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NATIONAL HEALTH MISSION
राष्ट्रीय स्वास्थ्य मिशन

Report of the Task Force on Comprehensive Primary Health Care Rollout

Ministry of Health & Family Welfare,
Government of India

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Executive Summary

In December 2014, the MoHFW constituted a Task Force on the roll out of Comprehensive Primary Health Care. The Committee was charged, *inter alia,* with identifying current challenges to rolling out comprehensive primary health care, finalizing components of service delivery, clarifying the institutional structures and service organizations, developing guidelines for the PHC team, and coordinating with other Task Forces set up by the MoHFW working on Human resources for Health and developing Standard Treatment Guidelines. The committee recommended that priority attention be paid to nine essential elements for the roll out of Comprehensive Primary Health Care.

Health policy documents, nationally and internationally have emphasised the importance of primary health care. Even countries in the developed world where health outcomes are several fold better, have, over the past three decades turned their attention to strengthening Primary Care and make it more *robust* and *accountable.* Primary Health Care is value for money, enabling better health outcomes at lower per capita total health expenditure. Effectively delivered Primary Health Care has the potential to reduce morbidity and mortality greatly at lower costs to the system and the individual than any other approach, and would significantly reduce the need for secondary and tertiary care. If India has to achieve universal health coverage by the end of this decade or even by the middle of the next, prioritization of primary health care, is the only affordable and effective path through which there is the possibility of reaching this goal. There are many reasons why this has not happened hitherto. They include inadequate financial investments and a policy defined restriction of primary care to a few selective elements of care with sub-optimal use of resources.

Three important requisites to ensure primary health care are: Bringing care closer to people, Giving primary health care providers the responsibility for the health of a defined population, and Strengthening the role of the primary health care team as coordinators of inputs from other levels of care. Universalizing primary health care implies organization of primary care services such that direct, free and permanent access to such care is assured without out of pocket expenditure and with social protection mechanisms ensuring affordable access to secondary and tertiary care referrals. Primary Health Care would also include action though health education and health communication to improve understanding of health and ill health and to promote behaviors and practices that are conducive to good health.

A situation analysis of the health status shows that for indicators such as Total Fertility Rate (TFR), Infant Mortality Rate (IMR) and the Maternal Mortality Rates (MMR), progress is broadly in line with the targets for several of the Millennium Development Goals and better than global averages. This improvement is however, highly skewed across and within states, and between population sub groups, reflecting inequities in service access and coverage. When disaggregated by rural-urban geography, the data looks bleaker. Our success in reversing the adverse sex ratio at birth and preventing excess female infant and child mortality that together account for to a significant gender imbalance has been limited

Progress with regard to national disease control programmes is mixed. Polio has been eliminated and there are significant reductions in leprosy, kala-azar and lymphatic filariasis. The prevalence rate of AIDS has declined but we have 21 lakh persons living with HIV, 1.16 lakh new cases and 1.48 lakh deaths in 2011. In the control of tuberculosis and vector borne

diseases, gains have been difficult to achieve and even more difficult to sustain. In addition emerging diseases such as Japanese Encephalitis, Dengue, Chikungunya, in urban and peri-urban areas add to the challenge. Programmes for control of non-communicable diseases have yet to reach a scale where we can even start measuring impact at a national or even a state level.

Poor functioning of primary health care systems is also reflected in the rapidly escalating demand for secondary and tertiary care services and an increasing cost of health care, which has now become one of the leading causes of impoverishment. Currently even a well functioning primary health center provides services that are limited to care in pregnancy, some aspects of child health and a few of the national disease programmes that are universal in scope. These together represent less than 15% of all morbidities for which people seek health care. For the rest, people have no option but to resort to a local private care provider, or travel to the crowded district hospital or government medical college hospital. If we estimate that nearly three fourths of the remaining 85% of the morbidity could be addressed at the primary health care level, unnecessary cost and suffering could be mitigated.

The report details a set of ten "Framework Factors" contributing to poor outcomes in Primary Health Care. Broadly these ten factors include: Lack of Responsiveness, Limited Attention to Social Determinants, Human Resource Shortages, Marginalization and Exclusion of specific population groups, Supply side Deficiencies, Mismatch between provider training and services to be delivered, Poor quality of relationship between provider and the community/ public, weakly realized potential of ICT in Primary Health Care, Inadequate efforts at community participation and awareness, and low institutional capacity.

Based on the analysis of these framework factors and the situation analysis, nine areas for action in order to make primary health care comprehensive and universal are proposed. They include:

1. Strengthen Institutional Structures and Organization of Primary Health Care Services:
2. Improve access to technologies, drugs and diagnostics for comprehensive Primary Health Care
3. Increase utilization of Information, Communication and Technology (ICT) - empowering patients and providers
4. Promote Continuity of care- for patient centric services
5. Enhance Quality of Care
6. Focus on Social Determinants of Health
7. Emphasize Community Participation and Address Equity Concerns in Health
8. Develop a Human Resource Policy to support Primary Health care
9. Strengthen Governance Financing, Partnerships, and Accountability

1. Institutional Structures and Organization of Primary Health Care:

(i) Operationalizing Primary Health Care would require two sets of components: The first and a central component is a triad: (i) the package of services that would be available, (ii) the way in which service delivery would be organised and (iii) the human resources required to deliver this set of services.

(ii) The second component is a set of supplementary strategies that include access to drugs and diagnostics, information technology, ensuring quality of care, human resource development, and management.

(iii) The package of services proposed in the report would evolve in different states, over a time frame of five to ten years, depending on current state capacity.

(iv) Services include those that (i) can be delivered at the level of the household and outreach sites in the community by suitably trained frontline workers, (ii) services that would be delivered by a team headed by a mid level provider (iii) the referral support and continuity of care within the district health system comprising the PHC, CHC and District Hospital (DH).

(v) The conditions listed for preventive, promotive or curative action can be broadly categorised into the following groups:

- Care in pregnancy and child-birth. (the latter would be provided in specific facilities depending on state context).
- Neonatal and infant health care services
- Childhood and adolescent health care services including immunization.

- Family planning, Contraceptive services and Other Reproductive Health Care services
- Management of Common Communicable Diseases and General Out-patient care for acute simple illnesses and minor ailments
- Management of Communicable diseases: National Health Programmes
- Screening and Management of Non-Communicable diseases
- Screening and Basic management of Mental health ailments
- Care for Common Ophthalmic and ENT problems
- Basic Dental health care
- Geriatric and palliative health care services
- Trauma Care (that can be managed at this level) and Emergency Medical services

(vi) Services for each of these components can be provided at various levels.

- *Family/Household and Community Level:* This would be provided by community level workers- ASHA, Anganwadi Workers, community volunteers, school teachers, etc, with the active support of the Village Health, Sanitation and Nutrition Committee (VHSNC) functioning in coordination with and under the leadership of the Panchayati Raj Institution (PRI). Services at this level include counselling, health communication in addition to basic screening and community level curative care. The ASHA and AWW would be considered members of the Primary Care team.
- *Health and Wellness Centres:* In order to move comprehensive Primary Health Care closer to people, existing sub centres will be converted to Health and Wellness Centres (HWC). There would now be one Health and Wellness Centre for every 5000 population. The services listed above would be provided by a team, led by a trained mid level health care provider. Health Sub centres would be upgraded to provide this larger package of services, comparable to the range of services presently being provided in the sector level Primary Health Centre (PHCs). Existing sector level PHC (one per 30,000) would also continue to provide the set of services as envisaged in the Indian Public Health Standards. In effect, therefore, every existing health sub-centre (now to be renamed the Health and Wellness Centres) would provide the package of services described above, enable referral for consultation with an MBBS doctor at the PHC and ensure follow up.
- *First Referral Level:* Referral support is an essential component of primary health care. It includes general medical and specialist consultation. The first level of hospitalization would be at the level of the First Referral Unit (FRU), which would now need to provide services beyond emergency obstetric care. Over time, states would progress to establishing FRUs at the level of the block level PHC and/or Community Health Centre (CHC)

(vii) A comprehensive primary health care approach would require not only revision of skill sets but also a review of the entry level qualifications of the staff. However, in essence the numbers would be the same- except for the *addition of a person with mid-level care provider skills, one at each sub-centre level*. Each HWC would be managed by a primary care provider team consisting of all ASHAs in the villages covered by the sub centre, two ANMs and a male MPW. The team would be led by a mid-level care provider who would be a Community Health Officer- a BSc. Community Health or a Nurse Practitioner or an AYUSH doctor, certified for a set of competencies in delivering public health and primary care services.

(viii) Human resources posted at all levels would be trained to be multi-skilled. Mid level providers would be trained and certified in a Bridge Course designed to ensure public health and primary health care competencies.

(ix) Members of the primary care team, including the ANM and MPW would need to be skilled as laboratory technicians, counsellors or pharmacists, etc- since it is not possible at this stage to have trained paramedic for each of these functions. The principle is that all these skills are available within the team at the HWC, so that the services are assured to the population. Similarly, at the PHC level, staff would be appropriately skilled to function as ophthalmic technicians, dental hygienists, physiotherapists, etc. Staff

that opt to provide such services would be trained and equipped with specific skills, and be provided with additional incentives.

(x) The HWC would maintain a family folder to ensure that the entire population within its coverage area is registered. Registration would be undertaken as an active process, in that every house and individual who is recorded in the census/Aadhar/National Population Register (NPR) is included. The long term goal is that this data would be digitized and be included in an integrated data system. Where the Aadhar card is available or an RSBY card has been provided these numbers would be part of the registration process. Performance of these centres would be measured through improved monitoring with active community engagement, use of IT tools and periodic external verification.

(xi) Improved financing mechanisms which factor in institutional readiness, work outputs in terms of caseloads with weightage for equity concerns and incentives for quality would be measured against a Quality of Care (QOC) framework.

2. Access to Drugs and Diagnostics for Comprehensive Primary Health Care

(i) Availability of medicines is essential for positive health outcomes. To provide the assured set of services identified in the previous section, availability of essential drugs and developing basic diagnostic facilities is a priority. These would depend on the clinical pathways and standard treatment guidelines.

(ii) The Essential Medicines List defined by the Ministry of Health and Family Welfare (MoHFW) can guide the procurement and supply of medicines in the public. Standards of procurement and supply chain management to develop and monitor implementation of the supply chain would be maintained.

(iii) Besides diagnostic laboratories, HWCs need to have screening capabilities for various conditions that are mandated to be treated at this level.

(iv) The principle to be used for diagnostic service availability is to minimise the movement of the patient and improve the timeliness and reliability of the report. The organization of diagnostic services in a district (block or corresponding administrative unit) would be based on a careful distribution of capacities across sites. One site would be the Health and Wellness Centre. Other sites would serve as diagnostic hubs of at least two higher complexity levels.

(v) A Central Diagnostic Unit (CDU) may be required for, say, (depending upon distances and populations served) every 20 HWCs.

(vi) The rapid progress in the field of appropriate and low-cost technological innovations and medical devices designed for resource-poor settings can be leveraged for diagnostics at primary care levels.

(vii) Regular transportation of samples to the central laboratory and diagnosis within 24 hours can be ensured through employment of *diagnostic runners* – local youth who visit the HCWs at specified times of the day (usually once or twice a day) to collect the samples, transport these to the CDU, and deliver reports from tests conducted the previous day.

(viii) Variations of this approach have been attempted in hub and spoke models for organization of diagnostic services. Successful examples from NGO run models such as Jan Swasthya Sahyog in Chhattisgarh and SughaVazhvu Healthcare in Tamil Nadu and organization of such services by larger commercial laboratory chains show the feasibility of such an approach.

3. Utilization of Information & Communication Technology – Empowering Patients and Providers

(i) The HWCs would use technology to play critical roles towards delivering better quality, more efficient and more accountable primary health care services. Public Health Informatics designed to support the delivery of primary health care needs to address the following five functions:

- Ensure quality of care through the use of standard protocols, continuing education and skill up-gradation, supportive supervision, adequate logistic support, and enabling systematic follow up.
- Enable continuity of care and navigation through the different levels of care seeking so that the primary care provider acts not only at the point of entry but also as the

long term case manager and guide for the patient.

- Institute population based analytics to measure population based health outcomes.
- Establish management functions related to inventory of drugs and consumables, accounting, monitoring of service provision and payments.
- Reduce/optimise the time and effort spent by providers on record maintenance, documentation and administrative functions, so that more time is available for patient care and knowledge up gradation. The development of such ICT tools would be coordinated so as to support primary health care delivery with the systems being used for birth and death registration, for disease surveillance, for early childhood care and for school health. These systems need to be necessarily inter-operable to get the best value for money in terms of information and its use.

(ii) ICT tools would also be required to enable patient satisfaction audits and grievance redressal mechanisms, for surveys and exit interviews that capture cost of healthcare and issues of exclusion and other problems of access.

(iii) Access of citizens to information form health systems, of individual patients to information related to the care provided, Information from public and private insurance systems and hospitals would be included in the population based analytics.

4. Continuity of Care – Making Care Patient-Centric

(i) Continuity of care is one of the key tenets of primary health care. Care must be ensured from the level of the family through the facility level. The principles in family led care include Dignity and Respect for Family Traditions and Practices, Information Sharing, Participation and Collaboration.

(ii) The HWC needs to leverage the network of ASHAs, and the VHSNC to optimise the production of health – which is distinct from the management of disease.

(iii) Specific functions include risk assessment and screening for early detection for those at risk, enabling continuity of medication and follow up to patients for secondary and tertiary prevention, and counselling and enhancing the supportive environment in the family and the community- by reducing stigma and improving understanding.

(iv) Gate-keeping is essential for judicious forward referrals in resource poor contexts like India to avoid unnecessary hospital admission and secondary/special care, and that the largest proportion of disease conditions are effectively managed at the primary care level by HWCs.

(v) The primary care team could fix appointments and facilitate introductions to a paramedic or volunteer at a help-desk located at the referral site, would facilitate the necessary social support and enable care seeking.

