of CHWs in the community.[38] Moreover, major shortfalls in the amount and quality of training ASHA equivalents in India[11,39] need to be redressed.

Recommendation 3: Enhancing the role of Panchayati Raj Institutions (PRIs) and elected representatives in health governance and community oversight, and in facilitating convergence with other services.

a) Local health functions and finances should be devolved to the village Health Council, block Health Council and district Health Council. Define responsibilities of health department officials with relation to PRIs and vice versa, supported by sufficient and clear directives, guidelines or orders, as applicable. PRI representative needs to approve disbursing of CHW emoluments.

b) PRI / other elected representative's responsibilities in facilitating convergence of health with other services should be defined, at each level-1) Village / Mohalla; 2) Block / taluka / town / MLA constituency; 3) District/city; 4) State; and 5) National.

c) Elected peoples' representatives should chair Village, Taluka and District Health Councils and Assemblies. Similarly, elected representatives should chair Councils and Assemblies at different levels, and in urban areas, including 1) Mohalla, 2) Town or legislative assembly constituency; 3) Municipality; 4) State; and 5) National.

d) CSOs with the appropriate capacity and commitment should be engaged for the training of PRI / elected representatives in health administration and in convergence of health with other services, at all levels.

Rationale

The involvement of local elected representatives in health governance and convergence is a widely recognized approach globally, with numerous examples of success and positive effects on the quality and responsiveness of health services, and on social determinants of health. In the Indian context, there is evidence from Kerala of the strong role of PRI in improving service delivery and utilization, and wider experience of PRI role in facilitating convergence with other services, under the NRHM.[20,21] The participation of PRIs through the (Village and Block) Health and Sanitation Committees has been variably successful, due to operational deficits underpinned by low capacities and role ambiguity.[27,39] The involvement of PRI and other elected representatives needs to be strengthened through clearer role definition, more complete financial devolution, capacity strengthening, and their greater involvement in community oversight and mobilization through Health Assemblies. The PRI role in local health governance is also envisaged to enhance accountability of community health workers.

Recommendation 4: Enhancing the role of Civil Society Organisations (CSOs) in delivering information about health-related entitlements, enabling community participation in health governance, community mobilisation for health, and capacity building of community-based platforms and community health workers.

a) There should be greater involvement of CSOs in facilitating community-based monitoring, building on prior experiences of the National Rural Health Mission.

b) There should be at minimum, 50% representation of non-governmental actors in Health Councils at all levels, including community based organisations and membership-based organisations of the poor, women's groups, trade unions or cooperatives, and health providers.

c) CSOs need to be engaged to undertake campaigns for Universal Health Coverage, in coordination with Village Health and Sanitation Councils, Block Health Councils and District Health Councils, and at State and National levels.

d) CSOs with the appropriate capacity and commitment should be engaged for capacity strengthening of Members of Health Councils, CHWS, and PRI / elected representatives at all

levels, in relevant skills and subjects (see previous recommendations)

e) CSOs should be engaged in provision of health services, including preventive and promotive services, as part of a coordinated network of Universal Health Coverage services (see chapter on Management and Institutional Reforms for further details).

f) Mapping and selective identification of CSOs for all aforementioned activities, on the basis of excellence, transparency of functioning and accountability, and established record of working for the poor or vulnerable groups. Preference should be given to Indian organisations as opposed to international NGOs and agencies, and to membership-based organisations of the poor, women's groups and self-help groups. A CSO that discriminates against any community, caste, ethnicity, sexual orientation or other social group, vulnerable or otherwise, should be disqualified from participation in the aforementioned activities.

Rationale

Previous international and Indian experiences of CSO mediation and facilitation of community participatory processes have frequently elicited success. An active facilitatory role of CSOs for mobilization, information empowerment, capacity building and hand-holding of community-based platforms and workers, can energize community-level interventions and enhance popular participation in health governance and oversight.

Recommendation 5: Instituting a formal grievance redressal mechantism.

a) Create an empowered office (Jan Sahayata Kendra) for confidential grievance redressal, and for information services to be located at the block headquarters. The office should have two distinct functions:

i. Grievance redressal: entertaining confidential complaints and grievances about public and private health services in that block. Procedure for corrective measures should be clearly enunciated at each level, with defined parameters for grievance investigation, feedback loop, corrective process, no- fault compensation and grievance escalation. Responsibilities of health department officials should be defined with relation to grievance redressal officer and vice versa, supported by sufficient and clear directives, guidelines or orders, as applicable.

ii. Information and suggestion services: conduct periodic public hearings, receive suggestions, and operate a telephone helpline. Wherever possible, these would be managed by membership-based organisations of the poor (women's or farmers' groups, trade unions or cooperatives).

b) Vertical linkages: The block-level office for grievance redressal should be linked, at the district level, with the office of the ombudsperson under the auspices of the Health Regulatory and Development Authority (see chapter on Management and Institutional Reforms). Serious grievances and unresolved cases should be referred up to the ombudsperson. The department for information services should be linked with the Health Promotion and Protection Trust (see chapter on Management and Institutional Reforms).

Rationale

Grievance redressal in the context of health services is a fundamental regulatory function, which is currently not supported by a credible community-friendly mechanism. Even where limited redressal mechanisms exist in the context of some hospitals or services, there is little explication of appropriate measures for adjudicating disputes, compensating plaintiffs, disciplinary action, or feedback to the health services to enable correction.[13] A systematic and responsive

grievance redressal and information mechanism is essential to ensure that citizens can access knowledge of their health entitlements, and are enabled claim them.

4. Expected Timeline

All projections assume that the implementation of these recommendations shall commence in the year 2012.

Timeline for Recommendation 1: Setting up institutional mechanisms and implementing strategies like health assemblies should be built on the current experiences of community-based monitoring currently operational across the country. We anticipate it will take 2 years to complete preparations, form the Council, build capacity of its members, and hold the first round of assemblies. This means the first assembly could be held by 2015.

Timeline for Recommendation 2: With regard to the expanded coverage by community health workers, the current average coverage is of 8 lakh CHWs (i.e. ASHAs) for just under 6.39 lakh villages. This rate of coverage, which accommodates greater numbers of ASHA in vulnerable districts, was reached in just 3 years of NRHM operation. Therefore, we project that it is realistic to achieve the requisite doubling of CHW coverage by 2015. However, this may take another year to complete, as the envisaged initial training is 2 times longer if compared to the ASHA training.

Timeline for Recommendation 3: Enhancing PRI roles in health will take a longer period of time, as currently, PRI influence in health is in its infancy, and the roadmap for delegation and decentralisation in the country is still nascent. Moreover, PRIs need a lot of capacity building inputs as well. Given these factors, we expect a 3 year preparatory phase; hence, the country would be ready to implement these recommendations by 2016. However, states where the PRI systems are at an advanced stage may implement this recommendation sooner - we have envisioned these as pilot states and expect recommendation implementation by 2015.

Timeline for Recommendation 4: Strengthening the role of civil society organisations in health also involves a lot of preparations including the development of systems for selection and enrolment of CSOs, as well as synergistic capacity building of health systems and CSOs. This requires the conceptualisation and establishment of frameworks and their careful, closely documented and evaluated implementation. Given these considerations, we estimate a 2 year preparatory phase and a year-long phase of initial implementation, commencing in 2015.

Timeline for Recommendation 5: The longest time-span required would be for establishing effective grievance redressal mechanisms, given that this is the domain of least experience in India thus far. Capacities that are needed to exercise the health regulatory as well as grievance redressal measures are not readily available at the levels of district or below. This will therefore require building human/institutional resources. We estimate a 4 year preparatory phase for this with piloting in select states with involvement of experienced CSOs. Thus, we expect to have pilot data from state level experiences by 2015, and the scaling up of the initiative across the country between 2016 and 2017.

5. Expected Outcomes

	Recommendations	Expected Outcomes
1.	Strengthening institutional mechanisms for community participation in oversight and governance of health at multiple levels (rural and urban)	• Transparent and participatory health governance/ administration at all levels; • A health system that is responsive to people's needs
2.	Increasing the number of community health workers to two workers for a village and equivalent urban administrative unit	• Improved outreach of health care support • Improved access to primary drugs and first level care and prompt referrals at the neighbourhoods • Collective efforts by people, especially by women, to overcome health problems of the locality • Improved health awareness, health seeking behaviours and health promotion initiatives at community level • Optimum utilisation of health care services • Improved coverage of national health programmes and optimum reduction in problems addressed by those programmes • Improved maternal health status and reduction in maternal mortality • Improved neonatal, infant and child health status and reduction in mortality including in stillbirths
3.	Enhancing the role of Panchayati Raj Institutions and elected representatives in health governance and community oversight, and in facilitating convergence with other services	• Preparation and implementation of local health plans • Better convergence and coordination between health and other initiatives that determine better health outcomes • Improved accountability of healthcare providers to local bodies
4.	Enhancing the role of Civil Society Organisations in delivering information about health and entitlements, enabling community participation in health governance, community mobilisation for health, and capacity building of community-based platforms and community health workers	• Optimum level of community participation in all health related decision making processes and health events • Improved and transparent management of community level health initiatives • Optimum knowledge and skill levels of community health workers and members of community structures • Improved coverage and provision of health care services at otherwise underserved areas

	Recommendations	Expected Outcomes
5.	Instituting a formal grievance redressal mechanism	• Improvement in quality and outreach of health services • Improved coverage of marginalised populations under health services • Improved user satisfaction levels for all health and related services

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Annexure 1

Prevailing National Policy Frameworks for Community Participation[a]

Community Health Workers	Accredited Social Health Activist (ASHA) scheme under National Rural Health Mission[1]/ Mitanin scheme in Chhattisgarh	National/ State	• Female community health activist selected for every village. Trained in pedagogy of public health • Function: bridge between Public Health system and community. Referral and escort services, construction of household toilets. Receives performance based incentives • Accountable to the Panchayat Secretary to the Village Health and Sanitation Committee and supports preparation of Village health plans
NGOs in Delivery of Information and Services	Guidelines for Department of family Welfare supported NGO schemes[2]	National	• Mother NGO and Field NGO functions defined: - Addressing gaps in information or RCH services - Building Strong institutional capacity at the state/ district /field level - Advocacy and awareness generation • Service NGO functions defined: - Provide clinical services in RCH sector to complement public health services in un-served and under-served areas
	Guidelines for management of PHCs by NGOs[3,4]	State	• Guidelines for staff recruitment and management of the PHCs by NGOs, and provision of infrastructure by government • Guidelines for grant-in-aid by government and NGO fund mobilization
	NGO/CBO Organisational guidelines for HIV/AIDS[5]	National	• Functions defined for contracted NGOs: - To promote better governance and service delivery - Various tasks of HIV/AIDS prevention & control programme
Community Financing	-	-	-

a Caveat: while every effort was made to enlist all the relevant policies, this may be short of a comprehensive listing - some policies may not have been available in the public domain, or could otherwise not be accessed.

Community Monitoring Health Rights & Account-ability	Community Monitoring and Planning under National Rural Health Mission[6]	National	• Involvement of local communities to assessing progress on the health action plans against agreed benchmarks - Communities to monitor demand/need, coverage, access, quality, effectiveness, behaviour and presence of health care personnel, denial of care and negligence, using simple indicators - Community monitoring from village level up to state level through mechanisms like Village health and sanitation committee and PHC Health monitoring and planning committee. Monitoring system to be directly linked to corrective decision making bodies at appropriate levels - Public participation in monitoring to be mediated through representatives of community based organisations - Public dialogue/ hearings to involve and empower general public
	Advisory Group on Community Action[7]	National	• Advise development of Community Partnership and ownership for the Mission • Advise on particulars of Community Monitoring of various schemes of Mission
	Recommendations of National Human Rights Commission[8]	National	• Citizen's charter shall be displayed prominently at PHCs
	Guidelines for communitisation of Health Units in Nagaland[9]	State	• Formation of Village Health Council (VHC) to supervise, support Sub-Centres - Salaries of health department transferred to VHC account and VHC to disburse the salaries of the personnel based on attendance and performance
	Assam Public Health Act[10]	State	• Defines people's rights in relation to appropriate health care, emergency care, rational drugs, standard treatment, access to medical records and data
	PHC Charter for Citizen, Karnataka[11]	State	• Provision for complaints box for registration of complaints, and due action

Participatory Planning	Community Monitoring and Planning under National Rural Health Mission[6]	National, State	• Constitution of Village Health and Sanitation Committees (VHSC) comprising of Panchayat, ASHA, ANM, Anganwadi, Local CBO and SHG women representatives • Village Health Plans to be prepared at the Village level by VHSC, based on resources and prioritization based on community needs and socio-epidemiological situations • PHC level, Block Level, District level health monitoring and planning committee at the respective levels to prepare plans based on aggregation of Village health plans • Untied funds at each level for facilitation of the processes
	Communitisation of the Health Units in Nagaland[9]	State	• Formation of participatory Village Health Council (VHC) with following functions: - Planning and implementation of health plan at the Village level - Supervision and support Sub-Centre staff
	Swasth Panchayat Scheme, Chhattisgarh[12]	State	• Development of a Health and Human Development Index for Panchayats, including 32 health indicators • Panchayats ranked and to improve health performance based on ranking
Convergence	Madhya Pradesh Gram Sabha Adhoc Health Committee[13]	State	• Merging of village committees into a single Gram Sabha Adhoc Health Committee - Merging of funds for Water and Sanitation, Health and Nutrition - Accounts operated jointly by Chairperson and Panchayat secretary for Water and Sanitation Campaign, ASHA for Health and Anganwadi worker for Nutrition - Disbursals to be approved by Committee in monthly meetings
	Tamil Nadu Public Health Act[14]	State	• Director of Public Health directs local authority for improvement of water-supply, drain construction, etc

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Annexure 2

Advisory Group on Community Action (AGCA) within NRHM and its facilitation of Community Monitoring in India

The implementation framework for the National Rural Health Mission includes 'communitisation' as one of the five key pillars of its approach. It also includes community based monitoring as one of the three sources of information for monitoring the progress and achievements of the mission.