(vi) Implementation of care pathways would ensure follow up care at the primary care level such that any repeat visits to the higher facility are based only for scheduled appointments or for complications that the primary provider is unable to handle. Such follow up would be enabled by ICT tools- either Electronic Health Records (EHR) or a simpler modification readily accessible to patient and primary provider.

(vii) One barrier to continuity of care includes treatment schedules requiring frequent clinic attendance that carry a heavy cost in time, travel expenses or lost wages. Primary care providers at the HWC can play a crucial role in ensuring that patients are not lost to follow-up, and that the required care regimen continues. The ANM/ MPW at the HWC can explain the modalities and importance of the treatment schedule to the patients to enable compliance and completion; maintain case records of patients, and ensure that desired health and nutrition practices are being followed at home.

(viii) Creating communication channels through home visits, liaison with community workers – ASHAs, ANMs and AWWs, telephonic reminders and text messages are possible ways to ensure systematic follow-up for continuity of care. In an integrated care setting, the consultant would provide a detailed set of instructions and a discharge summary to enable follow up at the primary care level.

(ix) The primary care centre should also maintain documentation of care, so that a follow up visit to the consultant is facilitated during follow up visits or if complications develop.

(x) Data would be owned jointly, between the patient on one hand and the primary care facility and the hospital (as the case may be) on the other. Such joint ownership would then also require mutual rules of authorization.

5. Quality of Care:

(i) In order for healthcare to be of good quality, it needs to be effective, safe, patient-centred and acceptable, accessible and timely, efficient and equitable. Quality assurance in these six components ensures better health outcomes, reduces the direct and indirect health expenditures, minimizes death and disability, shortens length of hospital stays, and minimizes overuse of drugs, diagnostics and medical procedures.

(ii) Three measures are proposed under the quality of care framework:

- A renewed commitment to achieve Indian Public Health Standards (IPHS) with respect to the minimum allocation of human resources, infrastructure, equipment and supplies.
- Implementing the Ministry of Health & Family Welfare's Quality Assurance Framework for Public Hospitals. (MoHFW 2013)
- Implementation of the Clinical Establishments Act- either the Central Act, or a State Act- which ensures that all private health care providers are also obliged to adhere to a minimum quality assurance framework.

(iii) In the immediate to short term, even while the process of strengthening infrastructure and human resources is underway and additional resources are being mobilized, five elements of quality improvement for primary health care could be immediately put in place everywhere: They are : Notification and adherence to Standard Treatment Guidelines, Implementation of Infection Control Measures, Implementation of Bio-Waste Management Measures, Periodic Patient satisfaction surveys, and Baseline quality measurements and scoring for all public hospitals under the district health system.

6. Social Determinants of Health

(i) The World Health Organization has defined social determinants of health as "conditions in which people are born, grow, live, work and age". It furthers states that such circumstances are 'artificial' and are shaped by "distribution of money, power and resources at global, national and local levels". Social determinants act as the most important factors responsible for health inequities, acting as 'causes for causes'.

(ii) India, in the past, has seen government led efforts to reduce such inequities through targeted programs for those population groups that face maximum disadvantage and are especially vulnerable. Under the National Health Mission, the high priority district approach is essentially based on identifying geographies with poorer health outcomes and providing enhanced inputs in infrastructure, human resources and finances.

(iii) In terms of access to entitlements, the report recommends a focus on three domains, namely: Hunger and Malnutrition, with its close relationship to poverty, livelihoods and employment, Safe Drinking Water and Sanitation, and Pre-school and School Education.

(iv) Correlating illness and mortality in the community with levels of malnutrition and anaemia would highlight the relationship to community and governments and help focus action. Though initially, the correlation is largely with under-nutrition, over-nutrition patterns and their disease correlation would become important in the future. Actions in this domain are:

- Sensitise community institutions to ensure that entitlements related to food security- access to food supply through public distribution systems, access to food supplements in integrated child care centres, mid-day meal programmes, access to the Mahatma Gandhi National Rural Employment Guarantee Scheme(MNREGA) and other livelihood and income programmes, reach those who need it most. In areas where ASHA and ASHA facilitators support the process, the VHSNC has been effective in this.

- Special emphasis on food access to those at greater health risks.
- Infant and Young Child Feeding and Health Education through joint and independent efforts of ANMs, AWWs and ASHAs.

Safe Drinking Water and Sanitation:

- The incidence of water-borne diseases and disease outbreaks would be correlated to gaps in safe water and sanitation at the local level. Joint inter-sectoral response to address these outbreaks and prevent future outbreaks would be developed.
- The patterns and response to such outbreaks have a different patterns in urban and in rural areas, and the primary health care system needs to be geared to addressing both. This requires integrated health and health related information systems.
- Awareness of good hygiene and sanitation processes with respect to prevention of water-borne disease in the community would be undertaken. AWW and ASHAs supported by the VHSNCs and the Integrated Child Development Services (ICDS) structures would be trained and supported.
- VHSNC capacity for collective action to protect water sources and promote sanitation would be built. Areas of focus would be a) solid waste disposal and drainage improvements b) protection of springs, and tube-wells with hand-pumps, chlorination of community tanks and other drinking water sources, c) undertake source reduction for vectors, and d) maintain village level data on outbreaks.

School and Pre-school Education:

- Promote the concept that every school and pre-school would also serve as a platform for enabling primary health care through screening, health education, health promotion, dietary supplementation, ensuring continuity of health care and even the management of common illness, in some cases.
- Strengthen the school health programme organised by the department of schools and supplemented by the health department.
- Leverage and strengthen the school mid-day meal programmes by measuring and addressing child malnutrition. This would be supplemented by other nutrition related interventions such as weekly iron and folic acid supplements, de-worming etc. .
- Ensure that the school and its environs itself serve as a site of behaviour change to encourages safe health practices- including hand washing, use of sanitary latrines, menstrual hygiene etc.

There are several other areas where there is scope for action on social and environmental determinants of health. These may not be the prime responsibility of the health department – but there are important tasks to which the primary health care team would have to contribute. An illustrative list includes: Prevention of tobacco use, alcoholism and abuse of other substances, Prevention and response to gender related violence, Safe Sexual Practices- especially focussed on those at higher risk and vulnerability, Road Safety Issues and the prevention of accidents, and Indoor Pollution and Respiratory Disease.

7. Community Participation and Equity Concerns in Primary Health Care

(i) The role of community participation is integral to comprehensive primary health care. The ASHA and VHSNC are starting points for community engagement. Vibrant VHSNC with the capacity for local level action for health could provide the initial catalytic spark for community action, but ultimately the involvement of all strata of the community is essential for sustained action and to leverage collective community action.

(ii) Building the capacity of the Panchayat system and in particular the Gram Sabha as an institution to undertake community planning, action and accountability is critical and must be a medium term goal in ensuring Comprehensive Primary Health Care. The MoPRI is currently developing a strategy to build the capacity of Gram Panchayat members in health, and this should be supported in all states.

(iii) Specific forms of community participation include community planning and action for surveillance and action on vector borne disease control

programmes, addressing risk modification for NCD, and undertaking social health campaigns. Other activities include advocating physical exercise and promoting sports for young people in the community for healthy life styles, supporting the primary care team in outreach activities, in reaching remote hamlets, and in taking action against alcohol, tobacco and other forms of substance abuse.

(iv) Organizing patient support groups facilitated by the ASHA or other frontline workers around particular disease conditions is a useful mechanism to improve treatment compliance and engaging not only those with the disease condition but also family members.

(v) A special area of focus in community participation is action on issues of gender equity- addressing patriarchy and gender stereotypes that are inimical to the health and safety of women – such as violence, early age at marriage, son preference, and higher education for girls. Engaging with existing women's groups and ensuring greater participation of women in the VHSNC is also an important strategy.

(vi) From the VHSNC, the process should gradually move to the Gram Panchayat committee, supported by the ASHA and other frontline staff in using public services monitoring tools, assessing and addressing intra-Panchayat inequities for improved community health status with active collaboration of the health system.

(vii) Comprehensive primary health care must ensure priority reach and coverage to the poorest and socially vulnerable who would not be the last to receive the benefits of care but are purposively reached by the primary care team and by making equity of care and access to entitlements a key focus of community action. The ASHA and the VHSNC would have an important role to play in mapping such individuals and communities, and ensuring service reaches and follow up.

(viii) The role of the ASHA in addressing inequities has been initiated in building her understanding of marginalization and the need for social mobilization to address the most vulnerable. This must also be part of the training of the primary care team. Enabling people's access to services and entitlements must be a key goal of the team. The enrolment of all families would purposively target the socially and economically vulnerable and specific follow up would be needed so as to ensure appropriate coverage for these groups.

(ix) The Primary Care team through its outreach work must consider community meetings and engagement with the VHSNC and Gram Panchayat as a key function that would yield improved health outcomes. Community meetings and joint planning with the community on a set of activities that would serve to improve preventive and promotive behaviour and improve equity would be a part of the annual plan of the team, and one of the measures by which they would be assessed.

(x) Financing of the VHSNC over and above the untied funds would be linked to performance on a set of functions. The functions could include organizing community events – such as health campaigns, promotion of awareness for particular issues and source reduction measures. This should be determined at the local level and paid for by the block or district, with leveraging of resource from the Panchayat fund as is being done in Kerala.

8. Human Resources Policy to Support Primary Health Care

In this section the Task force took a larger view of the human resource challenges and crafted systemic recommendations that would be needed to enable comprehensive primary health care. The report identifies seven key challenges that affect the human resource for health in the country. They include: Issues with current medical education, placement challenges in rural and remote areas, current workforce management policies, the specialist challenge, avoiding overlap between the roles of ASHA, ANM, and AWW with appropriate skilling and task definition, ensuring effective performance, and the creation of a public health cadre. Possible solutions to address these:

1. Increase the number of non capitation fee based, publicly financed medical and nursing colleges and limit the growth of capitation fee based medical and nursing colleges.
2. Develop an examination on the pattern of the National Eligibility Test (NET), (for college teachers), to serve as a qualifying examination for public service, with its entire emphasis on primary care. Care must be taken to ensure that the examination is designed so that only primary care competencies are assessed.

3. A strong programme of community orientation and primary care should be introduced into the teaching.
4. Strengthen the primary care posting during internship with more innovative teaching, where a set of essential primary care provision and leadership skills are imparted.
5. Link each government medical college to a field practice area in a district (or at least to a block with a population of about 200,000) making them accountable for better service utilization and health outcomes in this area, and ensuring efficient functioning of all public health facilities in that district (or block).
6. Sponsor and support professional associations of primary care and family medicine, to enhance their status.

Measures to address retention in rural and remote areas:

(i) An appropriate package of measures that encompass educational, regulatory, incentives and better work-force management including positive practice environments must be offered. This package must be constantly adapted and modified to match changing contexts and perceptions.

(ii) Contracting in private providers has been suggested often as a way of addressing human resource shortages. States should be able to provide the space to accredit dedicated providers/facilities in rural and remote areas. Public Private Partnerships (PPPs) would do better where health facilities are to be staffed with only non-medical personnel, or in areas like urban slums, which are also under-serviced.

Measures to address these workforce management issues:

(i) Learning from Tamil Nadu demonstrates that the best results are obtained where the process of selection and recruitment of contractual workers is similar to that for regular workforce. As and when regular posts become vacant, contractual staff, based on seniority should be regularised. The wage differentials need to be kept low-and work allocation undertaken without reducing the work load of the regular staff.

(ii) It is also important to ensure that the critical minimum number of posts (based on IPHS) is created and posts are filled as work-loads per service provider reach threshold levels. The threshold should be adjusted for equity considerations, so that tribal and hilly areas have greater density of providers per unit of population. Sanction of additional posts to a district should be in line with the total footfalls in the health care facilities of the district health system. However allocation between facilities could be decided by the district based upon caseloads in each facility.

(iii) Timeliness of promotions and postings should be made an important measurable performance indicator for senior administrators of the departments. ICT based HR management with transfers and postings through a web-based transparent approach would be undertaken.

(iv) There is evidence that team based incentives for achieving clear output measures are easier to implement and lead to substantial performance improvements. Distribution of team incentives especially in the case of monetary incentives need a set of guiding principles, within which each health team has some flexibility as well.

(v) Monitoring and disciplinary action too, is best done at the level of team functioning rather than of individuals.

(vi) It is important to build institutional capacity required to train large numbers of mid level care providers with adequate quality. Investment in training institutions with infrastructure and human resources and linkage to district hospitals for clinical material and primary centres for community level care would have to be put in place. To facilitate this process, consortia between government training institutes, health NGOs and not for profit health care providers who have experience in such training would be encouraged.

(vii) Primary health care teams would require referral support at the CHC (block hospital) level from specialists. Currently the gap of specialist is large and ever widening. There is a need therefore to rapidly introduce and scale up distance education approaches that build elements of wide ranging referral response skills in all MBBS medical officers and specialists posted in CHCs and DHs, so that they refer less and resolve more.

(viii) In addition, a team of three family medicine specialists can provide all the referral work at the block hospital level, leaving it to districts for creating fully fledged specialists.

Measures to address overlap in role confusion between ASHA, AWW and ANM:

(i) The potential problem of excessive staff could be resolved if the entire set of tasks outlined in the comprehensive primary care package is entrusted to this team.

(ii) The appointment of two female MPWs and one male MPW is essential to carry out the entire range of PHC tasks. India's policy on nursing has been to integrate nursing with midwifery and not create a separate cadre for the latter. But there is a need to ensure a higher level of skills in midwifery to nurses (of ANM or GNM qualification) who are required to conduct deliveries, and even promote the emergence of some who would be specialised only in midwifery service. This however is not a requirement for all Health and Wellness Centres in sub centres or PHCs where delivery services are not being provided. .

(iii) ASHAs also need to be recognised as an institution that would be required in perpetuity, but with roles that evolve from predominantly RCH care in states with persistent high fertility and poor maternal and infant survival rates, to a much wider vision of community level care including palliative and geriatric care and care for chronic diseases.

(iv) Clear job descriptions, career progression and long term HR strategies for all for all these personnel, including for the ASHA, are essential.

9. Governance, Financing, Partnerships and Accountability.

(i) The mechanisms for governance and accountability for primary health care would be similar to those for other levels of health care. No separate institutions for governance of primary health care are envisaged. It is important that the provision of primary care has political accountability.

(ii) The current institutional arrangements with the Secretary of Health, the Directorate, and the State and District Health Societies remain the basis. It is better to strengthen and reform these committees, addressing their short-comings, rather than create new and parallel institutions.

(iii) The main aspects of strengthening these existing institutions are strengthening the participation of elected local government, better coordination between Directorates and civil service leadership and building capacity of both for their respective roles, measures to reduce fiduciary risk and professionalising management with the introduction of a public health management cadre.

(iv) Vertical accountability within the public health system needs to be strengthened. Vertical accountability requires clearly definition of responsibilities with allocation of powers, for those charged with key administrative actions like recruitment, postings, promotions, procurement, supply chain management, timely financial flows, respecting the sanctity of signed contracts.

(v) For primary health care the recommendation is that financial flow to districts be organized such that there is assurance against misuse, but also allows for flexibility so that allocation is more responsive and efficient. This could be done by sanctioning the funds in a limited number of heads, with some heads sanctioned on a fixed basis and some related to utilization.

(vi) The fund flows related to utilization constitute a simple form of output based financing. Health and Wellness Centres which have a higher number of cases registered would receive a higher quantum of funds. This process could include additional amounts for completion of initial screening and the required level of data entry for digitisation of records. A quality of care framework and score could ensure a proportionate increase in funds for quality scores, since this would ensure positive outcomes as well. The rules for financial flows under each budget head could vary.

(vii) District Health Societies and Hospital Development Committees (Rogi Kalyan Samities) are expected to supervise the receipt of funds and their internal allocation. To strengthen the functioning of these committees it is essential that a results based framework (linked to finances) be prepared for the committee at each facility level, and progress be monitored by the committee leadership at the next higher level. Joint planning meetings and training programs for the members of committees from different stakeholder groups (so as to ensure a uniform level of sensitization) should be undertaken.

(viii) Building the necessary leadership to ensure comprehensive primary health care requires

a public health management cadre. The essential features of this cadre would include: a) mandatory training in public health or public health management to enable capacity for change management- either a diploma or a degree, b)a career path where this cadre is in charge of primary care, national health programmes and all aspects of preventive and promotive care and action on social determinants, c) speedier promotions and greater profile in administration, but with a non practicing allowance and a strict “no” to private practice, and d) periodic programmes of skill up-gradation in public health and later in institution building and policy development.

(ix) Though the government is the main provider of primary health care, there are situations where suitable not for profit health agencies are available and could be contracted in for provision of primary health care.

(x) Another important dimension of governance and professional management is ensuring access to knowledge resources. This requires that every state and every district has an identified technical support agency, which would provide it with the necessary technical support and capacity building inputs needed. Horizontal accountability to local communities is also vital. Mechanisms to enable this, include community monitoring, data sharing and sharing relevant information with local government bodies and their supervision.

(xi) Effective monitoring requires a careful choice of indicators. Indicators have to be organized as a hierarchy with some indicators being much more useful for programme management at the local level and a fewer number of indicators being adequate at higher levels. At the national level a few key indicators that guide policy and provide an overview of performance would be adequate.

Introduction

In December 2014, the MoHFW constituted a Task Force for the roll out of Comprehensive Primary Health Care (PHC) (Annexe 1). The Committee was charged, *inter alia,* with identifying current challenges to rolling out comprehensive primary health care, finalizing components of service delivery, clarifying the institutional structures and service organizations, developing guidelines for the PHC team, and coordinating with other task Forces working on Human resources for Health and developing Standard Treatment Guidelines. The Committee met in January 2015 and April 2015 and the final report was submitted to the MoHFW in July 2015. The report is structured as follows: In the first chapter, a rationale for prioritizing primary health care, a conceptual definition of the key features of primary health care, a situation analysis, and a framework that contextualizes the situation analysis are provided. Nine essential elements for the roll out of comprehensive Primary Health Care are identified. Subsequent chapters explore each of the nine elements in depth.

Members of the Task Force

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Ms. Vini Mahajan	Principal Secretary, Health, Government of Punjab
Ms. Roopa Mishra	Mission, Director, National Health Mission, Government of Odisha
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CHAPTER

one

Prioritizing Primary Health Care: A Situation Analysis

A. National and International Consensus on Primary Health Care

(i) All health policy documents, nationally and internationally have emphasised the importance of primary health care. The Declaration of Alma Ata, adopted in 1978 called for the key strategy of achievement of Health for All (HFA). The National Health Policy (NHP) of 1983 endorsed and emphasised the importance of primary health care in the attainment of a healthy nation, the NHP, 2002 and more recently the draft National Health Policy of 2015 also reiterated this. Successive Plan documents including the 12th Plan document too, endorsed this understanding. At the international level, the World Health Organization has emphasised the importance of Primary Health Care.

(ii) Even countries in the developed world where health outcomes are several fold better, have, over the past three decades turned their attention to strengthening Primary Care to make it more *robust* and *accountable.* In fact 80-90% of federal budgets on health care go towards establishing such Primary Care Systems in countries, such as the United Kingdom (UK), Australia, Canada, Netherland, Sweden, and the United States of America (USA). There is also convincing evidence that in a comparison *between* developed nations, those nations that invested a greater proportion of public health expenditure in primary care have achieved at comparable or similar costs, better health outcomes. In the UK for example the major part of the total budget is spent on primary health care, and about 65% of physicians work in primary health care, as compared to USA. Consequently on all parameters health outcomes in the UK appear better than the USA with a spend of only about 8% of the GDP as compared to 19% of the GDP that the US spends (1). Primary Health Care is value for money, i.e., higher health outcomes at lower per capita total health expenditure. Effectively delivered Primary Health Care has the potential to reduce morbidity and mortality at lower costs to the system and the individual than any other approach, and would significantly reduce the need for secondary and tertiary care.

(iii) The World Health Organization (WHR) in its 2008 report (2) contextualizes the situation thus, " Today, it is clear that left to their own devices, health systems do not gravitate naturally towards the goals of Health for All through primary health care as articulated in the Declaration of Alma-Ata. Health systems are developing in directions that contribute little to equity and social justice and fail to get the best health outcomes for their money. Three particularly worrisome trends can be characterized as follows: i) health systems that focus disproportionately on a narrow offer of specialized curative care; ii) health systems where a command-and-control approach to disease control, focused on short- term results, is fragmenting service delivery; iii) health systems where a hands-off or laissez- faire approach to governance has allowed unregulated commercialization of health to flourish. These trends fly in the face of a comprehensive and balanced response to health needs. In a number of countries, the resulting inequitable access, impoverishing costs, and erosion of trust in health care constitute a threat to social stability".

(iv) Further the WHR 2008 points out that "what has been considered primary care in well-resourced contexts has been dangerously oversimplified in resource-constrained settings." It cautions a number of these over-simplifications as follows:

a. "Primary care provides a place to which people can bring a wide range of health problems–it is not acceptable that in low-income countries primary care would only deal with a few "priority diseases";

b. Primary care is a hub from which patients are guided through the health system–it is not acceptable that in low-income countries, primary care would be reduced to a stand-alone health post or isolated community-health worker;

c. Primary care facilitates ongoing relationships between patients and clinicians, within which patients participate in decision-making about their health and health care; it builds bridges between personal health care and patients' families and communities – it is not acceptable that, in low-income countries, primary care would be restricted to a one-way delivery channel for priority health interventions;

d. Primary care opens opportunities for disease prevention and health promotion as well as early detection of disease– it is not acceptable that, in low-income countries, primary care would just be about treating common ailments;

e. Primary care requires teams of health professionals: physicians, nurse practitioners, and assistants with specific and sophisticated biomedical and social skills – it is not acceptable that, in low-income countries, primary care would be synonymous with low-tech, non-professional care for the rural poor who cannot afford any better;

f. Primary care requires adequate resources and investment, and can then provide much better value for money than its alternatives – it is not acceptable that, in low-income countries, primary care would have to be financed through out-of-pocket payments on the erroneous assumption that it is cheap and the poor should be able to afford it."

(v) If India has to achieve universal health coverage by the end of this decade or even by the middle of the next, prioritization of primary health care, is the only affordable and effective path through which there is the possibility of reaching this goal. This has been reiterated by all committee reports from the time of the Bhore Committee (3) report onwards. National Health Policy statements of 1983 and 2002 and the recent Draft National Health Policy of 2015 have reiterated it. The High Level Expert Group Report on Universal Health Coverage of 2011 also called for a 70% budgetary allocation to primary health care (4).

(vi) There are many reasons why despite such policy support this has not happened. The first and the most important has been that financial investments have been inadequate. The second and perhaps equally important reason, has been the policy defined restriction of primary care to a few selective elements of care in a rather fragmented manner, with sub-optimal use of resources. There is considerable evidence that even immunization targets are better achieved if they are part of a more comprehensive health care, than when they are part of a selective package. The issue is that the perceptions of policy makers and implementers related to primary health care has become so embedded in the highly selective definitions of health care-that instead of investing more in primary health care and reaching out and responding to all the health care needs of people, attention remains limited to a narrow service package.

B. Defining Primary Health Care

Primary Health Care can be best understood as a concept defined by a set of essential features. One-line definitions tend to be either too sweeping to be useful in operational terms, or too focussed on a few aspects. The WHO defines Primary Health Care as an approach to organization of health care services with the following essential features.

(i) Primary health care is a health service that provides entry point ambulatory care for health and health-related problems which includes a comprehensive range of integrated diagnostic, curative, rehabilitative and palliative services. In contrast to most conventional health-care delivery models, the offer of services should include prevention and promotion as well as efforts to tackle determinants of ill health locally.

(ii) Primary Health Care, to be effective is necessarily comprehensive. It is comprehensive in that it includes preventive, promotive, curative and rehabilitative aspects of health care. It is also comprehensive in that it provides such care for almost 95% of all illnesses; not being confined to some aspects of reproductive and child health and some communicable diseases alone. Finally it is comprehensive in that it is not it does not mean mere first contact care but includes the necessary referral support and care that is required for it to be effective.

(iii) The organization of primary health care services requires a direct and enduring relationship between the provider and the people in the community served and it is essential to be able to take into account the personal and social context of patients and their families, ensuring continuity of care over time as well as across services. Three important requisites for such a definition of primary health care are:

a. Bringing care closer to people, in settings in close proximity and direct relationship with the community, relocating the entry point to the health system from hospitals and specialists to close-to-client generalist primary-care centers;

b. Giving primary-health care providers the responsibility for the health of a defined population, in its entirety: the sick and the healthy, those who choose to consult the services and those who choose not to do so;

c. Strengthening the role of the primary health care team as coordinators of the inputs from other levels of care

(iv) Universalization of primary health care implies the organization of primary care services such that direct, free and permanent access to such care is assured without out of pocket expenditure and with social protection mechanisms ensuring affordable access to secondary and tertiary care referrals as required.

(v) "Primary health care teams cannot ensure comprehensive responsibility for their population without support from specialized services, organizations and institutions that are based outside the community served. In resource-constrained circumstances, these sources of support will typically be concentrated in a first referral level district hospital. Indeed, the classic image of a healthcare system based on Primary Health Care is that of a pyramid with the district hospital at the top and a set of public health centers that refer to the higher authority." (WHR 2008). Such a vision of primary health care that has the entire district health system in its ambit makes it more dynamic. "As healthcare networks expand, more resources allow for diversification: the range of specialized services that can be brought within reach may include emergency services, specialists, diagnostic infrastructure, dialysis centers, cancer screening, environmental technicians, long-term care institutions etc. This represents new opportunities, provided the primary-care teams can assist their community in making the best use of that potential, which is particularly critical to public health, mental health and long- term care." (2)

(vi) Primary Health Care would include all those dimensions where there is action though health education and health communication to improve understanding of health and ill health and to promote behaviors and practices that are conducive to good health.

(vii) Primary health care has, as an essential feature, that of coordination (gate-keeping). This role "effectively transforms the primary health care pyramid into a network, where the relations between the primary-care team and the other institutions and services are no longer based only on top-down hierarchy and bottom-up referral, but on cooperation and coordination. The primary-care team then becomes the mediator between the community and the other levels of the health system, helping people navigate the maze of health services and mobilizing the support of other facilities by referring patients or calling on the support of specialized services. This coordination and mediation role also extends to collaboration with other types of organizations, often nongovernmental. These can provide significant support to local primary care. They can help ensure that people know what they are entitled to and have the information to avoid substandard providers. Independent ombudsman structures or consumer organizations can help users handle complaints." (2)

(viii) Most importantly, primary health care would include "a wealth of self-help and mutual support associations for those living with disabilities,

diabetes and other chronic diseases that can help people to help themselves, and which primary health care can facilitate and coordinate. These groups do much more than just inform patients. They help people take charge of their own situation, improve their health, cope better with ill- health, increase self-confidence, improve access to care and diminish over-medicalization. Primary-care teams can be strengthened by reinforcing their linkages with such groups."

C. Situation Analysis of Primary Health Care in India

(i) The vision of Primary Health Care in India was articulated by the Bhore Committee Report in 1946, which envisaged a combination of vertical programmes to address selected health conditions as a short term measure, and strengthening of a network of primary health care facilities for the long term to provide comprehensive primary health care. Despite policy commitments, the emphasis in the next few decades was overwhelmingly on family planning, maternal and child survival, and just two to three communicable diseases, as has been documented in several reviews of health care in India. In 1978, India became a signatory to the Alma Ata Declaration and articulated the commitment in the National Health Policy of 1983. The launch of the National Rural Health Mission in the year 2005, a little less than three decades later, signaled another effort at strengthening primary health care systems within a broader health sector reform attempt. In this section we explore the situation of Primary Health Care in the country today and analyze why India is faltering in the commitment to provide primary health care to all its citizens.