The Advisory Group on Community Action (AGCA) was set up to provide inputs on ways to develop community partnership and ownership, and to advise on how community monitoring of the various NRHM schemes could be done. The AGCA consists mainly of leaders from civil society organisations that have worked for several years (or decades) on community-led processes to improve health services. The forum also includes government officials from the NRHM within the Ministry of Health and Family Welfare, Government of India. The AGCA took up the task of designing a community-based monitoring system, which would work village upwards. The entire process was based on the community entitlements and the standards of service delivery articulated in the NRHM. The mechanism that was developed included the monitoring of both aspects - community experiences of service received, as well as assessment of the delivery of services. This was to be done through a set of participatory exercises which led to the preparation of a village level and facility level report card. Details of the exercises and the proforma are available on the website www.nrhmcommunityaction.org.

The first phase of the community monitoring (CM) process was undertaken between March 2007 and March 2009. During this phase the CM process was rolled out across 315 PHC areas within 35 districts of 9 states. During this process state-level operational mechanisms were set up, comprising of a state level Mentoring Committee or Advisory Group, a state Nodal Agency which took over the responsibility of steering the process; as well as district and block-level implementation agencies. The role of these implementing agencies was to develop the capacity of Village Health and Sanitation Committees (VHSC) to conduct an enquiry using the prescribed tools and towards preparing report cards. These report cards were subsequently shared at public platforms called Jan Sanwads (Public Dialogue) which were attended by block and district level health officials. Following presentation of the report cards, plans were drawn up to improve service delivery. The AGCA-led process was limited to one round of community monitoring in the 9 states. In some states like Maharashtra, Karnataka and Rajasthan where subsequent rounds of community monitoring took place, there were substantial improvements in people's ratings of services, with changes in report cards. A recent small scale study in Orissa showed substantial improvement in maternal and child health service delivery through Village Health and Nutrition Day as a result of the Community Monitoring processes.

Annexure 3

Two Examples of Participatory Approaches to Health Care

Two countries with successful participation of community in healthcare are Thailand and Brazil. Both have created special structures which facilitate citizen participation and involvement in health planning (participatory budgeting and planning). Below briefly we describe Thailand Health Assemblies and Health Council in Brazil.

Health Assemblies in Thailand:

The first national health assembly was convened in 2001 by National Health Systems Reform Committee. But it was only in 2007 that the National Health Act came into existence. One of the key mandates of the Act was setting up of National Health Commission (NHC) and office (NHCO - secretariat) which would convene annual health assemblies.[1] The NHC comprises of the Prime Minister and 39 other members, evenly divided between and nominated from government, academia and health professionals, and civil society organisations. The NHC sets up the NHA organizing committee (NHAOC) which oversees all the processes related to convening the National health assembly (NHA). To be able to participate in the NHA, one needs to be part of a constituency recognized by the NHA regulation - these can be area based (from each province), civil society, government agencies, academia, private sector and health professionals. In the NHA all the constituencies' sends proposals for review in the assembly, the secretariat prioritize the issues to determine the agenda of the assembly and then helps prepare the technical briefing documents (supported by technical experts) for each agenda along with the associated stakeholders. Apart from the plenary sessions to arrive at consensus, there is a provision to make a 5 minute speech for all constituencies. The decisions of the NHA are consensus based rather than based on votes. The recommendations coming from the NHA are forwarded to NHC. It is the responsibility of NHC to ensure that steps are taken towards realizing the recommendations.[2] Other than the National Health Assembly, there are two other types of health assemblies - Area based (these are based on location and include provincial and regional level) and issue based (focus on a particular issue like youth, water management etc.) assemblies; unlike the NHA, these are held by citizens, CSOs etc under the support of National Health Commission Office.[3]

Health Council in Brazil:

It was in 1988 that the citizens charter of health was introduced, and it is Law no. 8.142, which supervises and emphatically talks about the participation of the community in the management of the Health System along with inter-government transfer of financial resources.[4] It also emphasizes the powers of different participation forums including health Councils. The Health Councils of Brazil are bodies comprising of citizens, health professionals, governmental institutions, and providers and producers of health services. These exist at federal, state, and municipal levels of the government. The National Health Council (CNS) is present at the federal level and has 48 Council members.[5] The CNS holds monthly meetings along with organizing commissions etc. on special topics. At each level the Councils comprise of citizens (civil society) who constitute nearly 50% of the Council along with representatives from health professionals and health managers both public and private.[6] Council members also include vulnerable groups such as women, people with specific pathologies, minority groups etc. and expert groups such as scientific institutions. These Councils audit health plans, budgets, discuss issues

and determine priorities in health. The extent of their influence is such that they can stop transfer of funds from the ministry of health if they reject the plan made by the health secretariat. The municipal councils are funded by transfer from the federal government based on the rules and regulations pertaining to the Ministry of Health Basic Operating Rule of 1993.[7] The municipal council meetings are held once a month and by law the municipal health secretary is the president of the Council (but no power to vote unless to break a tie). Similarly at the federal and state levels the Ministry of Health and the State Secretary of Health are members of the Councils.

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Chapter 7

Social Determinants of Health

The original terms of reference to the High Level Expert Group did not include the Social Determinants of Health (SDH). Recognising that Universal Health Coverage (UHC) will be difficult to attain and sustain without action on the wider determinants of health, the HLEG decided to add a section on SDH. This chapter highlights the importance of SDH and the nature of actions which need to be taken. It does not provide a detailed discussion on the various social determinants or the multi-sectoral actions needed. We strongly recommend that the Planning Commission, as a whole, address SDH in an integrated manner while developing the Twelfth Plan.

1. Contextual Background & Introduction to Social Determinants of Health

In a rapidly globalising world, millions continue to experience profound inequities in health, living, working, and too often, dying in conditions of poverty, exclusion, and disenfranchisement. The greatest successes of health system reform- be it primary health care in Cuba, the right to health paradigm of Brazil, or abolishing out-of-pocket spending in Thailand[1,2,3] -have addressed the wider determinants of health inequities as a national priority, implementing reform through both policy changes and grassroots-based action.

The World Health Organisation's Commission on Social Determinants of Health (CSDH) embedded the goal of universal health care in strategies that include improving daily living conditions, tackling the inequitable distribution of money, power, and resources, as well as measuring and understanding health inequities.[4,5]

The Commission's 2008 report defines health inequities as "systematic differences in health" that are "avoidable by reasonable action," and are "quite simply, unfair."[6] It proposes to terminate these systematic differences, i.e. close the gap in a generation, the space of 30 to 40 years, through action on the social determinants of health.[7]

The CSDH defines the Social Determinants of Health (SDH) as "the conditions in which people are born, grow, live, work and age, including the health system."[8] It encourages countries to provide Universal Health Coverage to address health inequity directly. The report acknowledges, moreover, that health inequities arise not only from within but also from beyond the domain of health, through other social determinants, including the "unequal distribution of power, income, goods, and services, globally and nationally, the consequent unfairness in the immediate, visible circumstances of people's lives - their access to health care, schools, and education, their conditions of work and leisure, their homes, communities, towns, or cities - and their chances of leading a flourishing life."[6]

It is already well established that among the most critical social determinants of health is the health system itself.[9,10] In India, the movement towards Universal Health Coverage (UHC) will necessitate reform of the health system. In addition, Universal Health Coverage will only be possible if there is accompanying action on social determinants like food and nutrition security, social security, water and sanitation, work and income security as well as social inclusion and equity across gender, caste and religious categories. In addition, macroeconomic policies in the country will also have a significant bearing on Universal Health Coverage.

India is marked by disparities in both exposure and vulnerability to diseases and access to health services, with the poorest and most disadvantaged being most affected. The latter include urban and rural poor, women, children, specially-abled persons, and the traditionally marginalised and excluded like Adivasis, Scheduled Tribes (ST), Dalits, Scheduled Castes (SC) as well as ethnic and religious minorities. Universal Health Coverage will require reducing such stratification by increasing reach, removing barriers, and including supportive services. Action on the social determinants of health, by addressing various inequities in society at large, will in turn enable greater movement towards equity in the health system.

2. The Rationale for a Social Determinants Perspective in the Indian Context

The need for action on social determinants emerges from the recognition that there are huge differentials among and between classes and castes, gender gaps and wide regional variations in both disease burden and response by the health system and others concerned with development.

a) Nutrition and Food Security

More than a fourth of the world's hungry are Indians. As per the WHO's standards, 40% of Indian children under the age of 3 are underweight, 45% are stunted and 23% have wasting (see Annexure 2). Malnutrition itself is the result of several other determinants that have extended and extenuating lifetime impact on the health and wellbeing of women and their children.[10] Even economically developed states - Gujarat, Maharashtra, Andhra Pradesh and Karnataka - have high levels of food insecurity.[11] As per the New Delhi Birth Cohort, the population attributable risk of being underweight is 28% for 6 month olds, as compared to 18% among 5 year olds - clearly the concentration of nutrition-related morbidity follows a reverse age gradient, rendering the youngest most vulnerable.[12] The focus of India's current nutrition programmes has become supplementary nutrition and preschool education for 4-6 year olds, belying the need to focus adequately on the first 2 years of a child's life - critical to prevent under-nutrition and its sequelae.[12] Even as breastfeeding should be advocated as a universal practice up to at least six months of the infant's age, the circumstances that govern the life of a poor working mother (who has access to neither maternity leave nor a nearby crèche) must be borne in mind. In urban areas, the decline in food insecurity between 2000 and 2006 has been by a margin of only 0.4%, out of step with the 6% growth rate in the same period.[13] Nutrition is a social determinant of health and is itself influenced by many other social determinants. Vertical programmes will, therefore, not provide complete or lasting solutions.

b) Water and Sanitation

There is a clear correlation between inadequate and poor quality of water or sanitation and health. A study of urban poor communities in Mumbai found that water-related illnesses accounted for almost a third of all morbidity in the last year among adults, and almost two-thirds of all morbidity among children.[14] Another study in five Indian states found a negative correlation between the provision of household toilets and community level prevalence of communicable diseases including cholera, typhoid/enteric disease, diarrhoea/vomiting, hepatitis, nematodal infections as well as malaria and dengue.[15]

A 2002 Planning Commission report expressed alarm over the 'rather extensive presence' of fluoride and arsenic in Indian drinking water, which is associated with a number of cancers (of the skin, lungs, kidneys, and bladder).[16] According to the Water and Sanitation Program, the cost per Disability Adjusted Life Year (DALY) of poor sanitation in urban areas is estimated at 5,400 INR.[17] Another major finding is that use of improved facilities is strongly correlated with sanitation related knowledge and hygiene-promotive attitudes.[14,15, 18]

c) Social Exclusion

In rural India, women are three times more likely than men to go without treatment for long-term ailments, a trend that persists even amongst the non-poor. When treatment is sought, significantly smaller sums of money are spent on treatment of women than on men.[19] Provisional data from the 2011 Census suggests that gender inequity is a persistent and worsening phenomenon in India, occurring throughout the life cycle: a 13 point decline in the male-female sex ratio from 927 females per 1,000 males in 2001 to 914 females per 1,000 males in 2011 suggests that as more families are having fewer children, gendering of sex composition is rising.[20] Girls that survive till adolescence must navigate situations of both wanton neglect and unwanted attention: a study of backward districts in 12 Indian states in found that 88% of adolescent girls were undernourished while almost two-thirds (64.6%) reported some form of sexual abuse.[21] (For more information, see Chapter on Gender and Health)

Apart from gender, social status is also associated with systemic neglect and poor health. Caste and social stratification in India determine health, education, employment, social, and economic outcomes.[22] For example, Indians in the lowest socio-economic stratum presently experience cardiovascular disease in greater proportions than those in higher strata.[23] National Sample Survey Data (NSSD) reveal that, controlling for a number of determinants (such as gender, residence in a forward or backward state, urban or rural area, living conditions, and socio-economic status), the mean age of death was 5-7 years lower among STs and SCs and 6-9 years lower among Muslims in comparison to Hindus.[24] 2006 data from Kerala suggest that even in a state with good health outcomes, the odds of reporting poor health are 88% higher among ST/SC and 73% higher among OBC women as compared to forward castes.[25] The gravity of caste- based social exclusion is seeing recognition in the incorporation of this indicator in the 2011 Census.

The health of tribal populations is also of particular concern. The latest National Family Health Survey (NFHS 3) found a complete lack of treatment for diarrhoea for over a third of respondents from Scheduled Tribes (36.3%), as compared to 27.6% among Scheduled Castes (SC), 28.2% among Other Backward Castes (OBC), and less than a quarter among the rest of the Indian population (23.8%).[26] Multiple studies have found that tribal children face the greatest incidence of malnutrition in India, particularly in the states of Jharkhand, Bihar, Madhya Pradesh, Chhattisgarh, Odisha, and West Bengal.[27]

There are significant inter-state differences in health. The infant mortality rate in the state of Kerala is 17 deaths per 1000 live births as compared to 111 deaths per 1000 live births in Madhya Pradesh.[28] According to the 2011 Census, while Punjab's child sex ratio improved from 798 females per 1,000 males in 2001 to 846 females per 1,000 males in 2011, this figure still remains among the lowest in India.[20] Moreover, while maternal mortality declined by 32.4% between 2001-2003 and 2004-2006 in West Bengal, Haryana registered a 3% increase in the same period.[29]

d) Work (In)Security, Occupational Health and Disasters

Globalisation and the concomitant casualisation of labour have resulted in the growth of informal economies that account for 93% of the Indian workforce. Migrant workers are among the poorest and most exploited, performing low level, unskilled and hazardous work.[30] This population faces significant disease burdens including musculoskeletal injuries, chronic obstructive lung diseases, toxic chemical exposure and poisoning and noise-induced hearing loss.[31]

Rapid urbanisation has spurred concentration of services and industries in cities, at times making them epicentres of protracted public health disasters, like the 1984 methyl-isocyanate leak in Bhopal.[32] In rarer cases, like the plague in Surat,[33] crises have catalysed reforms in sanitation and health services. Civil conflict is also associated with poor health: political combatants and refugees in Chattisgarh face syndemics of malnutrition, malaria, and other communicable diseases.[34]

e) The Foundation for Action on Social Determinants of Health in India

While the above factors underscore the need for urgent action on social determinants in the context of Universal Health Coverage, the foundation for such a move already exists. In addition to the Indian constitutional guarantee of the Right to Health as part of the Right to Life, Universal Health Coverage requires "Ensuring equitable access for all Indian citizens resident in any part of the country, regardless of income level, social status, gender, caste or religion, to affordable, accountable and appropriate, quality health services (promotive, preventive, curative and rehabilitative) delivered to individuals and populations, as well as services addressing wider determinants of health."[35] As per this definition, if the financially insecure, the socially excluded, or the politically marginalized lack access to health services or to social determinants affecting health, such as food, housing, or income security, the universality of health coverage is compromised and may be unattainable. In other words, for health coverage to be universal, the drivers of health inequity - the social determinants - must be addressed.