(ii) Going by the key demographic health indicators - the Total Fertility Rate (TFR), Infant Mortality Rate (IMR) and the Maternal Mortality Rates (MMR), progress is broadly in line with the expectations and targets of several of the Millennium Development Goals and better than global averages. This improvement is however highly skewed across and within states, and between population sub groups, reflecting inequities in service access and coverage. While many states have shown remarkable improvement, the high focus states of Uttar Pradesh, Bihar, Madhya Pradesh, Rajasthan, Jharkhand, Chhattisgarh, Orissa, Assam and Uttarakhand perform below the national average[1]. (Annexure 1). When disaggregated by rural-urban geography, the data looks even more bleak. Poor progress in reversing the adverse sex ratio at birth and in preventing the excess female infant and child mortality is leading to a major gender imbalance in the population.

(iii) Progress with regard to national disease control programmes is mixed. Polio has been eliminated and there are significant reductions in leprosy, kala-azar and lymphatic filariasis. However, for the latter three conditions, there are blocks in several districts of the country where prevalence is above the elimination threshold. The prevalence rate of AIDS has declined from a 0.41 % prevalence rate in 2001 to 0.27% in 2011, translating to 21 lakh persons living with HIV, with about 1.16 lakh new cases and 1.48 lakh deaths in 2011. In the control of tuberculosis and vector borne diseases, gains have been difficult to achieve and even more difficult to sustain. In addition emerging diseases such as Japanese Encephalitis, Dengue, Chikungunya, in urban and peri-urban areas add to the challenge. Performance in disease control programmes is largely a function and reflection of the strengths of the primary health care system.

(iv) Programmes for control of non-communicable diseases have yet to reach a scale where we can even start measuring for impact at a national or even a state level. Efforts to date focus on higher level centers, with little action at the primary health care level.

(v) In Annexure 2, we provide a table with the current status of Health Sub Centers (HSCs), Primary Health Centers (PHCs) and Community Health Centers (CHCs), which are intended to provide primary health care. It also shows the shortfalls in infrastructure. However, even this data is not complete, because while the table captures numbers, other factors such as the state of infrastructure, equipment, and caseloads are not possible to obtain through either surveys or monitoring systems. In Annexure 3, we provide the status of Human Resources across states at these facilities. Even though there has been

1 With regard to Total Fertility Rate (TFR) among high focus states, Uttar Pradesh, Bihar, Madhya Pradesh, Rajasthan, Jharkhand and Chhattisgarh are above the national average, which is 2.3

much improvement in the last decade, shortages of HR are still high and there are other systemic issues that hamper provision of primary health care.

(vi) Poor functioning of primary health care systems is also reflected in the rapidly escalating demand for secondary and tertiary care services and increases in the cost of health care, which has now become one of the leading causes of impoverishment. The rising burden of health care costs on the poor threatens to undo any good that may result from rising incomes or poverty alleviation programmes.

(vii) Currently even a well functioning primary health center provides services that are limited to care in pregnancy, some aspects of child health and some of the national disease programmes that are universal in scope. Together these conditions represent less than 15% of all morbidities for which people seek health care. For all the rest people have no option but to resort to either the local private care provider or travel to the crowded district hospital or government medical college hospital. If we estimate that nearly three fourths of the remaining 85% of the morbidity could be addressed at the primary health care level, much unnecessary cost and suffering could be mitigated.

(viii) In the initial years of the NRHM, there was a conscious effort to move in the direction of comprehensive primary health care- with the adoption of the Indian Public Health Standards (IPHS) and a planned increase of human resources at the primary care level. However by the end of the 11th Plan period, budgets had plateaued, and in the 12th Plan period, real declines began. These declines have affected the high focus states most and threaten to offset the gains of NRHM's early years. The problem of poor access to primary care however is rooted in a set of determinants that includes but is not limited to budgetary cuts.

(ix) In the nineties, health sector reforms under structural adjustment emphasized that government health care systems should focus on a very narrow package of services, leaving the rest to private sector, with or without insurance cover. User fees were introduced, with the notion that it would encourage competition and accountability and therefore quality of care, and it was expected to recover costs for the government. We know now that user fees were a significant financial barrier that excluded the poorest and equally important, also promoted migration of the paying and more vocal middle class from the public health system thus reducing the pressures for quality of care; giving rise to the aphorism that any health care designed exclusively to reach the poor would be poor health care. The circumscribed nature and smaller service package also affected professional satisfaction for providers and returns on investment in human resources and infrastructure. This has led to a trend of the primary care provider referring away most cases – especially all non-communicable disease and communicable diseases beyond the national programmes- to secondary and tertiary care centers, thus creating an impression that virtually no care is available at the primary care facility.

India's selective primary health care has, however, an even longer history. Starting from the late fifties and well upto 1978, (around the time of the Alma Ata declaration) central fund allocated for primary health care were largely focused on two concerns - Family Planning and Malaria. In the case of malaria, after dramatic reductions in incidence as a result of investments made over 15 years, attention declined in the late 60s, leading to its recrudescence.

The design and organization of primary health care services and the conflation of primary health care with family planning had much to do with why the recommendations of the Bhore Committee, with its brilliant and before-its-time recognition of criticality of comprehensive primary health care provision, were not implemented. In fact, the conflation was so complete, that India's move to "comprehensive" primary health care is ascribed not to the founding policy statements but to three policy developments on the late seventies- the adoption of the Alma Ata declaration in 1978, the withdrawal of coercive and exclusive family planning focus in 1977 and the adoption of the National Health Policy of 1983. However in the process of implementation, the mandate was re-interpreted to mean selective primary health care- but now expanded to include GOBI (Growth Monitoring, ORS, Breast Feeding and Immunization) and ante-natal care. In 1993, the Child Survival and Safe Motherhood (CSSM) Package was adopted, as a move to bringing "M back into MCH". The Cairo declaration in 1984, led India to adopt the Reproductive and Child Health (RCH) service package. The resultant, still very limited set of services in

primary health care can therefore be attributed to a policy design and choice of technical strategy often guided by global players.

Even on this limited package of services, India's performance on related outcome indicators fares poorly in comparison to the neighboring South Asian countries of Bangladesh, Nepal and Sri Lanka. One way to understand this is to examine the skew in performance across states. States such as Kerala and Tamil Nadu, with comparable or better social determinants and health systems and higher public health expenditure do better than Bangladesh and Nepal and are on par with Sri Lanka. However, other states, with adverse social determinants and weak health systems (such as Uttar Pradesh, Madhya Pradesh) and very limited public health expenditure do worse. But the core issues are common to all states. We explore these common issues in the section below.

D. Framework Factors Contributing to Poor Outcomes in Primary Health Care.

1. **Lack of Responsiveness:** There is a poor match between felt health care needs and services provided. Care for conditions such as common fevers, chronic illnesses, trauma and injury, are not offered in the primary health programme. On the other hand, the focus is on active demand creation and push of services for selected preventive and promotive services such as immunization, ante-natal care, and institutional care in delivery or family planning. This is targeted at poor communities where levels of literacy and awareness are low and health seeking behavior is poor. But the burden of common illnesses is high among such communities, and therefore among such population groups, a health care delivery system which is not responsive to felt needs has little credibility or traction for promoted needs. The service provider in the private sector in primary care, typically a General Practitioner, whether formally qualified or not, is far more responsive to felt needs. But here the pendulum swings to the other end and important health care needs which are not part of the "felt" demand, especially preventive and promotive health care, are almost completely excluded and the response to felt needs is often an excess of or irrational medication. The relationship between the availability of a broader package of care leading to more credible primary health systems and better utilization of services which are prioritized by vertical programmes requires to be studied further by exploring correlation across states and with South Asian nations.

2. **Limited Attention to Social Determinants:** First, the influence on IMR is multi-factorial. The states that do poorly on this indicator, as a rule have worse levels of poverty, malnutrition and access to safe drinking water and sanitation, and poorer female literacy levels than states that have lower IMR. This is also true of the inequity within states which often can be as high as the inequity across states. Within each group of states or districts at similar levels of development, performance does not correlate in a linear fashion with child or maternal survival figures. Some states like Bihar and Jharkhand are doing better in IMR than could be expected from their performance in health service delivery indicators, while states like Odisha and Chhattisgarh are doing worse. This just illustrates further the complex multi-factorial determinants of health outcomes, where service delivery is only one factor amongst many. To some extent, therefore, in order to measure performance, determinants of service delivery outputs and health outcome indicators, need to be measured, using a larger basket of indicators.

3. Constraints leading to Human Resource Shortages:

   3.1 *Effect of past policies: HR crisis stemming from the nineties:* High focus states began in 2005 with very high deficits in human resources at every level including at the primary care level due to the health sector reform and fiscal crisis of the nineties. There was also a shutdown or reduction in faculty-student ratios, of publicly financed educational and technical institutions that could have provided the necessary human resources to make effective use of NRHM funding. Only a few states have created a public health cadre to specifically address this gap. Even where such a cadre is in place, training programmes need to be updated to deal with current challenges and opportunities.

   3.2 *Understaffing at the Sub-center level*: The IPHS increased the number of female health workers (Auxiliary[2] Nurse Midwife-ANM)

2 Also called Village Health Nurse (VHN) and Junior Public Health Nurse (JPHN) in some states

at the sub-center to two, in addition to the Male Multi Purpose Worker (MPW-M). But the implementation of this was patchy, and worst where this was needed the most. A policy conditionality was that the sanction of a second ANM would require the addition of an MPW male, by the state. Most states were unable to do so and this delayed the sanction and deployment of the second ANM. By 2010, most states had revived educational institutions for training female and male MPWs and had started generating the pool of human resources from which they could recruit. However by then restrictions and uncertainties in financing this additional staff emerged. One form in which the restrictions took shape, late in the period of the 11th Plan was a re-emphasis on deploying centrally financed human resources exclusively for select elements of RCH care. Even where sanctioned, the second ANM was withdrawn from sub-centers and selectively deployed in those sub-centers which served as "delivery points", or were deputed to school health teams or newly opened urban health centers. The notion of using additional staff for an additional package that included non-communicable diseases was never formally withdrawn, but appears to have lost emphasis.

3.3 *Frontline worker Density:* The density of frontline health workers per population has a direct influence on service delivery outcomes. Here we are referring to the population served by each PHC or sub-center. Uttar Pradesh, Bihar, West Bengal have low density and, as can be expected, perform poorly on service delivery outputs. Uttar Pradesh, for example, has an average of over 8000 population per sub-center, with several serving a population of over 14,000. Jharkhand similarly has very poor ratios of approximately 5000 per sub-center, when the norm for a tribal, forested and hilly state is one sub center per 3000 population. Where these states were able to deploy more than one ANM per sub-center, the problem was ameliorated. Many states were unable to do so, and even those that did, focused on RCH care.

3.4 *Role of Community Health Workers:* In 2005, under NRHM, the ASHA programme was launched. One decade later there are 900,000 ASHA, but her role continues to be circumscribed towards promoting utilization of a limited set of RCH programmes, representing a missed opportunity for the ASHA to play a key role in the primary health care team. This is especially true for the non-high focus states where ANM densities are good, and the burden of RCH work is low. The ASHA should have evolved to play a role addressing several facets of primary health care, including action on social determinants and community participation, addressing the marginalized with a broader preventive care package, and playing an active role in promoting screening for chronic diseases and in supporting palliative and rehabilitative care.

3.5 *Workforce performance*: This is usually attributed to absenteeism and other forms of poor workforce motivation and negligence. The evidence on this however, is mixed. Our understanding is that the first four factors listed above would be sufficient to explain the variation in outcomes across states. But in every state, for a given level of human resource deployed, improvement in health systems performance with better governance and workforce management could be made. The problem is when this is used as an alibi for inaction on the other fronts. Social determinants alone do not excuse poor performance, nor do anecdotes of poor performance excuse the lack of action in putting in place the basic numbers of human resource required. By numbers, here one refers to the numbers required as specified so clearly in the Indian Public Health Standards and not just token increases that remain sub-critical to ensuring minimum required densities. The programme evaluation of the Janani Suraksha Yojana (JSY) conducted by NHSRC (5) notes, that even in a state like Uttar Pradesh, there are ANMs who cater to a population of close to 14,000 who manage to conduct close to 30 deliveries every month and also manage the entire load of immunization work reasonably well. But just like anecdotes of failures, anecdotal high performance cannot define a strategy. Workforce performance is closely linked to the quality of leadership and the structure of health care institutions and amenable to considerable improvement if administered better.

4. **Marginalization and Exclusion:** Another framework factor is the systematic exclusion of specific population groups. For example, in urban slum areas, performance in several states is sub optimal, resulting in the setting up of the National Urban Health Mission (NUHM). Past Common Review Missions (CRM) of the NRHM have pointed out that migrant and minority populations even in the more developed states of Punjab, Kerala and Himachal Pradesh have received lower attention. In these states such poor performance is not district wide, but focused on a few sub-centers and blocks. Tribal pockets with poor service delivery are also blind spots even in many of the non-high focus states. In High Focus States, the problems of marginalization exacerbate already poor rates of utilization of services.

5. **Supply side Deficiencies:** While the list of supply side constraints is long, we select two programmes which are relevant in the current context, namely Immunization and Family Planning. Vaccine logistics have a direct adverse impact on immunization outcomes. In most non high focus states the nearest Ice Lined Refrigerators (ILR) points are located at a PHC (30,000 population unit), whereas in some of the poor performing states the nearest ILR/ deep freezer point could be a block hospital that serves a 2.5 lakh population unit or even a district hospital serving over 10 lakhs. There is a mechanism called the alternative vaccine delivery system which is supportive but not entirely effective. Similarly, due to a lack of professionals with appropriate surgical skills for sterilization, the surgical procedure (for women who want a limiting method) is often limited to a few days/ weeks in a year, rather on a regular weekly basis, especially in poor performing states. Part of the supply side constraint is a result of poor planning and management, but also related to chronic poor investment and consequent underfunded health systems.