India's approach towards health reform has historically endorsed a social determinants perspective, and continues to do so. Social determinants have been acknowledged and prioritized in the Bhore[36] and Sokhey reports, [37] as well as the 2010 Annual Report to the People on Health, [38] and the draft National Health Bill.[39] The Sokhey report held that the state is to "provide not only the necessary means of curing disease when it occurs, but also for preventing it by bringing about an environment and conditions of living which would prevent the germs of disease taking hold…[through] an organised public service."[37] The 2010 Annual Report is more specific, highlighting nutrition, access to safe drinking water, education, as well as poverty and marginalisation as key social determinants of health in India. The Draft National Health Bill indicates that health interests will guide the creation of minimum standards for food/ nutrition, water, sanitation and housing, adding that an individual's right to the highest attainable standard of health cannot be impaired on grounds of social or economic status (including gender, religion, language and perceived or actual health status).[38]

There are many examples of programs addressing equitable access to health care, emerging from civil society, the public and private sectors, and from collaborations between them (see Annexure 1). These examples set precedence to move forward with a convergent agenda of action on the social determinants of health.

3. Acting on the Social Determinants of Health

As indicated by the CSDH and the case studies appended to this paper, what is required to enable UHC is action on multiple, intersecting and overlapping social determinants. There are several initiatives of the government currently that have the potential to positively impact the well-being of all citizens, especially the poorest. These include:

- The right to food under the proposed National Food Security Bill, (NFSB) wherein 90% of rural and 50% of urban poor families will be entitled to food.
- Reforms in the Public Distribution System (PDS), as enunciated in the NFSB, with an emphasis on local procurement, local storage, and local distribution. Local procurement will include nutritious food grains like millets which could improve nutrition and health.
- Recognition of the integral role of healthcare, water and sanitation and agriculture, among other factors, for food and nutrition security in the NFSB, and call for action on these.
- Reforms in the Integrated Child Development Scheme (ICDS) with a strong focus on pregnant and breast-feeding women, children under 2 years, early identification of malnourished children and mothers, and their treatment. Convergence with the health system is recommended.
- Extension of Rashtriya Swasthya Bima Yojana

(RSBY) and other social protection measures to mere occupation categories within the informal economy, thereby providing health insurance to the poorest of workers.

- Recognition of land and forests as crucial assets of the poor on which their very livelihoods and very survival depend, and hence, enactment of laws to protect these assets.
- The Right to Education for all children of our country.

4. Recommendations for Social Determinants of Health

The HLEG endorses this on-going action on social determinants. In addition to the above, it recommends the following:

Recommendation 1: Initiatives, both public and private, on the social determinants of health and towards greater health equity should be supported.

These may include pilot programmes and on-going ones. Impact on health and other indicators must be carefully assessed. Based on the findings, the pilots may then be scaled up and/or adapted to different settings.

Recommendation 2: A dedicated Social Determinants Committee should be set up at the district, state and national level.

The committee would operate at the national, state and district level and comprise civil society organisations with rotating membership and involvement of health policymakers. The Health Councils (proposed in the chapter on Community Participation and Citizen Engagement) can perform these functions, if their membership were broadened to include other development and social sectors. Each committee's functions would be to:

- Review current status vis-a-vis convergence of all developmental programmes.
- Examine and advise on convergence of developmental programmes to ensure implementation. This could be done in phases. For example, India could tackle the problem of malnutrition in rural areas through immediate convergence of ICDS, NRHM and the Public Distribution System (PDS). Specifically, this would involve clear outlining of roles, recognizing overlap and building synergies, especially at the point of contact with beneficiaries of these programmes (See Box 1).
- Examine the feasibility of pooling and rationalising resources for maximising outcomes. For example, dovetailing of the National Urban Health Mission with Jawaharlal Nehru National Urban Renewal Mission (JNNURM) and other programmes for urban infrastructure of the Ministry of Housing and Urban Poverty Alleviation.
- Review the progress of and remove operational hurdles against such amalgamation.

BOX 1. EXAMPLES OF CONVERGENCE AT GRASSROOTS LEVEL

a) Food - Under the proposed Food Security Bill, families will be entitled to 35 kg per month or 20 kg per month (depending on whether they are in the priority or general category respectively) which will be provided at their doorsteps. Hot, cooked food will be provided through the Integrated Child Development Scheme (ICDS) and there will be special maternity benefits for women. Several PDS reforms have been suggested. Community Health Workers (CHWs) and other local health personnel could work closely with the ICDS anganwadi worker and ANM to ensure that all children and pregnant women who need it, get access to food grains via Public Distribution System (PDS) and cooked food at the ICDS centre. Monitoring the PDS and identifying malnourished children and women for further and immediate referral could be one of the responsibilities of the CHWs.

b) ICDS - CHWs could ensure, along with the Village Health & Sanitation Committees (VHSCs), that the ICDS centres are first and foremost open, serve all children and women regardless of caste and community, that they are actually providing food of good quality and also undertaking the other activities (immunisation, health check-ups, referral, early childhood education etc).

c) Water and Sanitation - The VHSC, the Rogi Kalyan Samitis (RKS) and the CHW-cum-nurse team we are envisaging could work with the rural development department to ensure that the Total Sanitation Programme is actually implemented and that garbage is removed in the village, water does not accumulate etc. In urban areas, local health workers (link workers) would ensure that urban dwellers get the basic amenities from their municipalities (in turn financed by the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) of the Ministry of Housing & Urban Poverty Alleviation).

d) Social Protection - Implementation of the Rashtriya Swasthya Bima Yojana (RSBY) of the Ministry of Labour and proposed maternity benefits scheme (in a few pilot districts) could be facilitated by the CHWs team at local level.

Recommendation 3: Include Social Determinants of Health in the mandate of the National Health Promotion and Protection Trust (NHPPT) (see chapter on Management and Institutional Reforms) such that:

At the state level, HPPT chapters should examine health implications in other sectors, thereby creating enabling environments for health. HPPT chapters should be responsible for the development, administration and dissemination of WHO-recommended Health Impact Assessments[40] of policies relevant to health (eg. nutrition, hygiene, infrastructure) in phases of planning and implementation as appropriate. Specific areas of inquiry may include air and water pollution, sanitation, agriculture (food production, processing and quality), occupational exposure and health, as well as transport/urban design.

HPPTs should vigilantly assess trade, technology, infrastructure and related policies with bearing on health equity, such as Free Trade Agreements, which have implications for India's autonomy vis-a-vis drug production, pricing, and patents.

At the national level, the HPPT should initiate a macro-policy initiative across ministries and government departments to catalyse action on the WHO-recommended Health in All Policies framework[41] (see Annexure 1, Case Study Seven). This framework introduces health as a priority in the planning and implementation of ministries and departments involved with social determinants of health (such as chemicals, trade, agriculture/food, housing and transport, rural and urban development).

Recommendation 4: Develop and implement a Comprehensive National Health Equity Surveillance Framework, as recommended by the CSDH.[42]

The goal of this surveillance system will be to map the nation's progress in closing gaps in health equity. In some states of India, panchayat level indicators have been developed in collaboration with State Health Resource Centres (see Annexure 1, Case Study Five). Scaling up of such efforts at the panchayat and ward level will be facilitated by HPPT chapters in collaboration with SHRCs, local governments, and civil society.

Systems-level health equity surveillance will be coordinated with Health Systems Evaluation Units (see chapter on Management and Institutional Reforms) with disaggregated information up to at least the district level, and preferably up to the block level. This data will be routinely disseminated by HPPTs at regional health assemblies (see chapter on Community Participation and Citizen Engagement for detailed information on the governance structure and functioning of health assemblies).

In a country characterised by rapid industrialisation and economic growth along with demographic and disease transitions, it is vital to address issues and challenges in achieving health equity. In addition to some of the key determinants mentioned here, additional issues will emerge, such as the complex interactions between health and climate change.

The CSDH's ultimate aim is to stimulate action to reduce health inequalities within and across nations. By moving towards universal health coverage with action on social determinants, India can contribute to the larger cause of equity and social justice.

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Annexure 1

From Domestic Experience

Case Study One: SEWA - women's economic empowerment[1]

SEWA was formed in 1972 by a group of poor, mostly illiterate self -employed women, led by Ela Bhatt, a labour lawyer. Its initial activities focused upon organising workers without a formal employer-employee relationship into their own union. Gradually, SEWA's focus broadened to issues of livelihood and employment protection emphasizing economic security (income and employment, access to credit, ownership of assets) and social security (improved housing, education and training, health care, child care, insurance and pension). SEWA members have Identity cards, giving them the visibility and recognition that is their due. Once they join the union as members, they obtain access to a number of services that promote and protect women's employment, such as microfinance and health care through cooperatives, and marketing of products without middle men, to mention a few.

In the 1990s, SEWA developed the PARIVARTAN programme for slum upgradation, a partnership with the Ahmedabad Municipal Corporation, SEWA Bank, Community Based Organisations (CBOs) promoted by SEWA and led by local women and the private sector. The focus was on seven basic services - individual water connection, individual toilets, storm water drainage, paved roads, streetlights, garbage removal and landscaping. An impact study found significant improvements in health, reduction in health expenditure, increased school-going and enhanced earnings and savings.

SEWA has organised women to act on different aspects of their lives and towards their basic needs: work and income security, integrated financial services, food security and social security. Today it is a union of 1.3 million women from nine states in India, and the largest such women's union in the country.

Case Study Two: Naz Foundation- civil society advocacy against social exclusion[2]

Naz Foundation (India) Trust was established in 1994 by Anjali Gopalan based on a similar model in the UK focused on HIV/AIDS and sexual health of marginalized communities. Naz currently operates an outpatient health clinic in New Delhi, a care home for HIV/AIDS orphans, home-based medical care and support for People living with HIV, and peer education on issues of sexuality and sexual health in particular with youth and communities of men who have sex with men. For the latter group, a Drop in Centre has been created that has face-to-face counselling, social activities and support group meetings as well as a support helpline.

In September 2001, Naz petitioned the Delhi High Court with a Public Interest Litigation to challenge Indian Penal Code (IPC) Section 377, a colonial ruling that issues punishment for "carnal intercourse against the order of nature," applied to penalise same sex relations in India. Drawing upon a coalition of "Voices against 377," in 2008, hearings on the issue in the Delhi High Court ended with the Home Ministry supporting IPC 377 and the Health Ministry opposing it. On July 2, 2009, the Delhi High Court held that IPC 377, unless amended, was violative of Articles 21, 14 and 15 of the Constitution. The Section was struck down with the exception of non-consensual non-vaginal intercourse and intercourse with minors. This organisation has demonstrated the strengths of broad constituency building focusing on addressing social exclusion on a

legal platform, in addition to providing support to the most marginalized in absence of legal recourse and protection.

Case Study Three: Jayashree enterprises--Income generation for menstrual hygiene

Menstrual hygiene relates to a number of Millennium Development Goals (MDGs): universal education (MDG 2) because it stands between girls and completion of education upon reaching menarche, gender equality (MDG 3) because women are disproportionately affected by a number of unique health-related concerns from menarche to menopause, maternal health (MDG 5) due to the reciprocal link between menstrual hygiene and parturition, environmental sustainability (MDG 7) since eco-friendly sanitary disposal is among the chief concerns for communities seeking the introduction of feminine hygiene products at scale, and global partnerships (MDG 8) since the most recent of innovations to improve menstrual hygiene involve collaboration between local and national governments, innovators, pharmaceutical and other multinational corporations and communities.[3]

A unique example of this kind of convergence is Jayshree enterprises, an operation begun by A. Muruganantham in 2006, which supplies women's self help groups an wood-based sanitary napkin-producing machine.[4] Thus far, over 250 machines are in operation across 18 states and several hundred women are franchisees, some earning from over 5,000 to over 10,000 Rupees a month.[5] Pilot data from product development and women producers suggests that the product is more effective than cotton based pads and can last a whole day, offering relief in particular to rural Indian women. This initiative has won accolades from the Indian President and is now a model of gender-sensitive cost-effective community-run hygiene practices.[6]

Case Study Four: Swasthya Panchayat Yojana Chattisgarh[7-9] convergent village level health planning

From the year 2006 onwards, the Chattisgarh State Department of Health and Family Welfare, in collaboration with the State Health Resource Centre (see Annexure 1, Case Study Five), developed the Swasth Panchayat Yojana, a scheme to enable Panchayat members to assess health services, be ranked on the basis of their performance in health, encourage convergence for health, and implement participatory health governance.

From its inception, the programme was coordinated as a feature of the Mitanin Programme of community health workers, bringing them into direct interaction with Sarpanchs and Panchs (head and other representatives) of Panchayati Raj Institutions (PRI). Based on widespread community-based discussions, hamlets/habitations were chosen as the analytic unit, in order to bring out intra-panchayat variations. Based on hamlet-level data, an inclusive health plan could be developed, that addresses internal disparities, as well as inter-panchayat variations. In 2007, 32 hamlet/habitation level indicators were developed related to health outcomes (including indicators related to immunisation, birth weight, malnutrition, waterborne illness, etc.), access to health care services (including indicators related to Mitanin service delivery, institutional deliveries, uptake of sterilisation, use of mosquito nets), community behaviour related to health and the social determinants of health (including breastfeeding practices, use of toilets, early marriage, birth spacing, etc.).

Nearly 3,000 Mitanin trainers were trained to gather and compile data from around 60,000 rural hamlets, which were then fed into a computerized database and analysed to arrive at a Health and Human Development Index (HHDI). Panchayats in

each block are ranked based on the Index, on the basis of which the state disburses cash awards to the best Panchayat and offers additional technical and program support to the weaker ones. As of 2009, HHDI values are available prepared for 9141 out of 9820 Gram Panchayats of the state, and more than 1500 Gram Panchayats have prepared local health action plan based on them. Since 2010, the scheme introduced Panchayat Fellows in districts to ensure village level planning in collaboration with over 800 Village Health and Sanitation Committees, initiate problem-solving measures to over 650 locally identified health problems and implementation of over 300 village health plans.