6. **Mismatch between provider training and services to be delivered**: Providers, especially medical officers are trained to work in settings of high technology and considerable peer support, and to identify and treat diseases in one individual at a time in a hospital setting. Neither the skills nor the structure of peer recognition and financial rewards, enable these providers to view population health as a whole, nor can they provide care in a family/community setting. There is also a cultural gap, and hence providers working in communities face social and professional isolation and economic loss, compared to colleagues working in secondary and tertiary care settings. Effectiveness in primary care requires bonding between provider and the family/community. The limited ability of such providers to do so creates a mismatch between primary health care needs and provider performance.

7. **Poor quality of relationship between provider and the community/ public:** The disciplinary approach that arises from the need for maintaining law and order and often is overtly obvious in the institutions of the government is not particularly conducive for the delivery of health care services. Further, the nature of the professional to client/ customer relationship in health care, is distinct from other client/customer relationships. In this sector, the provider occupies a position of higher power due to professional privilege and perceptions, and this too is an impediment to primary care. When a professional employed by the government is providing health care services, the resulting combination of attitudes and relationship influenced by power and patriarchy, can pose a significant barrier to care utilization. Monitoring as currently practiced, tends to reinforce such attitudes. Building more effective forms of supervision, which are supportive, has been a challenge. A very different approach to training and supportive supervision could change this. The private sector is generally better at overcoming this problem, but since, in the private sector, decisions are invariably linked to monetary gains, there are other problems of trust and conflict of interests that dominate the relationship.

8. **Poorly realized potential of ICT in Primary Health Care:** Information and Communication Technology (ICT) has revolutionized public service delivery in many spheres, as for example, in the banking sector. It has the potential to do the same in health care, but this has not yet happened. The gap is more obvious in primary health care services. ICT as functional currently, is often perceived as an additional layer of work and one which does not enable care provision except for keeping the providers in a state of surveillance. However if ICT systems are geared to enable and empower providers to provide

the same level of care with greater quality and reduce their burden of work it could have a major impact. A key collateral would be to generate more reliable data. In the private sector the development of ICT has often been dominated by the needs of the insurance industry. The fit of such ICT architecture to primary health care needs is a challenge.

9. **Inadequate efforts at community participation and awareness**: The challenge lies in changing the role of the community - in its own perception, and in the perception of providers, from being passive beneficiaries of health services or customers for an industry, to being active thinking co-producers of their own health status. This is true of all health care, but essential for primary health care.
10. **Weak institutional capacity:** The role of health institutions to plan, to lead and to manage primary health care programmes is weak and the cause of many of the challenges described in this chapter. Inefficiencies in the public health system are a barrier to implementation and cover a range of areas discussed above. Poor capacity and little incentive to perform also limit the ability of staff at all levels to manage programs. Inefficiencies relate to the supply and demand side.

E. Strengthening Primary Health Care

We identified low investments and selective health care packages as two reasons why despite the constant reiteration across policy documents, primary care development in India has been constrained. In this section we identify nine areas for action in order to make primary health care comprehensive and universal.

1. Institutional Structures and Organization of Primary Health Care Services:
2. Access to technologies, drugs and diagnostics
3. Information, Communication and Technology (ICT) tools.
4. Continuity of care.
5. Quality of Care.
6. Social Determinants of Health
7. Community Linkages and Social Mobilization.
8. Human Resource Policy
9. Governance, Financing, Partnerships

Strengthening Primary Health Care encompasses these elements, all of which are equally important and that need to be developed simultaneously, necessitating a health systems approach. Each of these nine elements is discussed in the following chapters.

Learning from experiences of Non Governmental Organizations (NGO) and the Private Sector

Strengthening Primary Health Care Services also requires learning from best practices in the public and private sector, including from the “for profit” and the NGO sector. There have been significant efforts by non-government organizations to build models for scaling up by the government. There are initiatives by the for profit private sector in establishing robust primary care models, independent of tertiary care chains, focusing on promotion of wellness rather than on curative care and also avoiding conflict of interest. This is a welcome move, in which the private sector shares responsibility with the Government in a meaningful way, rather than establishing tertiary care citadels based on profit motives and thus escalating cost of care. These actors are often, but not always, “not for profit”, working in urban and rural settings. Some NGOs undertaking such projects, work in difficult situations, with very little return on investment. The systems they have developed can be applied to the public sector, for better outcomes and at lower cost in an “accountable” way.

Many interventions have been tested, often with elaborate controlled designs that are focused on single component interventions such as increasing workforce performance through incentivization or supervision inputs. While such pilots demonstrate improvements for a short period, they often even while under observation slip back (6,7) and most generally fail to sustain. Several externally funded programmes where the supervision forms part of the aid package, and thus can afford expensive models, suffer even more from this problem.

The other issue that merits study is effective design and implementation of public private partnerships. Could contracting out primary care services to the private sector yield better results by trying a different approaches such as increasing motivation and improved management? Fortunately we now have over 20 years of continuous experience of different forms of contracting out to the private sector. The results are, however, far from certain.

Though there are a few positive experiences- many are still either anecdotal, or in the form of a few cases of positive deviance. This is in contrast to a far larger pool of failed or middling performance. There is very little published data on these experiments making it difficult to evidence or even draw upon an institutional memory of interventions and approaches that were attempted.

We suggest that the findings of these experiments be interpreted to mean that we need to look for framework factors that determine performance more closely rather than focus in an isolated way on only motivation and ownership, which also characterizes such experiments. The debate has, for far too long, been centered only on whether it is public ownership or private that is better. But we have now enough experience to learn to look at other factors that could be more basic and that adversely affect both in equal measure. We also note that there are a significant number of successful non-government body led model-building exercises that have shown proof of concept for effective primary health care. A study of these can help understand the barriers that are being faced and suggest the way forward. As a supplement to this report, a compendium of case studies on primary health care using secondary reviews and primary data collection will be developed.

CHAPTER

two

Institutional Structures and Organization of Primary Health Care Services

Operationalizing Primary Health Care requires two sets of components: The first and a central component is a triad: (i) the set of services that would be available, (ii) the way in which service delivery would be organised and (iii) the human resources required to deliver this set of services. The second component is a set of supplementary strategies that include access to drugs and diagnostics, information technology, ensuring quality of care, human resource development, and management. The second component necessarily relies on the first component. The package of services proposed here would evolve in different states, over a time frame of five to ten years, depending on current state capacity.

A. Services in the Comprehensive Primary Health Care Package:

(i) Comprehensive Primary Health Care includes the delivery of a package of preventive, promotive, curative and rehabilitative services delivered close to communities by health care providers who are sensitive, have an understanding of local health needs, cultural traditions and socio economic realities, and are able to provide care for most common ailments, enable referral for doctor or specialist consultations and can undertake follow-up.

(ii) Services include those that (i) can be delivered at the level of the household and outreach sites in the community by suitably trained frontline workers, (ii) services that would be delivered by a team headed by a mid level provider (iii) the referral support and continuity of care within the district health system comprising the Primary Health Centre (PHC), Community Health Centre (CHC) and District Hospital (DH).

(iii) The detailed list of services is provided in Annexure 4. The rationale for inclusion of these services is that there is evidence showing that primary health care is a cost effective approach to reducing mortality and morbidity from these diseases. Secondary prevention would also be considered part of this primary care package. Individual states are free to include additional services based on epidemiological data, infrastructure, HR availability and financial and administrative capacity.

The conditions listed for preventive, promotive or curative action can be broadly categorised into the following groups:

(i) Care in pregnancy and child-birth. (the latter would be provided in specific facilities based on the state context).

(ii) Neonatal and infant health care services

(iii) Childhood and adolescent health care services including immunization.

(iv) Family planning, Contraceptive services and Other Reproductive Health Care services

(v) Management of Common Communicable Diseases and General Out-patient care for acute simple illnesses and minor ailments

(vi) Management of Communicable diseases: National Health Programmes

(vii) Screening and Management of Non-Communicable diseases

(viii) Screening and Basic management of Mental health ailments

(ix) Care for Common Ophthalmic and ENT problems

(x) Basic Dental health care

(xi) Geriatric and palliative health care services

(xii) Trauma Care (that can be managed at this level) and Emergency Medical services

B. The Organization of Service Delivery: Institutional Architecture

Primary Health Care is conceptualized as the care provided for a local community, by a primary health care team. Each of the services listed above has preventive, promotive, curative and rehabilitative components. Services for each of these components can be provided at various levels. This is also explained in Annexure 4.

(i) Family/Household and Community Level: This would be provided by community level workers- ASHA, Anganwadi Workers (AWW), community volunteers, school teachers, etc. Services at this level include counselling, health communication in addition to basic screening and community level curative care. It also requires the active support of the Village Health, Sanitation and Nutrition Committee (VHSNC) functioning in coordination with and under the leadership of the Panchayati Raj Institution (PRI). The ASHA and AWW would be considered members of the Primary Care team.

(ii) Health and Wellness Centres: In order to move comprehensive Primary Health Care closer to people, existing sub centres will be converted to Health and Wellness Centres (HWC). There would now be one Health and Wellness Centre for every 5000 population. Such HWC would provide the services listed above by a primary health care team, led by a trained mid level health care provider. Health Sub centres would be upgraded to provide this larger package of services, which is comparable to the range of services presently being provided in the sector level Primary Health Centre (PHCs). Existing Sector level PHC (one per 30,000) would also continue to provide the set of services as envisaged in the Indian Public Health Standards (IPHS). In effect, therefore, every existing health sub-centre (now to be renamed the Health and Wellness Centres) would provide the package of services described above, and referral for consultation with an MBBS doctor and follow up.

(iii) First Referral Level: Referral support is an essential component of primary health care. It includes general medical and specialist consultation as relevant and the first level of hospitalization at the level of the First Referral Unit (FRU), which would now need to provide services beyond emergency obstetric care. While FRUs should be at the level of the block level PHC and/or CHC, in practice in many parts of the country for now, such first level referral service package would be available only at the level of the Sub Divisional Hospital (SDH) or District Hospital.

In order to ensure that comprehensive primary health care is provided at these three levels , the following factors need to be considered: .

(i) Differentiation between centres at the same level is essential. HWCs (and this could include Sub-centres in Uttar Pradesh/Rajasthan and Block PHCs in Punjab/Tamil Nadu) would also provide services for normal vaginal delivery. However, the decision of where to locate the sites for provision of vaginal deliveries is a matter for the state to decide. The distribution of these centres in a district should be based on a consideration of factors: such as time to care, availability of infrastructure, equipment and HR for ensuring high quality care for the mother and newborn, distance from referral, and assured access to emergency transport and referral systems.

(ii) Similarly, selected block PHCs, CHCs, SDH and DH can also be referred to as First Referral Units providing comprehensive primary care, only when the facility is equipped to provide the full complement of such referral services to the population.

(iii) Not every block PHC however needs to have an identical package of services. However, the population of a block or district would be considered to have provided access to comprehensive services only when the consultant/referral arrangement is finalized and the entire package of services as stated in Annexure 4 is achieved. The current IPHS mandates a block level CHC as having at least 30 beds, a functional operation theatre, and a range of first referral/specialist services.

(iv) Based on geographical access and population density, the deployment of primary health care teams across different geographies and population densities can be flexible keeping

certain key principles in mind, such as -ensuring a 30 minute travel time for accessing a primary care provider and enabling provider density such that there are at least two providers for every 5000 population. This same concept would extend to urban areas as well. Though the population per centre ratios would be about double (one for every 10,000 population) the relationship between the number of providers and registered families would be the same, i.e. that additional human resources and supplies to deliver a larger range of preventive, promotive and curative care services, are made available, so that it becomes the **first port of call** for every individual and family. Additional HR and supplies can also be deployed to some centres which offer an additional package of services such as midwifery services and serve as delivery points. This holds true also for those centres with provide other additional services such as ophthalmic services, and tuberculosis.

(v) The process of up gradation of health sub-centres to HWC, and of Block PHCs and CHCs to first referral units would take time. A Health and Wellness Centre is defined as one that provides the full complement of services as defined for that level, where such service delivery outcomes can be measured and maintains records of all cases seen with documentary evidence. This would involve up gradation and strengthening of the existing health sub-centres and sector level PHCs. When the population served by a specific sub-centre is registered with the sub-centre and is getting the core services that constitute the package, it is then that is designated as a functional Health and Wellness centre. In the interim it can be designated as a sub-centre or PHC selected for up gradation.

(vi) States should upgrade facilities based on an initial grading with reference to infrastructure, equipment and HR and develop a time bound plan to graduate to higher levels of functionality for the provision of comprehensive primary health care services to their populations. In tribal areas the norms for population would be reduced. The complex of primary health care would be ultimately provided through the H&WC, the Sector PHC and the CHC. States would need to develop a road map for this vision.

C. Human Resources for Delivery of Comprehensive Primary Health Care

Currently, a geographical area, such as a block of 120,000 population based on IPHS norms has the following facilities and staff:

- One CHC or Block level PHC has five specialists, four general medical officers, nine nurses, five technical support staff (laboratory technician, pharmacists, ophthalmic technician, radiographer assistant and a physiotherapy technicians), one public health manager, one or two block level supervisors, three unskilled support staff and five clerical support staff.
- Three PHCs each with two doctors, three nurses and one female health worker (ANM level) making a total of six doctors and 15 nurses for the block at this level. (Three of these six medical officers could be AYUSH, or there could three AYUSH in addition to the six medical officers).
- Each PHC also would have one pharmacist and one lab technician and two clerical/data entry staff per PHC. This makes a total of three pharmacists, three lab technicians, and six clerical /data entry staff for each block.
- In addition each PHC would have two health supervisors (one male and one female), and one health educator. Thus there are a total of twelve such supervisors in the block.
- In the block there are 24 sub-centres each with 2 ANMs, or one male MPW and one ANM. For the block there would be a total of 72 MPWs – of which 48 would be ANMs and 24 male multipurpose workers.
- Each block would also have 120 ASHAs and 120 Anganwadi workers.