Case Study Five: Lessons from the State Health Resource Centre Chhattisgarh [10,11]

The State Health Resource Centre Chhattisgarh (SHRC) was set up in 2002 by the State Department of Health and Family Welfare (SDHFW), Chhattisgarh, and health-related civil society organisations operating in the state (notably ActionAid India), on the heels of a national level consultation on health. Alongside the formation of an interdisciplinary State Advisory Committee to guide health sector changes, the SHRC was instituted to conduct supportive health systems research, prepare health-related plans, and provide techno- managerial support for implementation of those plans. Additionally, the SHRC was entrusted a lead role in facilitating community participation, health promotion and capacity building, mainly implemented through the Mitanin programme [comprising over sixty thousand female community health workers (CHWs) generating awareness and delivering key health services in rural areas, which critically shaped the design of Accredited Social Health Activist (ASHA) programme under the National Rural Health Mission (NRHM)]. The SHRC takes the lead in convergence initiatives as well, on health determinants and decentralised health governance through Swasth Panchayat (see Annexure 1, Case Study Four) and other initiatives.

The SHRC Governing Body is chaired by a civil society expert, and most of its members are from civil society organisations, with additional representation from the SDHFW. The director and staff of SHRC are selected through an independent process. To ensure its autonomy, it has been made to function not under the direct control of the department but under a MoU with the department. Supported through initial external funding from the European Commission, it is now funded largely by the National Rural Health Mission (NRHM), with programmatic support from some non-health government departments and non- government funding agencies.

Key contributions of the SHRC include the workforce management study, state human resources development policy, rational drug policy, essential drug list, the state drug formulary, standard treatment protocols, Jeevan Deep participatory hospital management scheme, Chhattisgarh clinical establishments act, mainstreaming of AYUSH, and developing the model of community based monitoring for NRHM. For its contributions, the NRHM has deemed the Chhattisgarh SHRC a model technical support institution.

From International Experience

Case Study Six: International Policymaking on Tobacco Control

The Commission on Social Determinants of Health has endorsed the Framework Convention on Tobacco Control (FCTC), the first public health treaty negotiated by the World Health Organisation in 2005 as “an excellent (if rare) example of coherent, global action to restrain market availability of a lethal commodity.” The FCTC has a strong focus on countering the illicit trade in cigarettes and reducing demand for tobacco products, and enjoys an exceptionally high ratification of 168 signatories and 175 parties. At five years of implementation, the highest implementation rates were those concerning smoke-free public places

(Article 8), the banning of sales to and by minors (Article 16), communication and public awareness programmes (Article 12), strong health warnings on tobacco packages (Article 11), and disclosure of the content of tobacco products to government authorities (Article 10).[12]

In India,[13] a combination of excise taxes are levied on tobacco products, although income from taxes is not in turn used for tobacco control activities. Communication and awareness programmes in the general and school-based populations are part of the National Tobacco Control Program. As of 2008, smoking in public spaces is also prohibited in large part across the country (especially government buildings, health care facilities, educational facilities, private workplaces, public transport, and in many restaurants, bars, and cultural facilities). Pictorial health warnings on cigarette packets are going into effect in 2011.

While FCTC has been criticized for not addressing issues of tobacco supply and trade liberalisation, which has an established impact on smoking in low-income countries in particular,[14] it has distinguished itself as international conventions enjoying wide endorsement and relatively high levels of convergent implementation across levels (the tobacco industry, as well as a variety of sectors including education, employment, transport, and leisure).

Case Study Seven: South Australia's Health-in-All-Policies Framework[15]

In 2007, the state of South Australia adopted and developed 'Health in All Policies,' a policy framework that places health inequity as a central process of government, instead of being a health sector initiative. This attempts convergence across other sectors - giving it a central priority in the state's main planning document, the South Australian Strategic Plan. The state went through a phased process of preparing and raising awareness. As a proof of concept, with international expertise and guidance, all state sectors demonstrated the value of the 'Health in All Policies' approach for their own goals, as well as broader societal gains.

Currently, this process is in implementation phase: a range of projects involving different sectors are underway, including water security, migrant settlement and access to digital technology. Lessons from this model for international adoption are firmly shaping international policymaking on SDH (including through the Adelaide Statement on Health in All Policies) including a strong cross-government, centrally coordinated focus, flexible and adaptable methods of enquiry, using health lens analysis, ensuring mutual gain and collaboration, the allocation of dedicated health resources for the process, and a larger understanding of shared decision-making and accountability.

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Annexure 2

*Mr. Amarjeet Sinha

Fighting Malnutrition and Anaemia

Adopting a human development approach

That India's indicators for under-nutrition are worse than Sub Saharan Africa is well known. The government has been trying to find a way of tackling malnutrition and elaborate discussions in the Planning Commission and the NAC has been going on for some time. The Integrated Child Development Services (ICDS) has come in for criticism as many see it as the only programme to tackle under-nutrition. It only displays a poor understanding of nutrition and the limitations of shackling it in narrow departmentalism - nutrition needs a much more convergent human development thrust.

High level of malnutrition is clearly a blot on Indian democracy. This is a critical policy failure that has a bearing on low levels of learning among children and unsatisfactory health indicators of our country. It is also a failure of convergence, besides being reflective of state failure in securing basic entitlements to food, nutrition, water, sanitation, education and health care. Countries like China, Brazil, Vietnam, and Thailand have demonstrated how India can also make a significant difference to under-nutrition by adopting a public health perspective.

Government of Bihar's recent decision to set up a Human Development Mission under the Chief Minister, with 12-14 well defined outcomes, and each having 2-5 process indicators with agreed means of verification, is a very good step in the right direction. There is a need to adopt a human development approach to fight malnutrition and anaemia. It is time to shed narrow departmentalism and petty turf issues; malnutrition is not a department's mandate - it is a government's mandate!! Government of Bihar's recently launched 'Nayee Peedhee Swasthya Guarantee Karyakram' to cover each and every of the 3.4 crore 0-14 age boys and0-18 age girls for health check up, health card and complete referral follow up, is also an effective way of reaching every child and girl adolescent to attack malnutrition, anaemia and low age at marriage.

Under nutrition levels in India are very high. India is home to one third of World's under-nourished children. As per the National Family Health Survey 2005-06, 46% under 3 children are under weight. While only 11.9% children are malnourished in the 0-6 month period, it increases to 58.5% in the 1-2 year olds. 70% children in the 6-59 month period are anaemic. 38% under 3s are stunted (height for age - under nourished for some time - chronic under nutrition) and 19% are wasted (weight for height - caused by recent illness). There is variation across States with Madhya Pradesh having the highest number (60%) of malnourished children. Using WHO's growth standards, 40% under 3s are underweight, 45% are stunted and 23% are wasted. With 55% women being anaemic and every third woman being under-nourished (35.6% with low Body Mass Index), there is a need to simultaneously address the 0-3 year child, the pregnant woman and the adolescent girl in order to address the inter-generational cycle of under-nutrition.

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It is possible to make a difference - global evidence

The statistics are really damning as there is global evidence of reduction in under-nutrition over a short period of time. A few examples are as follows:

- In People's Republic of China, life expectancy increased from 35 years to 67 years and Infant Mortality Rate dropped from 200 to 42, between 1949 and 1979. This happened on account of five very basic measures - food security, clean water and sanitation, basic public health measures, a barefoot doctor in every village and full immunisation. Between 1990 and 2002, child malnutrition reduced by more than half, from 25% to 8%.
- Thailand halved child malnutrition from 50% to 25% between 1982 and 1986 through a network of Community Health Volunteers.
- Vietnam reduced malnutrition from 45% to 27% between 1990 and 2006.
- Brazil reduced child malnutrition from 18% to 7% between 1975 and 1989. During the same period, IMR came down from 85 to 36.

The common factors behind success

The success in the countries listed above is attributable, in most cases, to very basic interventions - Community Health Worker, food security, guaranteed clean water, sanitation thrust, focus on behaviour change communication, full immunisation, basic public health measures, and a functional primary health care system.

Addressing the 0-36 month age group - need for early preventive action

Malnutrition is the result of a very large number of deficits that a woman and her child suffer over a prolonged period. While food is an important and critical deficit, it is not the only one. Very basic health care and behaviour change deficits can be equally debilitating for an infant and her/his mother. FOCUS Survey 2006 reported that 50 percent children had symptoms of fever or diarrhoea or persistent cough or extreme weakness or skin rashes or eye infection during the two weeks preceding the survey. All these ailments are simple, neither requiring a Specialist nor even an MBBS doctor for treatment. All they required was a well trained Community Health Worker with a basic drug kit, working under the supervision of an Auxiliary Nurse Midwife of the Sub Centre. Similarly cultural or behaviour change deficits like age at marriage, breast feeding during first hour of birth, care of pregnant women, nutrition and health education of adolescent girls, are equally critical in fighting malnutrition. Female literacy, women's empowerment, community action, ante natal and post natal care, continuous monitoring of an infant's health parameters, quality of drinking water and sanitation, are all equally critical in fighting malnutrition.

The Velugu Project in Andhra Pradesh, in partnership with NRHM, has demonstrated in over 400 villages, the power of caring for a pregnant woman and removing all nutrition and health care deficits. The incidence of low birth weight babies registered a dramatic fall. Similarly, a community movement for early breast feeding in Lalitpur district of Uttar Pradesh, demonstrates the power of community action and technical support for early breast feeding and its consequences for fighting malnutrition. Madhya Pradesh's Nutrition resource Centres have shown how Grade III and Grade IV malnourished children can be brought back to normal development through concerted in-patient care and support.

Need for a common institutional platform - habitation/hamlet as unit of action

The multiple dimensions of the problem of under-nutrition makes it imperative that a common institutional platform be established for water, sanitation, health, nutrition, education, food security, women's empowerment and livelihood guarantees with specific focus on under privileged social groups. Besides recognizing a habitation/hamlet as the

basic unit for concerted community action under the umbrella of the Panchayati Raj Institutions (PRI), it is important to develop a habitation/hamlet specific human development plan, using all the on-going programmes of the government like - NREGA, PDS, SSA, NRHM, ICDS, TSC, etc. A habitation level human development committee can be created under the PRI umbrella that also involves women self help-groups, etc. Since programmes like the Right to Food Security and Urban Health Mission are still evolving, these too should be firmly part of the common institutional platform for human development.

Panchayat and District Human Development Plan

A Human Development Plan should similarly be crafted at the Gram Panchayat level, the Panchayat Samiti (or the Block) level and the Zila Parishad or the District level. The District Human Development Plan should use all the on-going programmes conjunctively to ensure a norm based provision of well-defined services that help in reduction of under-nutrition. The District Human Development Plan should use all the existing programmes of government and will have an additional Rs. 40 - 80 crores (depending on the level of under nutrition, IMR, female literacy, poverty, human development index, etc.) annually to ensure service guarantees on key determinants of under nutrition. This additionality should not slow down the proposed resources through other initiatives. In a normative framework, it has to be ensured that certain basic minimum guarantees are ensured to tackle malnutrition. The District Human Development Plan should necessarily be approved by the District Planning Committee under the PRI system. The Zila Parishad Adhyaksha will head the Human Development Council and the District Magistrate/CEO Zila Parishad the District Human Development Executive Committee.

State level Human Development Mission

At the State level, the Human Development Mission should be set up under the Chief Minister with a clear time bound plan on key outcomes and process indicators. All programmes for human development (SSA, NRHM, TSC, PDS, NREGA, etc.) will come under the purview of this Mission. The State Human Development Society, the executive wing, could be chaired by the Chief Secretary. The Development Commissioner/ Principal Adviser Planning at the state level, could have a lean Secretariat to manage the additional funds provided for guaranteeing human development. These funds will be placed with participating Departments after appraisal and approval of the District Human Development Plans at the State level, in consultation with the respective Central Ministries and the Human Development Secretariat in the Prime Minister's office. The concerned Department/ Society shall be responsible for the implementation of interventions with these resources. The State level Secretariat under the Development Commissioner will carry out extensive evaluation, monitoring, review and external validation of progress through studies, etc. It will also ensure effective MIS in all the participating Departments/Missions, reflecting key indicators that matter in fighting under nutrition.

Human Development Council under the Prime Minister

At the Central Government level, the Prime Minister should Chair a Human Development Council, which could be a Sub Group of the National Development Council, with representation of State Chief Ministers, concerned Ministries and Departments, and experts on human Development. The Executive function could be carried out through a lean Secretariat for Human Development that will have approximately Rs.30,000 crores annually to provide as additionality to States, over and above the on-going programmes like SSA, NRHM, ICDS, PDS, NREGA, TSC, etc. This will be allocated to States on the basis of their levels of under nutrition and other human development indicators. For effectiveness, the Human Development Secretariat should be directly under the Prime Minister with a purposive selection of distinguished professionals who understand malnutrition and

public administration. Its role would be to carry external validation of progress, engage with experts on human development, coordinate among all the Ministries and States, and submit a periodic Report Card to the Human Development Council under the Prime Minister. The Human Development Council under the Prime Minister will have powers to carry out changes in all programmes brought under the Human Development Council. Its primary responsibility will be to co-ordinate with State Human Development Missions.

Revamping ICDS

While revamping ICDS key decisions will have to be taken with regard to what is it that will make a difference to the nutrition statistics of India. A few key priorities could be:

- Thrust on where the problem of under nutrition is - 0-36 months children, adolescent girls, pregnant women.
- Consider 3+ children going to School in Nursery sections or transferring ICDS centres in school premises for Nursery sections along with the Aanganwadi Worker, depending on skills of the worker.
- A community place for children, mothers, adolescent girls who cannot go to institutions like school.
- Existing habitation level community space could be used with additions wherever required. Where Aanganwadis are made in central community area, the same can become a community day care and nutrition centre for 0-36 month children, pregnant women and adolescent girls.
- Provision for food must be flexible and as per local context as needs are different.
- There must be a provision of nutrition professionals in every Block who can guide what needs to be done.
- There must be a common institutional framework from the hamlet level to the national level - the District Human development Plan.
- There must be untied funds for local innovations.
- Encourage home visits by creating an all women's team at village level.
- Behaviour change communication must also become a thrust.

Institutional Framework for community action

(i) Let a single village/habitation/hamlet level Health, Education Nutrition, Water & Sanitation Committee (a Human Development Committee at the habitation/hamlet level) be responsible for SSA, MDM, TSC, NRHM, PDS, Right to food and ICDS at the village level. A similar structure in urban context can be visualized. Let this Committee have adequate representation of women and vulnerable groups. Besides elected Panchayat leaders, they must have active SHG members, PTA/MTA/SMC members, Mahila Samakhya Volunteers wherever possible. Let all those who have the motivation but not the authority become key members of this Committee. The school teacher, the Aanganwadi worker, the Accredited Social Health Activist (ASHA) or other Community Health Worker must be members of this Committee.

(ii) A common Committee at the Gram Panchayat and Block Panchayat Samiti level for SSA, MDM, NRHM, TSC, PDS & ICDS should be formed. Let the Zila Parishad also have a common committee (the Human Development Committee) for these activities. All superior functionaries and institutions of these programmes must start working together - CDPO, Supervisor, MO PHC, ANM, Staff Nurse, CHC, BRC, CRC, AWW Training Centre, ANM Training Centre etc. Adequate management structures be created to ensure that basic skills for effective programme

implementation is available at Block and District levels - effective decentralized planning, community monitoring, financial monitoring, skill based capacities for health care and nutrition, training, community processes etc. Staff can be specific to programmes like SSA, NRHM, TSC, ICDS but there must be a common platform for action at all levels - Block level Mission for Human Development, District Human Development Mission.

(iii) Operationalize village specific planning process. Household and Facility Surveys should inform thist process with the Teacher, the Aanganwadi Worker and the ASHA playing a key role in this process. Develop broad framework of norms for food, space, equipment, number of workers, honorarium, health care, public health measures, Monthly Health Days, training, effective behaviour change communication, early childhood care and education, etc.

(iv) Allow Village Health, Sanitation, Nutrition and Education Committees to use illustrative norms conjunctively to ensure that all variables to fight malnutrition are adequately addressed. Key professionals at Block and Cluster levels can facilitate these processes of ensuring that a Village/Hamlet/Habitation Human Development Plan has taken care of all deficits.

(v) Assess need for a second Aanganwadi worker along with the ASHA to ensure visit to households. Rework compensation for Aanganwadi Workers and blend honorarium with performance based payments based on objectively verifiable indicators and events. Provide for career progression where ASHAs aspire to become Aanganwadi Workers, Aanganwadi Workers aspire to become ANMs, ANMs aspire to become Nurses. Local government, local criteria and local accountability in public recruitments.

(vi) Encourage hot cooked meals under Village Committee Supervision with a strong component of nutrition and health education. Demonstrate good practice using local food. Community Centre for local action.

(vii) Ensure availability of basic drugs and equipment for health care and growth monitoring in each village. Fighting disease is as important as providing food. Prepare Sub Centres/PHCs/CHCs to tackle malnutrition more effectively.

(viii) Intensify behaviour change communication campaigns for age at marriage, exclusive breast feeding and subsequent role of supplementary nutrition, birth spacing, nutrition and health education etc.

(ix) Institutionalize Monthly Health Days at every Aanganwadi Centre - ANC, PNC, Immunization, malaria, nutrition and health education, women and child health monitoring, focus on adolescent girls, ORS, iron supplementation, larvicidal measures, cleanliness drives.

(x) Create platform for adolescent girls in every village. Thrust on health education, school education, skill development, personal hygiene, use of innovative low cost sanitary napkins, etc.

(xi) Cost the whole programme of human development district wise. Break away from Central Government and State Government responsibility separately. Work towards 75:25 sharing or a per capita based equalization grant for States, between Central Government and State Governments across programmes. Accept the principle of sustainable financing over a ten year time frame 2010 to 2020.

(xii) Move to rights based approach. Allow for need based Human development interventions. More financial resources will be needed - it is cheaper than a whole generation of permanently and irreversibly debilitated malnourished children growing up into adults whose human capabilities are completely compromised.

Chapter 8

Gender and Health

In the course of deliberations of the High Level Expert Group, the issue of gender arose repeatedly. Considerations of gender equity are integral to our understanding of Universal Health Coverage (UHC) and explicit across various recommendations. Yet, this chapter separately appraises the situation in India with respect to gender, and in turn, highlights the particular ways in which the UHC framework will both strengthen and be strengthened by gender equity. This is a reflection of the special attention that we feel gender requires as we move forward with our vision for health reform in India.

1. Introduction

Until recently, 'gender in the context of health' implied a discussion on women's health. However, an inclusive approach to health should attend to the needs and differentials between men, women and other genders, along with the interaction between social and biological markers of health.[1] In order to attain such universality in health coverage, it is essential to achieve gender equality (the equal enjoyment of good health by men and women of all ages regardless of sexual orientation or gender identity). This may be ensured through gender equity (the process of being fair to the different health needs of men, women and other genders), gender mainstreaming (making men's and women's health concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of health policies and programmes) and empowerment (enabling individuals and communities to gain more control over their lives and to shape systems around them).[2] A gendered perspective would thus take into account the health needs of all categories of sexual identity; "heterosexual, homosexual, lesbian, gay, bisexual, 'queer', transgendered, transsexual, and asexual."[3]

The very framework and principles of UHC for India will be severely undermined if gender insensitivity and gender discrimination remain unaddressed. Gender disparities, particularly persistent in anti-female biases, are most glaringly reflected in the declining female-to-male ratios among children below six (with the sex ratio among children declining from 927 girls per 1,000 boys in 2001 to 914 in 2011).[4] The World Economic Forum ranked India as 132nd out of 134 nations in terms of gender equity in health.[5] Furthermore, there remains a disturbingly high Maternal Mortality Ratio (MMR) of 212 maternal deaths per 100,000 live births,[6] despite the country's rapid economic growth rate.[7]

2. Burden of Disease

A difference between the genders is apparent in risk factors and disease burdens across the lifecycle, from childhood, through adolescence and adulthood, to old age.[8,9] We present some examples of these life-cycle burdens as well as those that are hidden or understudied.

Childhood: Data from NFHS-3 revealed that in 2005-06, while neonatal mortality rates were higher in boys, post-neonatal mortality rates were higher for girls, demonstrating that gender discrimination leading to inadequate care nullified the girl child's biological advantage over boys during the first few years of life.[9] Gender disparities are also seen in nutrition with persistently high levels of anemia among girls and women, and in immunization rates, where girls are significantly less likely to be fully immunized than boys.

Adolescence: Complications during pregnancy are the leading cause of death among 15-19 year old girls

in India. Early marriage and child-bearing can pose several additional health risks, including pregnancy-related complications, unsafe deliveries, improper prenatal and postnatal care and miscarriage.[10] Mental health problems associated with puberty, identity crises, and role transitions also constitute a large proportion of the burden for adolescent girls.[11] Occupational hazards due to physical labour and domestic work (especially in agricultural areas) can be particularly damaging for the underdeveloped and undernourished adolescent girls in rural areas.[12] Gender differences are also apparent in tobacco use, with 33.2% of Indian boys under the age of 15 years smoking tobacco, compared to 3.8% girls under the age of 15 years in 2006.[13]

Adulthood: Studies indicate that anemia (iron deficiency) affects 50-90% of pregnant women in India, and significantly increases the risk for maternal deaths due to hemorrhage.[11] Significant health complications also arise due to unwanted pregnancies and subsequent unsafe abortions. A gender bias is seen in the way reproductive health and sexual health are considered as exclusive health needs of women and men respectively. For instance, reproductive health services are targeted towards heterosexual women who are, or will be, mothers and therefore the Reproductive Health Programme for women. Sexual health services, especially in relation to HIV/AIDS, are considered needs of men, and hence the National AIDS Control Programme. These kinds of gender biases need to be addressed during the sensitization and training of health care providers as well as while designing Essential Service Packages for men and women, including for persons of diverse sexualities.

Old Age: In India, the life expectancy at birth is 66 years for women and 63 years for men, however this longevity brings with it a considerable burden of disease for elderly women.[13]Women over 60 years tend to have greater disability and more co-morbidities than men of the same age-group, which may be due to biological factors such as lower muscle strength and bone density in women compared to men[14, 15], as well as social factors such as restricted access to nutritional food and healthcare facilities across the lifespan. Heart disease causes more deaths in older women than men, however women are less likely to seek or receive appropriate and timely care for the condition, and are often under represented in cardiovascular risk research.[14] A considerable health burden for women in this age group is experienced due to neuropsychiatric conditions, especially dementia and depression. Other conditions during this period include loss of vision, cancers, osteoporosis and arthritis.[14]

Hidden Burden of Disease: Women are afflicted with a considerable hidden burden of disease which is often not accounted for in morbidity figures. Evidence indicates that there is a trend towards the growing burden of non-communicable diseases, in India and the world.[16, 17] In a review of Indian studies, Davar found that women are twice as likely to suffer from common mental disorders as men,[18] which is supported by global prevalence rates.[19] Violence against women remains high in India and a study by INCLEN reported that 40.3% of the women sampled reported at least one instance of physically abusive behaviour in their lifetime.[20] A report by WHO-SEARO discusses how suicide, an extreme manifestation of these hidden burdens, is now a leading cause of death among young women in India and China.[21]

Marginalisation from the health system occurs in intersections; i.e. health status overlaps with social status, employment, and gender. This is the case for other vulnerable populations as well, such as those from SC/ST populations, and religious minorities. In healthcare settings in particular, transgendered Indians have had to face discrimination on the basis of transgender status, sex work status, HIV status, or a combination of the aforementioned.[22]

3. The Rationale for a Gender Perspective in the Indian Context

There are variations in the way public health policies in India define, depict and prioritize issues related to gender and health, particularly among the poor and marginalised. Examples include population control policies like the two-child norm, the neglect of safety in childbirth by promoting hospital births without addressing issues of quality or the reality of home births, research trials on tribal girls for vaccines for cancer prevention without parental consent or resources for screening, lack of guidelines for transgender populations seeking health care and varying efforts towards ensuring comprehensive sex education and body literacy in schools. Women are also targets of provider-centric population control and disease control policies like injectable contraceptives, oral contraceptive pills, hormonal drugs, fertility regulators, and intrauterine devices (IUDs). Very little is known about the post-reproductive effects of drugs (such as menopause, menstrual regulators, and hormone replacement therapy) on the metabolism of women.

Moreover, the health sector is one that absorbs the highest number of women, largely because of their socially prescribed role as carers. A large proportion of the women in the public health system in India are employed as frontline workers – Accredited Social Health Activists (ASHAs), Auxiliary Nurse Midwives (ANMs), Lady Health Visitors (LHVs), Anganwadi Worker (AWWs), and Nurses. Comparatively, the proportion of women in health policymaking and in health management positions is very low. Even when women are in management positions (for example the Directors of Nursing and Nursing Administrators), within the health sector, the hierarchy between Doctors and Nurses is such that women have less power and leverage than men. Therefore, recommendations for Universal Health Coverage (UHC) should take into account the needs of women employed in this sector. Furthermore, under UHC, the definition of 'maternal health' needs to be expanded beyond childbirth in hospitals to include nutrition, wage loss entitlements, breastfeeding support in the workplace, and services for maternal morbidities.

It should also be ensured that programme design prioritises approaches to service provision that are non-coercive, based on safe choices and that adopt a rights-based approach. Sex and gender differences - for example, higher depression amongst women and higher substance abuse amongst men, or the fact that while prevalence of malaria amongst men is higher, its consequences for pregnant women can be fatal – need to be factored into the design and content of services for women and men.

Another key issue is access to health services for vulnerable genders. Access is severely reduced by neglect that stretches from the family to the health care provider especially for life-saving obstetric care, reproductive and sexual health services for girls, women and transgenders, along with poor health education and awareness for all sexes.

There are several barriers to the provision of and access to these services, which should be factored in while framing recommendations for UHC. These include:

a) **Political and legal barriers** such as the misplaced emphasis on population control policies while fertility rates decline, the lack of political will for sexuality education and gender-sensitization;

b) **Economic barriers** such as user fees for maternal health services, the burden of healthcare loans repayment for poorer families, and the dearth of affordable public primary care services, which makes inevitable the use of private tertiary services;

c) **Social barriers** such as stigma attached to certain illnesses such as HIV/AIDS (especially for men who have sex with men who face greater social and epidemiological risks) and depression (higher among women and access to services lower); and

d) **Health system barriers** such as the shortage of human resources for health, lack of gender

sensitization among health care providers and lack of linkage and integration in current provisioning, which lacks primary care and rural coverage, as well as a lack of awareness of the provisions of the various schemes and programmes for women.

4. Recommendations for Gender and Health

While the country's health system has a considerable distance to go in order to become truly gender-sensitive, important steps need to be taken in the following core areas in the move towards Universal Health Coverage:

- Acknowledging gender diversity through the life-cycle during the conceptualisation and delivery of services;
- Improving access for women and other vulnerable genders;
- Recognizing the key role that women play as formal and informal providers of health services and empowering them for that role;
- Strengthening data, analysis, and monitoring & evaluation systems in order to make them more gender sensitive; and
- Supporting and promoting the rights of girls and women to health in families and communities through programmes and policies.

In making UHC truly gender-sensitive, we specifically recommend critical actions in the following four areas.

Recommendation 1: Improve access to health services for women, girls and other vulnerable genders (going beyond maternal and child health) by:

- Using a life-cycle approach that allocates greater financial and human resources to nutritional anaemia, broad sexual and reproductive health (including RTIs, STIs, safe abortion, contraceptive care, uterine prolapse, menstrual disorders, malaria and tuberculosis during pregnancy), domestic and gender-based violence, and critical mental health services (especially for depression);
- Identifying and responding to occupational health and work-related health issues in a gender sensitive manner;
- Adjusting the location and timing of health service delivery at all levels to be responsive to women's multiple work and time burdens, lack of mobility, and transport costs; and
- Training health providers to be responsive to the specific needs and concerns of girls and women, and to improve their interactions with poor and marginalised communities.

Recommendation 2: Recognize and strengthen women's central role in health care provision in both the formal health system and in the home by:

- Improving working conditions for women workers especially by addressing their concerns about safety, transportation, housing, and hygiene and sanitation. Moreover, maternity benefits, career re-entry prospects for women who have been out of work due to motherhood, addressal of sexual harassment issues, and the need for within-district appointments also need to be factored in;
- Expanding women's career trajectories through time-bound programmes to increase the number of women in higher positions in health management;
- Ensuring that all health management structures have mandated representation of women professionals including nurses; and
- Providing for community based care programmes such as day care centres, palliative care, domiciliary care, and ambulatory care that can support home based health care provision.