A comprehensive primary health care approach requires revision of skill sets and even entry qualifications of the above staff- but in essence the numbers would be the same- except for one *important addition of a person with mid-level care provider skills, one at each sub-centre level; i*.e. 24 per block.

There are three important caveats:

(i) The full complement of staff as recommended in the IPHS is currently nowhere in place. The addition of the required staff would be an important first step. The IPHS norms would also be interpreted with flexibility- so that depending

on case loads, the numbers could be expanded or reduced.

(ii) The skill sets required of the staff, whether of fresh recruits or existing staff- will not be adequate to manage the services expected of them. These would have to be built up. In the interim measure this would require in-service training programmes. In the long run it would require alteration of the pre-training curriculum.

(iii) The current allocation of tasks amongst the existing human resources has led to sub-optimal utilization of the time and skills of the various staff cadres. Revising work allocation would be met with serious resistance to change at all levels. A combination of team based financial and non financial incentives and IT based support strategy would be needed for change management.

(iv) Thus each Health and Wellness Centre would be managed by a primary care provider team consisting of all ASHAs in the villages covered by the sub centre, two ANMs and a male MPW. The team would be led by a mid-level care provider who would be a Community Health Officer- a BSc. Community Health or a Nurse Practitioner or an AYUSH doctor who is certified for a set of competencies in delivering public health and primary care services. Of this team, there are already two ANMs (one regular and one contractual), and five ASHAs. In some areas there may be a male MPW as well. States would need to recruit the mid level care provider using tried and tested selection and recruitment processes with assistance from organizations that have the expertise to select candidates with the right attitude, competences and motivation.

(v) Whatever the entry qualification, the human resources posted at all levels would require to be multi-skilled in various aspects. The mid level providers would need to undergo and be certified in a Bridge Course designed to ensure public health and primary health care competencies. Before undergoing the bridge course they would be assessed on the competencies in their primary qualification.

(vi) The primary care team would need to be skilled to function as a lab technician, counsellor or pharmacist, etc- since it is not possible at this stage to have trained paramedic for each of these functions. The ANM and MPW could also be skilled to undertake these functions. The principle is that all these skills be available within the Primary Health Care team at the HWC, so that the services are assured to the population. Similarly, at the PHC level, staff would be appropriately skilled to function as an ophthalmic technician, dental hygienist, physiotherapist, etc. Staff that opts to provide such services would receive special training to equip them with specific skills, and also be provided with additional incentives.

D. Organization of Service Delivery: Key Work Processes.

(i) Every individual and family would necessarily be registered with the primary care team. Each HWC would maintain a family folder to ensure that the population within its coverage area is registered. Where the family is resident close to a bigger hospital such as the district hospital/ CHC, although separate physical infrastructure may not be required, there would still be a designated primary care team in that hospital with which they would be registered.

(ii) Registration would be undertaken as an active process, in that every house and individual who is recorded in the census/Aadhar/National Population Register (NPR) must be registered. An active annual search would ensure that new arrivals into the population get registered. Anyone resident in the area, say for more than three months, would qualify to be registered. The long term goal is that this data would be digitized and be included in an integrated data system. Where the Aadhar card is available or an RSBY card has been provided these numbers would be part of the registration process- but the lack of identification cannot be a reason for non-registration. The UID card would eventually become the means for establishing identity as needed by the system, but until the UID data base is ready, states can use other means of identification as considered appropriate in their contexts.

(iii) The work distribution within the primary care team is subject to local flexibility and innovation. It is expected that much of the care that is provided at the level of the family through visits, a considerable part of the facilitation to access, and follow up on medication is done by the ASHA. Where clinical judgement has

to be exercised and diagnostic or therapeutic procedures carried out- then the multipurpose health workers/mid level providers would be the main providers of care. Where diagnosis is more uncertain then consultation with the MO or specialist is necessary.

(iv) Laboratory work would be organised such that a lab technician in each and every HWC is not mandatory at least to begin with. Rather than standardization of exact and specific staffing patterns, state flexibility would be allowed, so that manpower is added in line with growing outputs and services.

(v) Recording and documenting the delivery of primary health care is a challenge. The team will need to have minimum data entry and retrieval skills. The system recognises that there are different degrees of institutional readiness to undertake the shift to a fully digitised platform. States would therefore adopt an incremental approach, which starts with current capacity and builds on it.

(vi) A key determinant of comprehensive care being provided in the primary care package at the HWC is a mid level provider with appropriate training placed and equipped to provide the necessary care. A doctor or specialist may have to initiate the treatment and supervise it, but some part of the care can be provided locally by the primary care team, thus saving overcrowding at the higher facility, avoiding underutilization at the primary level, and protecting the family from high costs and consequent hardships. The use of tools such as tele-medicine to support the team at the Health and Wellness centre would be explored.

(vii) The mid-level provider would receive a certain proportion of her/his salary contingent on certain outcomes- linked to quality and coverage. In addition, team incentives and non monetary incentives would also be instituted. A system of incentives would support achievement, documentation and verification of many of these processes. For example, completion of registration would earn a team incentive. Completion of the delivery of the core preventive and promotive sub-packages including screening for specific diseases would also earn team incentives.

(viii) At the village level, the Village Health, Sanitation and Nutrition Committee (VHSNC) and the Village Health and Nutrition Day (VHND) act as platforms for all care providers- ANM, ASHAs, Anganwadi Workers, etc. to come together under the guidance of the Gram Panchayat and the local community to take action on environmental and social determinants.

(ix) External verification and verification by the elected local body should demonstrate that every family knows who their ASHA, their male and female health worker and the Mid level provider (Community Health Officer) are, by name and by site of access- with a card that denotes these details. Similarly every provider on the team should know which individuals are in their care and the primary health centre should have a record of all names of all families under their care.

(x) Performance of these centres would be assured through improved monitoring with active community engagement, use of IT tools and periodic external verification. Improved financing mechanisms which factor in institutional readiness, work outputs in terms of caseloads with weightage for equity concerns and incentives for quality shall be measured against a Quality of Care (QOC) framework.

(xi) The primary care units (Health and Wellness Centres and Sector PHC) would be able to provide information on population based rates for the prevalence of hypertension, the level of successful control and incidence of complications that reflect primary care failures.

CHAPTER
three

Access to Technologies, Drugs and Diagnostics for Comprehensive Primary Health Care

A. Essential Medicines for Primary Health Care

(i) Availability of medicines is essential for positive health outcomes. The common causes of mortality and morbidities in India -acute respiratory infections, diarrhoeal diseases, cardio-vascular diseases, tuberculosis, and malaria are all conditions for which safe, inexpensive, essential drugs can be life-saving. Simple iron-folate preparations can reduce maternal and child mortality from anaemia of pregnancy; treatment of hypertension reduces heart attacks and strokes, treatment of diabetes prevents complications and gives the patients a normal life expectancy. Medicines are also essential to provide relief from pain and suffering due to disease, even where the disease is self-liming, or where it has no cure. Equally important, the credibility of a health and wellness centre rests on the availability of essential medicines and diagnostics for a wide range of health care needs.

(ii) To provide the assured set of services identified in the previous section, availability of essential drugs and developing basic diagnostic facilities is a priority. These would depend on the clinical pathways and standard treatment guidelines. (The process of finalizing and implementation are discussed in the following section).

(iii) Defining the list of medicines required: A full supply of these essential medicines, including necessary antibiotics, vaccines and injectables would need to be maintained at each HWC, at the district and sub-district referral hospitals with re-order cycles automatically determined by computerised algorithms based on the level and frequency of consumption of each of these medicines.

(iv) Towards this end, the List of Essential Medicines defined by the Ministry of Health and Family Welfare (MoHFW) can guide the procurement and supply of medicines in the public sector. Additionally, the Essential Medicine List prepared by the WHO and updated every two years can be used as a reference guide.

(v) Examination of these lists and identifying the drugs that can be dispensed and administered at the primary care level is important for defining the treatment capabilities of the HWCs. The standard treatment guidelines would inform the choice of medicines at the primary and referral levels. Periodic review of the essential medicines list and revision based on epidemiological evidence, and well as the capacities of primary care providers is crucial.

B. Reliable Supplies and Rational Use of Essential Medicines

(i) A related challenge with regard to essential medicines is regular availability. As the scope of primary care facilities for treatment expands, the need to design reliable supply chain systems becomes important. Clear protocols and maintenance of a rigorous drug inventory management system that tracks the availability of drugs in each facility and ensures that there is a minimum of three months stock at any given time is the key to ensuring this. This would determine procurement cycles and prevent stock-outs of essential drugs.

(ii) There is now considerable experience with maintaining this supply chain in Tamil Nadu and more recently in Rajasthan. The detailed methods of procurement and design of the supply chain could be learnt from these acknowledged best practices and built upon. We note that in many states, efforts to replicate these models have not been as successful because the focus of replication is on a few process elements- like the formation of an autonomous corporation, while it fails to develop the other systems and processes required.

(iii) The NHSRC has translated these learnings into a manual for standards of procurement and supply chain management which could be used to both develop and monitor implementation of the supply chain[3]. These standards specify the process requirements for A) ensuring transparency and effectiveness in procurement, B) for ensuring the quality of drugs procured and distributed C) for ensuring that supply is responsive to demand and consumption patterns at the level of each facility and provider and that there are no stock outs, and D) the promotion of rational drugs prescription and utilization which includes adherence to standard treatment protocols E) access and utilization by the patient. The Tamil Nadu Medical Services Corporation (TNMSC) and the Rajasthan Medical Supplies Corporation (RMSC) are currently the benchmarks on best practices for several of these areas.

(iv) The primary care staff at the HWC needs to follow evidence-based treatment protocols that take into account details of dosages and treatment pathways for the entire range of disease conditions that they will address. Clear treatment protocols ensure the correct and efficacious use of drugs. They help providers with a ready to use reference for guiding clinical judgement and to keep pace with new and upgraded recommendations on prescriptions - thereby improving the quality of care they provide. There is considerable international experience on such use across many nations. Two of the earliest and most successful are the experiences of the National Health Services in England and the Thai health care system.

(v) There are also expectations that implementation of such protocols would facilitate monitoring against malpractice – thereby contributing to improved quality of care, and by linkage to supply chains, contribute to reliability and efficiency of procurement systems. Also, these contributions would be enhanced by technology-based platforms integrating diagnostics, drugs, and case-management and supply chains.

C. Essential Diagnostic Services for Primary Care

(i) Provision of efficient diagnostic services is an essential part of a functioning healthcare system. Medical laboratories provide confirmation of clinical diagnoses, facilitate improved management of diseases, generate essential public health information and with adequate government funding, can facilitate disease surveillance at the primary level. When there are functioning laboratories, limited resources available are maximized since only patients with confirmed diagnosis will be given treatment. (8)

(ii) Besides diagnostic laboratories, HWCs need to have screening capabilities for various conditions that are mandated to be treated at this level. Early diagnosis and treatment are essential not only as curative interventions but also for effective control of communicable diseases and management and prevention of chronic conditions. (9) Studies have shown that facilities for diagnosis offered in conjunction with consultation are a key determinant in the utilisation of health services. (10)

D. Defining Primary Care Diagnostic Services

(i) For diagnostic services at the HWC, the rule to be used would be to minimise the movement of the patient and improve the timeliness and reliability of the report. In an ideal setting, most diagnostics could be conducted at the HWC using digitised techniques that leave little to human judgement. However, in the real world- there is a need for efficiency in the deployment of human resources and equipment. Also for many tests, a certain minimum volume is required to maintain

3 Another useful reference is "Good Governance for Medicines Programme "(2004-2012) which includes valuable lessons from 36 different countries, most of them strongly focused on pursuing specific outputs and outcomes, such as low-cost medicines, efficiencies through bulk procurement and achieving efficient management of supply chains.

quality given the nature of skills and clinical judgement required.

(ii) The organization of diagnostic services in a district (block or corresponding administrative unit) is therefore, a careful distribution of capacities across sites- one site being the primary provider at the Health and Wellness Centre or community level and the other sites being diagnostic hubs of at least two higher complexity levels.

(iii) At the HWC samples of blood, sputum, and tissue would be collected, and transferred at least once a day to a central facility for analysis of a wide number of tests. This immediate testing should be linked to a centralised diagnostic unit (CDU) graded by the volume and range of tests that it can provide.

(iv) The HWC itself would have the capacity to deliver a minimum package of basic diagnostics. It would be necessary to have a good centrifuge and slide preparation equipment at the HWC. It would also be essential to have a good BP apparatus, the appropriate weighing machines, Snellen's chart and perhaps a peak flow meter/ home spirometer as well. In addition, rapid diagnostic kits and dipsticks as appropriate- must be available. For all these tests, most of which relate to screening and physical examinations, (and where digitised like digital BP apparatus or glucometers or RDKs or pregnancy tests), the staff at the HWC – the mid level care providers, health workers and even the ASHAs would be trained. In order to screen for cervical cancer a colposcope would need to be included at the level of the HWC.

(v) A Central Diagnostic Unit (CDU) may be required for, say, (depending upon distances and populations served) every 20 HWCs. The set of diagnostics available here would include routine blood and urine tests, tests for TB, malaria and typhoid, tests for reproductive tract infections, syphilis, HIV, Blood grouping, and so on (11). Further, the increasing contribution of non-communicable diseases to total mortality necessitates laboratory requirements for these diseases, such as facilities for appropriate blood tests for diabetes, and lipid profile and electrocardiogram for coronary heart disease.

(vi) The CDU will also have high reliability machines such CHEM-7 and KX-21, and it is recommended that it is staffed by an individual with a DMLT qualification. The rapid progress in the field of appropriate and low-cost technological innovations and medical devices designed for resource-poor settings can be used for diagnostics at primary care levels. An advantage of these diagnostics over conventional methods is that they are much easier to operate with minimal training and are best suited for the tests and procedures that are expected of rural healthcare laboratories. Additionally, prices of digital X-Ray machines for chest, whole body, and dental X-rays, and ultra-sounds have fallen dramatically and may be explored for placement respectively at the CDU. Ophthalmoscopy at this level is also a desirable.

(vii) The following table presents the recommended laboratory based diagnostic and other screening capabilities for primary care facilities.

Table 1: Recommended services at the Central Diagnostic Unit for primary care[4](12)

at the HUB		At the HWC
1	Haemoglobin	Haemoglobin
2	TC, DC, ESR, Peripheral smear	
3	Blood grouping and typing	
4	Urine Pregnancy Rapid Test	Urine Pregnancy Rapid Test
5	Urine Dipstick	Urine Dipstick
6	Blood Glucose & HB A1C	Blood Glucose- glucometer, Collection Procedure for Dried Blood Spot (DBS)
7	AFB Smear	

4 Adopted from the WHO publication: Summary of WHO Recommendations on Laboratory Investigations for Clinical Care by Level of Health Care Facility.

at the HUB		At the HWC
8	Malaria Smear	
10	Malaria Rapid Test	Malaria; Kala Azar Rapid Tests
11	Serology for vector borne disease- Dengue, Chikungunya, Filariasis, Malaria, Kala-Azar (some of these at higher hub)	
12	Rapid Syphilis Test	
13	HIV Serology: Rapid Test	
14	Typhoid serology	
15	Hepatitis testing- basic HBs Ag- (more advanced at higher hub)	
16	Sickle Cell testing- (other blood tests at higher hub)	
17	Wet Mounts – Direct Microscopy	
18	Liver function tests (enzymes)	
19	Blood urea, creatinine	
20	Lipid Profile	
21	X-Ray	
22	Ultrasound	
Screening and diagnoses		
1	NCDs	Weighing Machines- for different age groups Blood Pressure Peak flow measurements-spirometers Questionnaire –algorithms-for detection of risk factors- e.g. smoking, substance abuse, and for chronic respiratory disease
2	Cervical cancer: Colposcope	Colposcope
3	Mental disorders:	Questionnaire algorithm for mental disorder detection- and epilepsy
4	Eye: Ophthalmoscope	Snell's Chart
5	Under nutrition	Weight Charts and weighing machine
6	Newborn and Child Screening for development delays and disabilities	Questionnaires and charts
7	Disability and Palliative care	Questionnaires to assess requirement.

e. Developing Networks and Supply Chains

(i) Laboratories require a good logistical supply and utility services to be in place to function properly. This is difficult to achieve in rural areas in India. Key challenges are costs and human resources. (13).

(ii) To some extent the creation of centralised diagnostic units can reduce these difficulties. However they would still require a well functioning procurement and logistic systems integrated with the one developed for medicines.

(iii) Regular transportation of the collected and prepared samples to the central laboratory and diagnosis within 24 hours can be ensured through employment of *diagnostic runners* – local youth who visit the HWCs at specified times of the day (usually once or twice a day) to collect the samples, transport these to the CDU, and deliver

reports from tests conducted the previous day. Variations of this approach have been attempted in hub and spoke models for organization of diagnostic services. Successful examples from NGO run models such as Jan Swasthya Sahyog in Chhattisgarh and SughaVazhvu Healthcare in Tamil Nadu and organization such services by larger commercial laboratory chains show the feasibility of the approach.

F. Quality Assurance and Control

(i) The reliability of results of laboratory investigations continues to be the major challenge facing rural laboratory scientists, technologists and technicians, especially those who do not have access to latest automated machines. However, with quality and control measures, adequate knowledge and with training and retraining, simple methods can give reliable results.

(ii) Training of laboratory health workforce in rural healthcare facilities also entails adequate training on quality control. This could be described as the foundation for every laboratory operation. Quality control (QC) in healthcare laboratories ensures that the results are accurate, reliable, and reproducible (14). Effective laboratory quality systems, including well-written policies and procedures, a QC system, quality improvement (QI), external quality assessments (EQA), and accreditation standards should exist. Standard operating procedures (SOPs) must be understood and implemented to ensure overall test reliability, which includes test accuracy and precision. Laboratory professionals should routinely perform QC testing to guarantee that the test methods and equipment perform according to the established standards. Laboratory professionals must participate in EQA/proficiency testing (PT) programs in order to demonstrate that they have acceptable systems and that specimens are collected and processed appropriately.

(iii) The Indian Council of Medical Research (ICMR) published the quality assurance guidelines in 2008 (15) and these can be used for reference. At the international level, the WHO is actively involved in ensuring the quality of laboratory investigations being carried out across the world, and publishes lists and capabilities for essential medical laboratory services. The WHO has developed detailed General and Technical Guidelines[5] for all recommended diagnostic tests at different levels of healthcare facilities, including primary care. The guidelines for each test acts like a detailed protocol and can be extremely useful in training primary care staff, as well as for guiding their practice. The general considerations for diagnostic operations prove valuable for quality control measures at the facility level.

5 http://www.who.int/management/facility/laboratory/MaputoAnnexDETestsbyLevel.pdf

CHAPTER

four

Information and Communication Technology to Empower Patients and Providers

Primary health care facilities would use technology for delivering better quality, more efficient and more accountable primary health care services. As the range of services expands, the task of ensuring quality and continuity of care becomes more complex. As the system scales up, there is an increasing expectation that Information and Communication Technologies (ICT) to provide game-changer solutions in facilitating these changes. The intensive deployment of ICT in the last decade, in mainstream government systems and as part of innumerable array of pilots has generated knowledge and experience that can be leveraged to achieve health policy objectives. Public Health Informatics designed to support the delivery of primary health care needs to address the following five functions:

- Ensure quality of care through the use of standard protocols, continuing education and skill up-gradation, supportive supervision, adequate logistic support, and enabling systematic follow up.
- Enable continuity of care and navigation through the different levels of care seeking so that the primary care provider acts not only at the point of entry but also as the long term case manager and guide for the patient.
- Institute population based analytics to understand health outcomes in the population served.
- Establish management functions related to inventory of drugs and consumables, accounting, monitoring of service provision and payments.
- Reduce/optimise the time and effort spent by providers on record maintenance, documentation and administrative functions- so that more time is available for patient care and knowledge up gradation.

(i) Though these are simple requirements, the experience has been that instead of integrating data collection and management into the core process of health care it gets added on as an additional layer over the other existing processes, and is directed towards centralised monitoring. This translates to an additional burden of work for the provider with no additional benefits for either provider or patient. In contrast, systems that are of immediate benefit to the provider and patient, enabling and empowering them in the performance of their duties, tend to have higher acceptance and more reliable informational outcomes.

(ii) An integrated Health Management Information System (HMIS) would mean seamless access by all stakeholders at the primary care level. This would include providers being able to see the past treatment record when a patient presents and also being reminded to see patients who do not come for follow up. It would include the ability to estimate coverage rates and health outcomes in population terms at the local, sub-district and district levels. It would enable prescribed diagnostic tests to be made available to the laboratory directly through the HMIS, so that laboratory technicians can input test results back into the platform for physicians to access, and that prescribed drugs can be entered directly into the Electronic Health Records (EHR). It would facilitate communication between different levels of care, so that there is a primary care follow up for all patients seen at a secondary or tertiary care level, and there is no unnecessary health seeking at higher levels for care that is available at the periphery (referred to as “gate-keeping”).

(iii) Primary Care providers require a device/ tool that enables the recording of services provided with relevant details of care provided required to ensure adequate follow up. The standard treatment protocols set out these requirements. Such a device/tool should then be able to digitally generate the reports that multiple higher functionaries need for monitoring of their respective programmes and priorities. It should also be able to digitally generate population based analytics needed for improved public health management at local, sub-district and district levels.

(iv) To aid data-capturing in resource-poor settings with intermittent power supply and internet connectivity, the HMIS can be designed to allow offline data entry to automatically sync with the online system when an internet connection is available.

(v) Though largely geared to population based analytics, there is also scope to support individual clinical decision making especially in remote settings and with para-skilled personnel, on the basis of symptoms and bio-markers entered. Such a system would therefore allow a detailed medical and social audit of the work of each primary care team and help in improving their performance.

(vi) Given that the requirements in terms of health priorities in given contexts vary widely based on epidemiology, operational realities, and institutional capacities, ICT tools would be designed to be modular and flexible. Given that programmes are dynamic and that institutional capacities to provide and utilise more granular information is evolving, the system requirements would also periodically change. Thus it is best to use only open-source platforms and what are called "agile" solutions. Processes of ICT procurement and support should keep this in mind.

(vii) It is important to coordinate development of these ICT tools to support primary health care delivery with the systems being used for birth and death registration, for disease surveillance, for early childhood care and for school health. These systems need to be necessarily inter-operable to get the best value for money in terms of information and its use.

(viii) ICT tools would also be required in the following areas:

- Enabling patient satisfaction audits and grievance redressal mechanisms
- Enabling surveys and exit interviews that capture cost of healthcare and issues of exclusion and other problems of access.
- Access of citizens to information of health systems and of individual patients to information of their own care.
- Information from insurance systems- private and public, and from hospitals –private and public, that need to be factored into population based analytics.

Use of ICT in Supply Chain Management

(i) Leakages of drugs and consumables, stock-outs and irregular supplies are critical problems in delivering healthcare, especially at the primary level. Technology can be used to address this problem and design an intelligent inventory management system. The inventory at each HWC can be managed at the central pharmacy or central diagnostic unit through maintenance of supply records. Detailed lists of all essential drugs and consumables that are supplied to the HWCs/ primary care facilities need to be maintained in a technology-based inventory management platform. Drugs dispensed by the physicians at the primary care levels can be entered into the system, for predicting additional requirements on a real time basis.

(ii) The benchmark in public systems for this is the Medical Service Corporation in Tamil Nadu and Rajasthan. These are based on essential lists of drugs and all supplies that are needed by the public health system. The district warehouse acts as the hub, and the state ICT system can track and ensure at least a three month stock of every essential item in every district warehouse. District warehouses similarly equate with each of the health facilities, ensuring a three month stock and no stock-outs. Individual health facility consumption patterns in terms of value and pattern of drugs is available on a real time basis and used to calculate the next year's requirements, with commensurate increases in budgets to meet needs, marked by little or no wastage.

Telemedicine and ICT for remote care

(i) To ensure continuity of care in primary health care, providers at the HWC may often need the support and consultation of specialists

and doctors at more centralised locations. Remote diagnostics and telemedicine solutions can be innovatively used to leverage limited infrastructure and resources. The high penetration of cell phones has also been identified as an important tool to reach people in remote areas for primary care. Equipped with clinical protocols to guide each patient interaction at the HWC, and with an integrated HMIS making data available at different locations across the system can prove to be very useful mechanisms for delivering remote care. Telemedicine capabilities (linked to a higher level centre such as the district hospital) could be organized in certain specified “hubs” depending on epidemiological and geographical realities. For complicated cases that require the support of an MBBS doctor or a specialist, the patient could visit the HWC telemedicine hub and the staff there can facilitate the consultation.

CHAPTER
five

Continuity of Care – Making Services Patient-Centric

(i) To a person with a health care need, the experience of care should be one of seamless continuity. The categorization into promotive, preventive, curative or rehabilitative care, or into self care, home care, primary care, secondary or tertiary or even into modern medicine and indigenous medicine, etc., are secondary considerations. The primary concern is in attaining and retaining a state of well being and relief from pain and suffering and, where possible, averting death. An ideal situation would be to ensure that all of these are provided at one place that could be accessed conveniently and with comfort and dignity. But the reality is that such care and capacities are distributed across a large number of providers and facilities. Continuity of care also has a time dimension. Despite changing providers and sites of care, an individual treatment plan for a given patient is important.

(ii) To a large extent the institution of the family doctor or the general practitioner provided this experience. But over time, partly in response to the growing complexity of care, partly in response to specialization, and partly due to enforced selective care approaches, health care has become fragmented. Providers tend to view the patient in terms of a single consultation. Concern for outcomes mandates a consistent and coherent approach to the management of the patient's problem, often including two or three levels of consultation, until the problem is resolved or the risk that justified follow-up has been fully addressed. In the absence of a coordinated care approach, the individual patient struggles and negotiates her/his way through these different sites and levels with little or no guidance. The gaps in communication and care between these levels have major implications for the costs of care, patient outcomes and population health outcomes. More importantly, they undermine the credibility of primary care systems and push care to tertiary levels where it is not only costlier, but often more inappropriate. Resultant overcrowding of tertiary care institutions also undermines the quality of tertiary care.

(iii) The emphasis therefore, is to reclaim the entry point of the system – viz- primary health care, where people first present with their problem. This should serve as the reference point to guide and guarantee continuity of care. Continuity of care is an important determinant of effectiveness, whether for chronic disease management, reproductive health, mental health or for making sure that children grow up healthy.

(iv) Comprehensiveness and continuity of care also makes managerial and operational sense and adds value. People take up services more readily if they know a comprehensive spectrum of care is available. It also maximizes opportunities for preventive care and health promotion, reducing unnecessary reliance on specialized or hospital care. Specialization has its advantages, but the fragmentation it induces is often counterproductive and inefficient.

(v) This does not imply that entry-point health workers should solve all health problems that patients present, or that all health programmes always need to be delivered through a single integrated service-delivery point. Nevertheless, the primary-care team has to be able to respond to the bulk of health problems in the community. When it cannot do so, it has to be able to mobilize other resources, by referring or by calling for

support from specialists, hospitals, specialized diagnostic and treatment centres, public-health programmes, long-term care services, home-care or social services, or self-help and other community organizations.