Recommendation 3: Build up the capacity of the health system to recognize, measure, monitor and address gender concerns through improved data gathering, analysis, monitoring and evaluation by:

- Ensuring that all health data (whether collected through the Ministry of Health and Family Welfare, the centralized statistics collection systems such as the National Sample Survey, the states, or by others such as the National Family Health Survey) are disaggregated by sex and age; and are reported and analysed on these bases;
- Supporting the major resource centres for health analysis such as the National Health Systems Resource Centre, State Health Systems Resource Centre, National Institute of Health and Family Welfare, State Institute of Health and Family Welfare and others to build their capacity for gender analysis;
- Requiring monitoring and evaluation systems (including, for example, the annual Common Review Missions under the National Rural Health Mission) to address performance on the basis of gender through clearly developed criteria and indicators; and
- Accounting for unpaid, home-based health care in the National Health Accounts so as to arrive at a realistic estimate of the contribution of households and women to the health sector.

Recommendation 4: Support and empower girls, women and other vulnerable genders to realize their health rights through:

- Sensitization programmes for all young people that include key elements of health, gender power relations and their health consequences;
- Removing conditionalities (specifically two-child norms for maternity or other benefits) from all health programmes so as not to punish women and girls for behavior over which they have little or no control.

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Process of Consultations

Universal Health Coverage Process and Context

With the aim of incorporating a comprehensive plan for health within the 12th Five-Year Plan, the Planning Commission, under approval by the Prime Minister, constituted a High Level Expert Group (HLEG) on Universal Health Coverage (UHC), which has been assigned the task of reviewing the experience of India's health sector and suggesting a 10-year strategy going forward. The overall charge of the Committee is to develop a framework for Universal Health Coverage, to be progressively implemented over 2010-2020 (Please refer to Annexure I for the membership and terms of reference of the HLEG).

The Public Health Foundation of India (PHFI) has been appointed the Secretariat, by the Planning Commission of India, to provide technical and logistical support to the High Level Expert Group in preparing its report. Six terms of reference (ToRs) have been formulated under the broader framework of Universal Health Coverage, each of which was addressed by the High Level Expert Group and a dedicated team from the PHFI secretariat.

Deliverables

The report has evolved over three phases of iteration:

Phase 1: An initial progress review was presented to the Planning Commission at the end of **January 2011** as a summary of discussions and suggested ways forward to achieve the provision of 'health care for all'.

Phase 2: The process of appraisal and consultations continued with interim recommendations developed by the HLEG at the end of **April 2011.**

Phase 3: The final framework on achieving Universal Health Coverage for India was submitted **on the 21st of October, 2011** comprising of final recommendations of the HLEG.

Description of Process

I. Initial meetings

Dates: 5th and 18th October, 2010

5th October - The HLEG came into effect through Notification No. 9(2)/09-H&FW by the Health and Family Welfare Division of the Planning Commission on 5th October 2010, which defined the composition of the HLEG representing health experts, economists, administrators, civil society and private sector perspectives, along with six terms of reference (ToRs). It recognised the Public Health Foundation of India as the Secretariat of the Expert Group.

The terms of reference (ToRs) are as follows:

1 Develop a blue print and investment plan for meeting the human resource requirements to achieve health for all by 2020.

2. Rework the physical and financial norms needed to ensure quality, universal reach and access to health care services, particularly in underserved areas and to indicate the relative role of private and public service providers in this context.

3. Suggest critical management reforms in order to improve efficiency, effectiveness and accountability of the health delivery system.
4. Develop guidelines for the constructive participation of communities, locally elected bodies, NGOs, the private for-profit and not-for-profit sector in the delivery of health care.
5. Purpose reforms in policies related to the production, import, pricing, distribution and regulation of essential drugs, vaccines and other essential health care related items, for enhancing their availability and reducing cost to consumer.
6. Explore the role of health insurance systems that offer universal access to health services with high subsidy for the poor and a scope for building up additional levels of protection on a payment basis.

The Planning Commission of India convened the first meeting of the HLEG on the **18th October 2010,** to acquaint members with the overall mandate and specific terms of reference.

During interactions with the Deputy Chairman, Member (Health) and Member-Secretary of the Planning Commission, the HLEG members stressed that the social determinants of health too needed to be integrated into the framework of UHC, even though they were not listed as a specific ToR. The Deputy Chairman asked the HLEG also to specifically examine the issues related to the governance of hospitals under the Central Government Health Scheme (CGHS) and the role of public-private partnerships in the delivery of health services. The HLEG decided to hold consultations with and receive position papers from organizations representing the civil society, the private sector as well as consult with international organizations like the World Health Organization (WHO) and the World Bank. Recognizing that the Medicos Friends Circle (MFC) had developed some approach papers for UHC, an interaction with the MFC at their upcoming Nagpur conference was proposed. Similarly, interactions with the representatives of CII, FICCI and ASSOCHAM were planned.

The HLEG also recognised that the broad scope of the ToRs made it difficult to come up with anything other than a landscape and a reasonable level of analyses for each ToR by end-January 2011. Issues related to the definition of UHC were discussed, and it was decided that the MFC definition be used as a working definition till the next meeting. It was also decided that sub-groups corresponding to each ToR be created, each supported by a team of PHFI technical staff.

Setting the agenda

The HLEG was divided into ToR specific Sub-Groups, with dedicated PHFI resource teams that would provide technical support. These technical resource persons would be responsible for preparing background papers under the guidance of the Sub-Group members, as well as for providing general research assistance to the HLEG. The six ToRs were further elaborated and priority areas within each ToR delineated. It was also decided to develop a seventh chapter addressing social determinants of health, as this was seen as an important overlapping element to be covered by, and beyond, all ToRs.

To supplement discussion and discourse, external experts as well as representatives of the Government, civil society and the private sector were to be invited to share information and provide perspectives to the HLEG and inform the work of the Secretariat.

Website

To initiate discussion, facilitate dialogue, share numerous resources/papers, and debate various issues among HLEG members, a secure website was set up at http://www.hlegphfi.org/

Developing strategy and approach - Subsequent meetings/consultations of the HLEG

Date: 8th November, 2010

On 8th November, a teleconference was organised during which the HLEG members discussed and debated the definition of UHC to be used by the group. Various issues with respect to the definition were clarified, and it was decided that the planned changes be incorporated and shared with HLEG members for discussion at the next meeting. The 'Preamble', developed by an HLEG member, was shared and discussed during this teleconference, and the need for further refinement of this was recognised.

Note: Dr. G. N. Rao, due to personal reasons, recused himself from the Committee.

Dates: 24th to 26th November, 2010
Venue: PHFI, ISID Campus, New Delhi

The first 3-day meeting of the HLEG and PHFI technical teams was organised from 24th-26th November 2010 in New Delhi. The first half of the first day was devoted to further refining the definition of UHC and the principles on which UHC in India would be based. The modified definition from the previous discussion was further refined and finalised as the working definition for the HLEG. Each of the principles was then discussed, and several issues were raised, many of which were open-ended, requiring further discussion.

This meeting was followed by ToR specific discussions and external presentations by:

- Ms. Archana Joshi from the Deepak Foundation (ToR 4)
- Dr. T. Sundararaman from NHSRC (ToR1)
- Dr. Dileep Mavalankar from IIMA, (ToR1)
- Dr. Alok Mukhopadhyay from VHAI (ToR 4)
- Dr. Abhay Shukla from MFC (ToR 4)

The agenda for the next meeting, timeline for report preparation, the structure and format of the report and external presentations to be made over the next 2 months were also discussed.

Dates: 21st- to 23rd December, 2010
Venue: PHFI, PHD House, New Delhi

The December meeting was held over the 21st, 22nd and 23rd in New Delhi. The first day consisted of a series of panel discussions on secondary care, tertiary care, human resources and the pharmaceutical industry, with inputs from key stakeholders in these areas from the private sector, government and civil society. The external panel for these sessions included:

- Dr. Naresh Trehan (Chairman and Managing Director Medanta-The Medicity), representing CII (The Confederation of Indian Industry)
- Dr. Devi Shetty (Founder, Narayana Hrudayalaya, Bangalore), representing ASSOCHAM (Associated Chambers of Commerce and Industry of India)
- Dr. V. Renganathan (Co-founder Vaatsalya Healthcare, Bangalore)
- Mr. Anantkumar (CEO, LifeSpring Hospitals Pvt. Ltd, Hyderabad)
- Ms. Shobana Kamineni (Executive Director, Apollo Hospitals), representing CII/FICCI
- Dr. T. Dileep Kumar (President, Indian Nursing Council)
- Mr. A.B. Kulkarni (Trained Nurses Association of India)
- Mr. S. Srinivasan (Managing Trustee, Low Cost Standard Therapeutics)
- Ms. Leena Mangenay (Lawyer, Médecins Sans Frontières)
- Ms. Kajal Bhardwaj (Lawyer, Independent Consultant-patient groups and patent challenges)

Regrets: Shri. Debashish Panda (Joint Secretary, Ministry of Health & Family Welfare) and Shri. Arun Jha (Joint Secretary, Department of Pharmaceuticals, Government of India).

During the second day, Sub-Group meetings were held during which the HLEG members and the PHFI technical teams evaluated available literature and incorporated inputs from external experts for the development of the ToR-specific background papers. The third day began with a documentary presentation, 'Sick around the World', followed by summation discussions and plans for the next steps. This included delineation of 5-10 preliminary recommendations over the next 2 weeks.

Dates: 19th to 22nd January, 2011
Venue: PHFI, ISID Campus, New Delhi

During 19-22 January 2011, the HLEG and PHFI secretariat met to write, debrief and consult. At this meeting, a district model for UHC overlapping across all ToRs was discussed in detail. A video conference was organised by the World Bank's China office, where Dr. Jack Langenbrunner, Dr. Shiyong Wang and Dr. Shuo Zhang presented on China's health care reforms. In addition, external presentations were made by Dr. Jerry La Forgia and Dr. Somil Nagpal from the World Bank's Delhi office. A background paper was also presented by PHFI research interns on cross-country comparisons. Over the last two days of this meeting, ToR specific priorities were further discussed and refined, and consensus was achieved on many aspects of the impending progress review to be shared with the Planning Commission by the end of January 2011. External presenters included:

- World Bank China presentation - Dr. Jack Langenbrunner (Health Reform in China); Ms. Shiyong Wang

  (Public Health in China); Dr. Shuo Zhang (Primary Health Care in China)
- Pragmatic approaches to UHC- (Dr. Jerry La Forgia and Somil Nagpal) from the World Bank's Delhi Office.

II. Additional Consultations

Interactions and discussions with international experts and participation in external meetings have also been an important part of the HLEG consultation proces.

Dates: 29th November-9th December, 2010,
13th January, 2011

Venue: PHFI, ISID Campus, New Delhi

International Experts

Two international experts were invited for consultations and presentations to inform and assist the HLEG.

- Mr. Robert Yates from the UK (Senior Health economist and Senior Social Policy Advisor, DFID,) visited PHFI from 29th November to 9th December 2010. Besides meeting with HLEG members, he gave a presentation on the role of health financing reforms in achieving Universal Health Coverage.
- Dr. Armando di Negri Filho from Brazil (the Head of the Executive Committee of the World Social Forum on Social Security and Health) visited PHFI from 10th to 13th January 2011 and shared with the HLEG and the Secretariat his expertise and perspectives on Brazil's road to Universal Health.

Date: 17th December, 2010,

Venue: McKinsey Office, Gurgaon

Private sector perspectives

Additional consultations were also held with Dr. Mandar Vaidya and Mr. Palash Mitra of McKinsey & Company which resulted in a videoconference on the 17th of December with McKinsey's UK based international consultant Dr. Nicolaus Henke. Dr. Henke shared perspectives on health system reform strategies for health coverage adopted in various countries like Egypt, Germany, Belgium, Switzerland, Scandinavia, Latin America and Africa. This included

addressing financing mechanisms, levels of care, capacity development, health care expenditure and regulation of quality in delivery.

Date: 11th January, 2011

Venue: India Habitat Centre, New Delhi

Lancet-PHFI: Meeting on Health Care in India

Several HLEG members and the Secretariat of the HLEG also participated in the Symposium on Healthcare in India which was jointly organized by PHFI and The Lancet, the reputed international medical journal. The Symposium was held on the occasion of a special Lancet series on healthcare in India, developed under the overarching theme of Universal Health Coverage. The articles and commentaries of this series have also been utilized as background papers for the HLEG's work.

III. External meetings and stakeholder participation

Dates: 7th-9th January, 2011

Venue: CHPH, Gardiner School, Nagpur

Medico Friends Circle Conference on Universal Health Coverage

Members of the HLEG and PHFI Secretariat also attended external meetings being organised within the country. One such meeting was the MFC annual meeting held in Nagpur from 7th to 9th January 2011. The meeting was on Universal Access to Health Care, and hence was very useful for the HLEG. An internal HLEG meeting was also held at Nagpur, during which various ToR-specific recommendations were discussed.

Date: 15th January, 2011

Venue: Air Link Hotel, Mumbai

A meeting on the 'Regulation of Private Medical Sector for a System of Universal Health Care' was organised in Mumbai on 15th January 2011, which helped identify and clarify several issues related to private sector regulation. The meeting was attended by 22 participants (including PHFI secretariat members) representing various facets of public/private sectors, NGOs and the civil society.

- Moderators - Dr. Gita Sen, Dr. Yogesh Jain, Dr. Nachiket Mor (HLEG) and Dr. Abhay Shukla (SATHI)

Some of the participants included:

- Dr. Jaya Sagade, ILS Law College, Pune
- Dr. Krishna Kumar, Seven Hills Hospital, Mumbai
- Dr. Anant Phadhke, SAATHI, Pune
- Dr. Abhijit More, SAATHI, Pune
- Dr. Amita Pitre, Independent Consultant, Mumbai
- Dr. Kamayani, JSA, Mumbai
- Dr. Leni Chaudhuri, JSA, Mumbai
- Dr. Bharat Randive, FRCH, Pune
- Dr. Sarika Chaturvedi, Associate, Foundation for Research in Community Health, Pune
- Dr. Padma Bhate-Deosthahi, Coordinator, CEHAT, Mumbai
- Dr. Vinay Kulkarni, Coordinator Prayas Health Group, Amrita Clinic, Karve
- Dr. Subhash Salunke, PHFI, New Delhi/Nagpur
- Dr. Armida Fernandez, Mumbai
- Dr. Amar Jesani, Indian Journal of Medical Ethics; Trustee, Anusandhan Trust
- Dr. Ravi Duggal, Program Officer, International Budget Partnership; CEHAT, Mumbai
- Dr. Priya Balasubramaniam, PHFI, New Delhi
- Dr. Raj Panda, PHFI, New Delhi
- Dr. Kabir Sheikh, PHFI, New Delhi

IV. ToR-specific meetings

In addition, numerous sub-group related ToR-specific meetings were also held in November, December and January. Some of those include:

Date: 16th November, 2010

Venue: PHFI Campus, New Delhi

A meeting on physical and financial norms for second term of reference was convened by Shri. Amarjeet Sinha, where a block costing exercise was planned with the HLEG and PHFI secretariat. External experts included:

- Mr. Sunil Nandaraj (National Professional Officer (Health Systems Development), WHO)
- Mr. Gautam Chakravarthy

Date: 8th December, 2010

Venue: NIPFP, New Delhi

HLEG member Prof. Govinda Rao hosted a one-day workshop on current trends in India's Health Insurance Schemes. Speakers included:

- Ms. Sumita Chopra, World Bank
- Mr. Arman Oza, Vimo SEWA Cooperative
- Mr. P.C. Tripathy, Star Health and Allied Insurance Co. Ltd.
- Mr. Sanjay Datta and Vijay Thakur, ICICI Lombard
- Mr. B. Krishnamurthy, United India Insurance Company Ltd.
- Dr. Shiban Ganju, Ingalls Hospital, Harvey, Illinois, USA

Date: 14th January, 2011

Venue: PHFI Campus, New Delhi

A meeting on management reforms was convened by Dr. Gita Sen for ToR 3, with Dr. Ravi Duggal presenting.

V. International Expert Conclave

Dates: 14th - 15th February, 2011

Venue: PHFI ISID Campus, New Delhi

The aim of the two-day panel discussion was to understand and learn from the experiences of countries who have tried to provide Universal Health Coverage. The main theme of these international discussions was: 'Mapping the road to Universal Health Coverage- What needs to be done and how'

International participants included:

- Prof. Anne Mills, LSHTM, London
- Dr. Andre-Jacques Neusy, Founder/Director, Center for Global Health (Training for Equity)
- Prof. Timothy Evans, Dean, BRAC School of Public Health, Bangladesh
- Dr. Peter Berman, World Bank, Washington
- Dr. Ravindra P. Rannan-Eliya, IHP, Sri Lanka
- Dr. Robert Hecht, Results for Development Institute
- Dr. Jerry LaForgia, The World Bank
- Mr. Robert Yates, DFID, UK
- Mr. Billy Stewart, Senior Health and AIDS Advisor

National Participants:

- Mr. Devadasan, Institute of Public Health, India
- Mr. Anand Grover, Legal Advisor
- Mr. Abhay Shukla, SATHI-CEHAT
- Prof. V.R. Muraleedharan , IIT, Madras
- Dr. Padmanaban, Advisor (Public Health Administration), National Health Systems Resource Centre, National Rural Health Mission, Ministry of Health and Family Welfare
- Dr. Ravi Duggal, Program Officer, International Budget Partnership
- Prof. Y. V. Reddy, IAS officer, Former Governor of Reserve Bank

- Ms. Poonam Muttreja, Director, Population Foundation India (Secretariat of the AGCA)
- Dr. Dileep Mavalankar, Dean (Academics), Indian Institute of Public Health Gandhinagar
- Dr. T. Sundararaman, Executive Director, NHSRC
- Dr. Sukumar Vellakkal, Health Economist & Adj. Assistant Professor South Asia Network for Chronic Disease
- Dr. Rajni Ved, Advisor, Community Process, NHSRC

On day one, the panel was divided into several sections, each dedicated to a particular (Term of Reference) ToR where evidence and evolving recommendations were presented, which was followed by discussions amongst the various attendees who shared their expertise and experiences. The day concluded with an in-depth discussion on the "Politics of UHC" where the interaction resulted in emphasizing the key need for a political strategy to ensure that UHC is achieved.

On day two of the conclave, the main aim was to create convergence between different ToRs. Three break away groups (ToR 6 & 5, ToR 1 & 4, and ToR 2 & 3) worked towards resolving and consolidating multiple issues of inter-sectoral convergence across their various thematic areas. Later on, each group presented the key points from their discussions, followed by a larger discussion and debate resolving on possible gaps. Dr. Reddy concluded the 2 day panel summarizing key points and next steps based on the panel's collective inputs and suggestions.

VI. Presentation of Progress Review

Dates: 25th February, 2011

Venue: Planning Commission of India, Yojana Bhavan

On the 25th of February, the HLEG was invited to present an initial progress review of the report. A presentation was made by the HLEG chair, Professor K Srinath Reddy that summarized the process of consultations, emerging points of discussion along with emerging recommendations across the various terms of reference. Suggestions were taken from Planning Commission members who attended, which would be incorporated in the next draft of the report. The Deputy Chairman, Planning Commission also suggested that, as there was a need to examine various issues of health insurance in the country comprehensively, a half day meeting involving various stakeholders would be required, which was subsequently planned.

VII. HLEG Consultations

Dates: 19th March, 2011,

Venue: PHFI ISID Campus, New Delhi

Meeting/Tele-conference: Dr. Vijay Kumar Sankaran (IAS. Spl. Secretary to Government of Tamil Nadu, Dept. of Health and Family Welfare, Chennai) and Mr. Babu (Head-Rajiv Arogyasri Scheme)

This meeting primarily focused on better understanding publicly funded insurance schemes. Also discussed were:

- Public expenditure on health
- Strengthening Primary Care
- Universal entitlement packages
- Merits/Demerits of 'User Fees' as a revenue generating mechanism

Key inputs were given by Dr. Vijaykumar Sankaran on Kalaignar scheme of Tamil Nadu, while the experience from Andhra Pradesh on the Rajiv Arogyasri Scheme was shared through telephonic conversation by Mr. Babu (CEO Arogyasi).

HLEG member attendees:

- Prof. Govinda Rao
- Dr. AK Shiva Kumar
- Dr. Nachiket Mor

HLEG Meeting-Constituting a National Health Package

Dates: 22nd -25th March, 2011

Venue: PHFI ISID Campus, New Delhi

This four-day meeting aimed at finalizing the essential entitlement packages and infrastructural norms along with the human resources and financing mechanisms required to deliver these essential packages. Other key topics discussed included - gender and vulnerable groups and how to address their specific needs in the UHC architecture along with regulatory systems and accountability across all ToRs. At the end of the 4 days, key recommendations across all the ToRs were identified and refined.

PHFI Secretariat Writing Retreat

Dates: 4th - 6th April, 2011

Venue: Zorba the Buddha, MG Road, Delhi

A writing retreat was organized for the PHFI secretariat. The goal of this three-day retreat was to write up the recommendations based on the inputs from past HLEG meetings and deliberations. The retreat resulted in recommendations and background papers for each ToR, ready to be presented at the next HLEG meeting for discussion.

HLEG Meeting-Structuring Final Report

Dates: 21st -23rd April, 2011

Venue: PHFI ISID Campus, New Delhi

The Agenda of this meeting was to finalize the structure of the final report, starting with identification of the top recommendations from each Term of Reference (ToR), while ensuring linkages across all ToRs. The architecture, narrative and layout of the report were also finalized. The HLEG deliberated on, and arrived at consensus on the chapters on Social Determinants of Health, Gender and Urban Health.

Dates: 12th-14th May, 2011

Venue: PHFI ISID Campus, New Delhi

Final recommendations of each ToR were discussed and revised. Issues across the ToRs were resolved. Discussion on Gender and Health also featured in this meeting.

VIII. Presentations at the Planning Commission

Health Financing Finance Sub-Committee (HLEG Members) Meet at Planning Commission

Dates: 18th May, 2011

Venue: Planning Commission, Yojana Bhavan, New Delhi

On the 30th of March, the Finance Sub-Committee members of the HLEG were invited to share their views at a meeting on Health Insurance convened by the Planning Commission. The focus of the meeting was a discussion on Health Insurance in India. Dr. Nachiket Mor, HLEG member, elaborated on key issues in health financing that the HLEG were deliberating on. This included public spending on health; provision of universal primary health care; out of pocket expenditures; and catastrophic illness expenditure.

The meeting also had presentations by Shri Anil Swaroop on RSBY, Dr. Vijay Kumar on the Kalaignar Insurance Scheme, and a presentation on Mukhyamantri Health Insurance Scheme in Rajasthan. **(Note: Dr. Vijay Kumar and the representative form Rajasthan submitted their presentations for discussion as they could not attend the meeting).** The presentations focussed on an overview of the rationale and implementation of the schemes with a focus on costs and breakdowns (including payments to insurance companies for their services), usage patterns of services, claims ratios, and financial sustainability. This was subsequently followed by a panel discussion with invited international experts,

moderated by HLEG Chairperson Professor K Srinath Reddy, on 'How the plan for Health Financing in India can be informed by Global experiences?' Key points of the discussion included:

- What are some of the preferred health financing options the HLEG could pursue for UHC and those which have to be avoided, based on international perspectives and lessons learnt from other countries?
- Risk Analysis - health insurance agents versus direct contracting-in of private providers.
- The question of user fees - what works, what does not and why? What can we learn from evidence.

The panel participants included: Dr. Jerry Laforgia (World Bank), Mr. Robert Yates (DFID), Dr. Nachiket Mor (HLEG), Professor Govinda Rao (HLEG) and Dr. A.K. Shiva Kumar (HLEG). Additional invitees included Shri L.C. Goyal (Additional Secretary & Director General CGHS), Ms. Malathi Jaiswal (Third Party Administrator and Director, Meditech), and Mr. Billy Stewart (Senior Health Advisor DFID).

IX. Presentation of Draft Executive Summary of Pre Final UHC Report

Dates: 21st August, 2011

Venue: Planning Commission, Yojana Bhavan New Delhi

On the 21st of August, HLEG chair, Professor K Srinath Reddy was invited to the Planning Commission to present the final draft of the UHC report and the resulting recommendations. During this meeting a pre-final draft of the Executive Summary that detailed the all of recommendations was shared with the Deputy Chairman (Dr. Montek Singh Ahluwalia) and Member Health (Dr. Sayeda Hameed) along with a draft volume of the chapters on Health Financing and Financial Protection and Access to Medicines. Feedback, suggestions and clarifications from the Planning Commission was taken in account for the final report.

Dates: 13th September, 2011

Venue: Planning Commission, Yojana Bhavan New Delhi

On the 13th of September HLEG chair, Professor K Srinath Reddy presented 3 final draft volumes of the High Level Expert Groups framework on Universal Health Coverage along with the Executive Summary to the Deputy Chairman and the Member Health at the Chairman's offices. These volumes contained the final recommendations across all chapters and were in the process receiving a final sign-off from the High Level Expert Group. Suggestions were taken on the regional and national dissemination advocacy of the report going forward along with further consultations on the implementation of the recommendations with international and national stakeholders.

X. Final HLEG Meetings

HLEG Meetings

Dates: 20th July, 2011

Venue: PHFI ISID Campus, New Delhi

This meeting was convened for the HLEG to sign off on the 'Key Recommendations' of the Report. All the recommendations were discussed and any issues remaining were clarified. At the end of this meeting, the Secretariat was given the task of incorporating the changes and consolidating the final report.

Dates: 24th September, 2011

Venue: PHFI ISID Campus, New Delhi

The last HLEG meeting before the submission of the final report on Universal Health Coverage for India was held on the 24th of September 2011. During this meeting the members went through the recommendations, evidence and framework across all chapters and delivered their final sign-off on the report. This

was followed by an informal interaction with select members of the press corps who were invited to a post lunch briefing. Also strategized in detail during this meeting were key next steps on advocacy, endorsement and dissemination of the final UHC report, especially at the state level, by the various members. Plans were charted for regional meetings to discuss and pilot key recommendations, promoting the report through local media for response and discussion and organise national and state level forums to debate and architect the implementation of key sections of the Universal Health Coverage framework with both regional and national experts

ANNEXURE I

9(2)/09-H&FW Planning Commission
Health & Family Welfare Division

Dated: 5th October, 2010

NOTIFICATION

Subject: High Level Expert Group on Universal Health Coverage

Recognizing the importance of defining a comprehensive strategy for health for the Twelfth Plan, it has been decided with the approval of the Prime Minister to set up a High Level Expert Group on Universal Health Coverage. The Expert Group will have the following composition:

Chairman

Dr K. Srinath Reddy, *President, Public Health Foundation of India*

Members

1	Dr. Abhay Bang	Society for Education, Action and Research in Community Health (SEARCH), Gadchiroli
2	Dr. A. K. Shiva Kumar	Adviser, UNICEF and Member National Advisory Council
3	Sh. Amarjeet Sinha	Principal Secretary, Health & Family Welfare Department (H&FW), Government of Bihar
4	Ms. Anu Garg	Principal Secretary-cum-Commissioner (H&FW), Govt. of Odisha
5	Dr. Gita Sen	Professor, Centre for Public Policy, IIM, Bangalore
6	Dr. G. N. Rao	Distinguished Chair of Eye Health, L V Prasad Eye Institute, Hyderabad (Recused due to personal reasons)
7	Ms. Jashodhra Dasgupta	Coordinator, SAHYOG, Lucknow
8	Dr. Leila Caleb Varkey	Public Health Researcher
9	Prof. M. Govinda Rao	Director, National Institute of Public Finance & Policy
10	Ms. Mirai Chatterjee	Director, Social Security, Self Employed Women's Association (SEWA)
11	Ms. Nachiket Mor	Chairman, Sughavazhvu Healthcare
12	Dr. Vinod Paul	Head of Department, Paediatrics, AIIMS
13	Dr. Yogesh Jain	Jan Swasthya Sahyog, Bilaspur
14	Mr. P. K. Pradhan Representative of MoH&FW	Mission Director (NRHM)
15	Prof. N. K. Sethi	Sr. Adviser (H&FW), Planning Commission - Convener

Terms of Reference

a). Develop a blue print and investment plan for meeting the human resource requirements to achieve health for all by 2020.

b) Rework the physical and financial norms needed to ensure quality, universal reach and access of health care services, particularly in under-served areas and to indicate the relative role of private and public service providers in this context.

c) Suggest critical management reforms in order to improve efficiency, effectiveness and accountability of the health delivery system.

d) Develop guidelines for the constructive participation of communities, local elected bodies, NGOs, the private or-profit and not-for-profit sector in the delivery of health care.

e) Purpose reforms in policies related to the production, import, pricing, distribution and regulation of essential drugs, vaccines and other essential health care related items, for enhancing their availability and reducing cost to consumer.

f) Explore the role of health insurance system that offers universal access to health services with high subsidy for the poor and a scope for building up additional levels of protection on a payment basis

.

Process of Consultations

The Secretariat of the Expert Group would be located at the Public Health Foundation of India with Financial and Administrative support to be provided by the Planning Commission. TA/DA as admissible to the non-official Members would also be borne by the Planning Commission. However, TA/DA in respect of official Members will be borne by their parent organizations.

The Expert Group will submit its first draft report within four months and the final report within eight months.

(S M MAHAJAN) Adviser (Health)
Tel/Fax 23096709
Email: smmahajan@nic.in

To,
The Chairman & all Members
of the High Level Expert Group on Universal Health Coverage

Copy to:

1. PS to Deputy Chairman/MOS (Planning)/Members (BKC)/(SC)/(SH)/(NJ)/(AS)/(MS)/(KK)/(AM)/ Member-Secretary, Planning Commission, Yojana Bhawan, New Delhi
2. All Pr. Advisers/Advisers/HODs in Planning Commission
3. Prime Minister's Office, South Block, New Delhi
4. Cabinet Secretariat, Rashtrapati Bhawan, New Delhi
5. US (Admn I)/Pay & Accounts Officer/Accounts I Section, Planning Commission/DDO, Planning Commission
6. Information Officer, Planning Commission

(S M MAHAJAN)
Adviser (Health)

Expert Consultants*

The PHFI Secretariat acknowledges and is grateful to the following national and international experts who were consulted for their technical expertise and inputs in the preparation of this report.

National Experts

- Babu Ahmed, Rajiv Arogyasri Scheme
- Kajal Bhardwaj, Independent Consultant
- Sarika Chaturvedi, Foundation for Research in Community Health
- Leni Chaudhuri, Jan Swasthya Abhiyan
- Mita Choudhury, National Institute of Public Finance & Policy
- Sumita Chopra, World Bank
- Sanjay Datta, ICICI Lombard
- Padma Deosthali, Centre for Enquiry Into Health and Allied Themes
- N. Devadasan, Institute of Public Health
- Ravi Duggal, International Budget Partnership, Centre for Enquiry Into Health and Allied Themes
- Armida Fernandez, Sneha Urban Health Centre
- Narendra Gupta, Prayas
- Malathi Jaiswal, Meditech
- Amar Jesani, Indian Journal of Medical Ethics, Anusandhan Trust
- Archana Joshi, Deepak Foundation
- Shobana Kamineni, Apollo Hospitals, representing Confederation of Indian Industry /Federation of Indian Chambers of Commerce and Industry
- Sunil Kaul, The Action Northeast Trust
- B. Krishnamurthy, United India Insurance
- A.B. Kulkarni, Trained Nurses Association of India
- Vinay Kulkarni, Prayas Health Group, Amrita Clinic
- Anant Kumar, LifeSpring Hospitals Pvt. Ltd
- Vijay Kumar, Former Director, Tamil Nadu Health Systems Project
- Krishna Kumar, Seven Hills Hospital
- T. Dileep Kumar, Indian Nursing Council
- Kamayani Bali Mahabal, Jan Swasthya Abhiyan
- Dileep Mavalankar, Indian Institute of Management
- Leena Menghaney, Medicines Sans Frontières
- Nergesh Mistry, Foundation for Research in Community Health
- Abhijit More, Support for Advocacy and Training to Health Initiatives
- Alok Mukhopadhyay, Voluntary Health Association of India
- V. R. Muraleedharan, Indian Institute of Technology-Chennai
- Poonam Muttreja, Population Foundation of India
- Sunil Nandraj, World Health Organisation
- Arman Oza, Vimo Self-Employed Women's Association Cooperative
- P. Padmanaban, National Health Systems Resource Centre
- Anant Phadhke, Support for Advocacy and Training to Health Initiatives
- Amita Pitre, Independent Consultant

***All lists are alphabetized by last name.*

- Bharat Randive, Foundation for Research in Community Health
- Y. Venugopal Reddy, Former Governor, Reserve Bank of India
- V. Renganathan, Co-founder Vaatsalya Healthcare
- Jaya Sagade, Indian Law Society
- Victoria Saint, Foundation for Research in Community Health
- Subhash Salunke, Health Support System Unit, Public Health Foundation of India
- Vijay Kumar Sankaran, Tamil Nadu Deparment of Health and Family Welfare
- Jay K. Satia, Indian Institute of Public Health-Gandhinagar
- Devi Shetty, Narayana Hrudayalaya, representing Associated Chambers of Commerce and Industry of India
- Abhay Shukla, Support for Advocacy and Training to Health Initiatives, Centre for Enquiry Into Health and Allied Themes
- Sarabjot Singh, Marsh India Insurance Brokers
- S. Srinivasan, Low Cost Standard Therapeutics
- H. Sudarshan, Karuna Trust
- T. Sundararaman, National Health Systems Resource Centre
- P. Suranjeen, Child in Need Institute
- Anil Swaroop, Ministry of Labour
- Vijay Thakur, ICICI Lombard
- Naresh Trehan, Medanta –The Medicity, representing The Confederation of Indian Industry
- P.C. Tripathy, Star Health and Allied Insurance Co. Ltd.
- Prasanta Tripathy, Ekjut
- Rajni Ved, National Health Systems Resource Centre
- Sukumar Vellakal, South Asia Network for Chronic Disease

International Experts

- Peter Berman, World Bank
- Richard Cash, Harvard University
- Lincoln C. Chen, China Medical Board of Cambridge, ME
- Timothy Evans, BRAC School of Public Health
- Jerry La Forgia, Wold Bank
- Shiban Ganju, Ingalls Hospital, Harvey, Illinois
- Charu C. Garg, World Health Organisation
- Asha George, Johns Hopkins Bloomberg School of Public Health
- Monica Das Gupta, World Bank
- Robert Hecht, Results for Development Institute
- Nicolaus Henke, McKinsey & Company
- Henri van den Hombergh, United Nations Children's Fund
- Karin Hulshof, United Nations Children's Fund
- Joseph Kutzin, World Health Organisation
- Jack Langenbrunner, World Bank
- Marty Makinen, Results for Development Institute
- Nata Menabde, World Health Organisation
- Anne Mills, London School of Hygiene & Tropical Medicine
- Palash Mitra, McKinsey and Company
- Pavitra Mohan, United Nations Children's Fund
- Patrick Mullen, World Bank
- Somil Nagpal, World Bank
- Armando di Negri Filho, World Social Forum on Social Security and Health
- Andre-Jacques Neusy, Center for Global Health (Training for Equity)
- Ravindra P. Rannan-Eliya, Institute for Health Policy
- Jon Rohde
- Stephanie Sealy, Results for Development Institute

- Billy Stewart, Department for International Development
- Mandar Vaidya, McKinsey & Company
- Shiyong Wang, World Bank
- Robert Yates, Department for International Development
- Shuo Zhang, World Bank

Ministry of Health and Family Welfare and Planning Commission of India

- K. Chandramouli, Ministry of Health and Family Welfare
- Keshav Desiraju, Ministry of Health and Family Welfare
- L.K. Goyal, Central Government Health Scheme
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Abbreviations

AFB	Acid Fast Bacillus
AIDS	Acquired Immuno Deficiency Syndrome
ANM	Auxiliary Nurse Midwife
APH	Ante Partum Haemorrhage
API	Active Pharmaceutical Ingredient
ASHA	Accredited Social Health Activist
AWW	Anganwadi Worker
AYUSH	Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy
B.Sc	Bachelor of Science
BCG	Bacillus Calmette-Guérin
BMT	Bachelor of Medical Technology
BRHC	Bachelor of Rural Health Care
CBO	Community Based Organisation
CDSCO	Central Drug Standards Control Organisation
CEDAW	Convention on Elimination of all forms of Discrimination Against Women
CGHS	Central Government Health Scheme
CHC	Community Health Centre
CHW	Community Health Worker
CII	Cost Inflation Index
CL	Compulsory Licence
CSDH	Commission on Social Determinants of Health
CSO	Civil Society Organisation
DCGI	Drug Controller General of India
DEO	Data Entry Operator
DGI	Domestic Generic Industry
DH	District Hospital
DHKI	District Health Knowledge Institute
DLHS	District Level Household Survey
DMT	Diploma in Medical Technology
DOTS	Directly Observed Therapy, Short Course
DPH	Directorate of Public Health
DPHN	District Public Health Nurse
DPT	Diphtheria, Pertussis and Tetanus
EAG	Empowered Action Group
EDL	Essential Drug List
EMR	Electronic Medical Record
EMI	Emergency Management and Research Institute
EPI	Expanded Program of Immunisation
ESIS	Employees' State Insurance Scheme
EU	European Union
FCTC	Framework Conventin on Tobacco Control
FDA	Food and Drug Administration
FDC	Fixed Dose Combination
FDI	Foreign Direct Investment
FIPB	Foreign Investment Promotion Board
FW	Family Welfare
GDP	Gross Domestic Product
GMP	Good Manufacturing Practice
GNM	General Nursing and Midwifery Diploma course
GSDP	Gross State Domestic Product
GSK	Glaxo Smith Kline
HAL	Hindustan Antibiotics Limited
HBNC	Home Based Newborn Care
HHDI	Health and Human Development Index
HIC	High Income Country
HIV	Human Immunodeficiency Virus

HLEG	High Level Expert Group
HLFPPT	Hindustan Latex Family Planning Promotion Trust
HPPT	Health Promotion and Protection Trust
HRH	Human Resources for Health
HRM	Human Resource Management
HRMIS	Human Resources for Health Management Information Systems
HSEU	Health System Evaluation Unit
HSM	Health Systems Management
ICDS	Integrated Child Development Services
ICESCR	International Covenant on Economic Social and Cultural Rights
ICMR	Indian Council of Medical Research
ICSSR	Indian Council of Social Science and Research
ICU	Intensive Care Unit
IDPL	Indian Drugs and Pharmaceuticals Limited
IEC	Information Education Communication
IFA	Iron Folic Acid
iHIND	Indian Health Information Network Development
IMNCI	Integrated Management of Newborn & Child Illness
IMR	Infant Mortality Rate
IMS	Intercontinental Market Services
INC	Indian Nursing Council
INCLEN	International Clinical Epidemiology Network
IP	In Patient
IPHS	Indian Public Health Standards
IT	Information Technology
IUD	Intra Uterine Device
JLI	Joint Learning Initiative
JNNURM	Jawaharlal Nehru National Urban Renewal Mission
KMC	Kangaroo Mother Care
LHV	Lady Health Visitor
LMIC	Low/Middle Income Country
M & E	Monitoring and Evaluation
M.Sc	Master of Science
MBA	Master of Business Administration
MBBS	Bachelor of Medicine and Bachelor of Surgery
MBP	Membership-Based organisations of the Poor
MCH	Medical College Hospital
MCI	Medical Council of India
MDG	Millennieum Development Goals
MDR	Multi Drug Resistant
MDT	Multi Drug Treatment
MIS	Management Information System
MMR	Maternal Mortality Ratio
MMU	Mobile Medical Unit
MO	Medical Officer
MoHFW	Ministry of Health and Family Welfare
MoU	Memorandum of Understanding
MRD	Medical Research Division
NABH	National Accreditation Board of Hospitals and Healthcare Providers
NAC	National Advisory Council
NBE	National Board of Examinations
NCHRH	National Council for Human Resources in Health
NCMH	National Commission on Macroeconomics and Health
NDRDA	National Drug Regulatory and Development Authority
NEDL	National Essential Drugs List
NFHS	National Family Health Survey
NFSB	National Food Security Bill
NGO	Non-Governmental Organisation
NHEC	National Health Entitlement Card
NHMFAU	National Health and Medical Facilities Accreditation Unit
NHP	National Health Profile

NHP National Health Package (for Universal Health Coverage)
NHPPT National Health Promotion and Protection Trust
NHRDA National Health and Regulatory Development Authority
NHS National Health Service
NHSRC National Health Systems Resource Centre
NICE National Institute for Health and Clinical Excellence
NIHFW National Institute of Health and Family Welfare
NREGA National Rural Employment Guarantee Act
NRHM National Rural Health Mission
NSSO National Sample Survey Organisation
NUHM National Urban Health Mission
OBS/GYN Obstetrics/Gynaecology
OOP Out-Of-Pocket
OP Out Patient
PDS Public Distribution System
PFS Pre Filled Syringe
PHC Primary Health Centre
PHFI Public Health Foundation of India
PHN Public Health Nurse
PID Pelvic Inflammatory Disease
PPA Phenylpropanolamine
PPH Post Partum Haemorrhage
PPP Public Private Partnership
PPP$ Purchasing Power Parity Dollars
PRI Panchayati Raj Institution
PSU Public Sector Unit
QoC Quality of Care
RBI Reserve Bank of India
RHS Rural Health Statistics of India
RIHFW Regional Institutes of Health and Family Welfare
RKS Rogi Kalyan Samiti
RSBY Rashtriya Swasthya Bima Yojana
RTI Reproductive Tract Infection
RTI Right to Information
S & I Standards and Interoperability
SC Scheduled Caste
SDH Social Determinants of Health
SDH Sub-District Hospital
SEARO South East Asia Regional Office
SHC Sub-Health Centre
SHRDA State Health Regulatory and Development Authority
SIHFW State Institutes of Health and Family Welfare
SSA Sarva Shikshya Abhiyaan
SSU System Support Unit
ST Scheduled Tribe
STG Standard Treatment Guidelines
STI Sexually Transmitted Infection
SUS Serviço Único de Saúde
TB Tuberculosis
TNMSC Tamil Nadu Medical Services Corporation
ToR Term of Reference
TRIPS Trade-Related aspects of Intellectual Property rights
TSC Total Sanitation Campaign
UHC Universal Health Coverage
UIP Universal Immunisation Program
UN United Nations
UNCRPD United Nations Convention on the Rights of Persons with Disabilities
UNFPA United Nations Population Fund
UNICEF United Nations Children's Fund
UT Union Territory
UTI Urinary Tract Infection
VAT Value Added Tax

VHSC Village Health Sanitation Committee

WHA World Health Assembly

WHO World Health Organisation

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