(vi) Comprehensive and integrated care for the bulk of assorted health problems in the community is more efficient than relying on separate services for selected problems, partly because it leads to a better knowledge of the population and builds greater trust. One activity reinforces the other. Health services that offer a comprehensive range of services increase the uptake and coverage of, for example, preventive programmes, such as cancer screening or vaccination. They prevent complications and improve health outcomes.

(vii) Comprehensive services also facilitate early detection and prevention of problems, even in the absence of explicit demand. There are individuals and groups who could benefit from care even if they do not express explicit demand. Early detection of disease, preventive care to reduce the incidence of poor health, health promotion to reduce risky behaviour, and addressing social and other determinants of health require that health services take the initiative.

Mechanisms to Ensure Continuity of Care

There are specific resources and mechanisms to enable institutionalization of continuity of care within the health system. Due to the significance of primary care facilities as the first point of contact with the health system, most of these mechanisms need to be initiated at this level, and therefore implemented by the HWCs. These key mechanisms are described below.

Integrating Family led Care

(i) The objective of family administered primary care is to decentralize the level of care and increase the involvement of those who are most affected by an episode of illness – the family. The principles in family led care are the following:

Dignity and Respect for Family Traditions and Practices: The perspective of the family should be valued and incorporated in planning. As far as possible family knowledge, values, beliefs, and cultural background are honoured and care revolves around patient rather than the patient adjusting to the provider.

Information Sharing: The primary onus of sharing information related to the health condition is on the health practitioner. Complete and unbiased information should be shared with families and beneficiaries to enable them to make informed choices about treatment and referral options

Participation: Patients and families should be encouraged and supported in participating in care and decision-making at the level they choose. This would require a favourable environment for families to participate in meaningful decision making. For example, at the family level, it could be to ensure that the care giver is not burdened with other household chores. At the policy level it could be to recognize the crucial role of family members in the provision of care and providing measures in employment, work and social policies to support such providers (addressing social determinants of health).

Collaboration: As far as practically feasible, families should be involved in providing feedback on the quality of health service delivery, health care providers and outreach of services.

(ii) Primary care at family level involves a set of activities that family members can undertake to support treatment compliance, identify and act to enable referral, create an enabling environment for family care givers (for instance mothers) to attend to vulnerable groups (infants and sick children, elderly patients) and provide oversight at the household level with the community level worker so that a continuum of care is ensured.

(iii) Families could be involved in providing essential preventive, promotive, curative and rehabilitative dimensions of care on a day-to-day basis, under the guidance of frontline workers (ASHA, AWW, ANM, and MPWs). The idea is not to shift the 'responsibility' of care on family, but make the care more 'participative' so that the family is aware of the treatment process and is cooperative and supportive.

Community linkages and prevention

(i) Understanding people and the context in which they live is important in order to provide a comprehensive, person-centred response and to ensure continuity of care. Health is produced and maintained at the level of the family and the community, and the health workers and care providers at the HWC need to leverage the network of ASHAs, and the VHSNC to optimise

the production of health, which is distinct from the management of disease.

(ii) ASHA, Anganwadi workers, school teachers and other care providers who live and work close to the communities and are aware of their needs and realities are also important sources of community linkages.

(iii) Specific functions include risk assessment and screening for early detection for those at risk, enabling continuity of medication, following up patients for secondary and tertiary prevention, and counselling and enhancing the supportive environment in the family and the community, by reducing stigma and improving understanding. It also involves active promotion of good health practices and avoidance of faulty health practices.

(iv) It involves feedback from population analytics to communities and from community institutions to health information systems so that there is a better understanding of the relationship between population and individual health.

Treatment protocols and care pathways

(i) To ensure rational and equitable continuity of care across all levels of the health system, there is a need for clear treatment protocols and care pathways that provide detailed and methodical guidelines for diagnoses and treatment of disease conditions for each level of care, primary, secondary and tertiary. Referral guidelines that form an integral part of good protocols, can improve the appropriateness of the HWC care, provider referrals and reducing demand at the interface between primary and specialist care.

(ii) The referral pattern at the level of the HWC needs to be based on decision support using evidence-based protocols, care pathways and electronic records. The most successful experience of such referral systems has been in the United Kingdom where each referral decision is determined by protocols set by the National Institute of Care and Health Excellence (16).

Forward and backward referral linkages

(i) A key issue in continuity of care is the management of referrals. One dimension of the management of referrals is the need to have effective and efficacious forward referrals from the HWC to the secondary level (CHC or District Hospital). Gate-keeping is essential for such referrals in resource poor contexts like India to ensure that unnecessary hospital admissions and secondary/special care are avoided, and that the largest proportion of disease conditions are effectively managed at the primary care level by HWCs.

(ii) Gate keeping, to be acceptable, must perform an enabling function- helping the patient find the appropriate provider in the complex environment of the large hospital, and obtain enough support in terms of information and logistics. Most important is the trust and friendliness in what is otherwise a somewhat hostile, depressing or even a fearful atmosphere. The primary care team could fix appointments and facilitate introductions to a help-desk located at the referral site. The help-desk paramedic or lay volunteer could then provide the necessary social support and enable care seeking.

(iii) An even more neglected dimension is the backward referrals from secondary or tertiary care facilities to the primary care provider .The rigorous implementation of care pathways can ensure the elements of follow up care that must preferably be provided at the primary care level, making repeat visits to the higher facility subject only to either a prior fixed appointment or a complication beyond the capacity of the primary provider.

(iv) Such follow up is enabled by ICT tools- the Electronic Health Record (EHR) or a simpler modification, which is accessible to the patient and primary provider. The doctor at the secondary care hospital can list detailed instructions and advice on the ICT platform for the primary care physician at the HWC at the time of discharging each patient. With such guidance and with the help of treatment protocols, the HWC staff can effectively manage the patients and meet their needs for regular care. Such a system of backward referral not only ensures that patients receive continuous care at a facility closer and more accessible, but also prevents the costs incurred in accessing follow-up care at higher level facilities.

Gate keeping

(i) One mechanism to ensure timely intervention and prevent unnecessary or irrational care is gate keeping. The gatekeeper may be defined as a designated health professional that serves as the patient's primary care provider and refers the patient to specialist services, as needed. (17)

This is required for containing the costs of care. One of the most difficult challenges in health care delivery in India is the high cost of care. In India, both low and middle income households are pushed into poverty due to catastrophic health expenses, with even one health shock. Fortunately, a number of these health shocks are avoidable with early diagnosis and intervention at the primary care level.

(ii) Many health systems in developed and developing settings use a variety of mechanisms to encourage primary care physicians to act as "gatekeepers" in managing medical care. Evidence from countries such as Thailand (18), Kyrgyzstan (18), the United Kingdom and other contexts show that the gatekeeping role of primary care providers is a cost-effective way to lower health care costs through judicious use of specialty referrals, expensive diagnostic tests, and use of unnecessary specialist and secondary care services. (20,21,22, 23)

(iii) With a strengthened primary care network, the health system could benefit from using gatekeeping to achieve increased cost-effectiveness, better health outcomes, reduced irrational care and out-of-pocket payments. The HWC may be entrusted with the primary care gatekeeping role, where the primary care provider at the HWC acts as case manager, provides first-level curative care for a comprehensive range of disease conditions and reduces unnecessary specialty consultations and hospital admissions.

(iv) Prior authorization by the HWC would be required for referrals, procedures and hospital admissions to the secondary/specialist level. There are bound to be patient and family concerns about the implication of this vis a vis right to health care and choice of providers. One suggestion is to link free care to authorization for secondary care, without denying care. In addition if there is a necessity for seeking secondary care exemptions from payment can be provided. Another suggestion to enable gatekeeping would be to provide functions such as assistance in navigation, appointments, continued year round medicine supply for chronic illness etc which are available to those who are linked to and steered by the primary care provider.

(v) With its expanded and integrated curative functions (as envisaged in the Draft National Health Policy 2015), and guided by rigorous treatment protocols and care pathways that list out the conditions for referrals, the HWC can be capacitated to perform this gate-keeping role successfully. Based on existing experiences, HWCs as gatekeepers can be expected to ensure equity by judiciously matching healthcare services, including specialty referrals, to healthcare needs; altering patients' behaviour, and increasing levels of first contact care with primary care physicians, thereby reducing patients' self referrals. It is also critical that the HWC is monitored on information about costs, adherence to protocols and referral patterns with regard to gatekeeping.

Systematic patient follow-up

(i) A barrier to continuity of care is that treatment schedules often require frequent clinic attendance that carries a heavy cost in time, travel expenses or lost wages. They may be ill-understood and patient motivation may be reluctant or lacking, given these high indirect costs. Patients may get lost in the complicated institutional environment of referral hospitals. Such problems need to be anticipated and recognized at an early stage. Primary care providers at the HWC can play a crucial role in ensuring that patients are not lost to follow-up, and that the required care regimen continues. The health worker at the HWC can explain the modalities and importance of the treatment schedule to the patients so as to maximize the chances that it can be completed; maintaining case records of patients helps in follow-up and ensuring that desired health and nutrition practices are being followed at home. This is especially true for chronic disease conditions, pregnant women and 0-2 year old children. Creating communication channels through home visits, liaison with community workers – ASHAs, ANMs and AWWs, telephonic reminders and text messages can be powerful ways to ensure systematic follow-up for continuity of care.

(ii) The Mother and Child Tracking System (MCTS) has established such an arrangement for continuity of care in the case of pregnant women and child immunization. Countries such as the UK, Thailand and Brazil have established it for all chronic illness. In India, pilot efforts like the SughaVazhvu's Health Extension Workers (HEWs) have shown the practicality of this approach for chronic care patients in the Indian setting. In essence all these arrangements

call for a community health volunteer making periodic home visits to ensure that the patient is following the diet and care advice. In addition regular phone calls/mobile SMS could be made to remind the patient about diagnostic tests (such as blood glucose or blood pressure), scheduled physician consultations and medicines.

Technology and Electronic Health Records

(i) An important enabler to continuity of care is the digitisation of individual patient care. Record of care provided to each individual is important, whether it is care provided by the primary care provider at the HWC or by the hospital and consultant.

(ii) Information and communication technologies allow for possibilities to improve the circulation of medical information at an affordable cost, thus enhancing continuity, safety and learning. Electronic Health Records (EHR) developed through communities of practice and open-source software are facilitating improvements in systems designed to enable these factors.

(iii) Care in hospitals and by consultants is increasingly being documented in the form of EHR. In an integrated care setting, the consultant provides a detailed set of instructions and a discharge summary to enable follow up at the primary care level. The primary care centre should also provide documentation of care, so that a follow up visit to the consultant is facilitated in the event of a subsequent follow up visit or if complications develop. While details of the EHR in its entirety could be made available to primary providers, the discharge summary would best serve the purpose. This would also allow for maintaining confidentiality and privacy and most importantly, the client's ownership over his or her own data.

(iv) Data would be owned jointly, between the patient on one hand and the primary care facility and the hospital (as the case may be) on the other. Such joint ownership would then also require rules of authorization for each other. Based on the purpose for which it is sought, appropriate authorization would be required from either party or both parties before it is shared with others, except where it is part of aggregate and anonymized numerical information.

(v) Unique patient identifiers are important in enabling retrieval in some contexts, especially to reduce duplication when aggregate information is compiled. But in most contexts of usage since it is either the patient or the provider who authorizes the release of information. Parameters such as the name, address, gender and first level identifiers would be adequate. Unique patient identifiers could also be useful in insurance schemes to prevent fraudulent double claims.

CHAPTER

six

Quality of Care

Mere availability or utilization of health services does not guarantee effectiveness. It also requires that the quality of services is ensured. in order for the healthcare to be of good quality, it needs to be effective, safe, patient-centred and acceptable, accessible and timely, efficient and equitable'(WHO 2006). Quality assurance in these six components ensures better health outcomes, reduces the direct and indirect health expenditures, minimizes death and disability, shortens length of hospital stays, and minimizes overuse of drugs, diagnostics and medical procedures. In the broader realm, it not only improves fairness of health systems and satisfaction of service users, but also increases the productivity span of individuals and families(WHO 2008).

The details of each of these parameters are described below:

Effective:

a. Provision of Health care adheres to an evidence base, results in improved health outcomes for individuals and communities, is based on need and refrains from providing services to those not likely to benefit (avoiding underuse and overuse).

b. Enabling the provision of Standard Treatment Guidelines (STGs) and compliance can substantially improve effectiveness. Another dimension of effectiveness is to ensure that the entire population in need of services is able to access quality services.

c. While process indicators to measure effectiveness include adherence to STGs, Cure rates and disease incidence rates are good outcome indicators. Measuring access and coverage with quality services would be best reflected in the reduction in disease prevalence and in the number of complications averted as a measure of secondary prevention.

Equitable:

a. Delivering health care which does not vary in quality regardless of personal characteristics such as gender, race, ethnicity, geographical location, or socioeconomic status.

b. Ensuring that certain groups (such as tribal populations, or those living in remote underserved areas) which are more marginalized are not excluded from services of good quality. Thus hospitals have to be pro-actively made women-friendly, child-friendly, disability-friendly, friendly to sub-groups that face relentless exclusion (homeless or transgenders). Measurement of equity is reflected in affirmative action aimed at ensuring that certain marginalised groups get access and through outcome analysis, disaggregated for sub-groups which are at higher risk for exclusion or a relative lack of access.

Safe:

a. Defined as Health care which minimizes risks and harm to service users. In both the primary care and hospital setting, patient safety is related to choice of technology, and precautions taken against iatrogenic or hospital acquired infections and medical errors in diagnosis, or administration of drugs or other therapies.

b. In hospitals another important dimension of safety is infrastructural- the hazards of fire, ability

to withstand disasters, etc. Further there is the dimension of provider safety and community safety. For both of these, proper bio-medical waste management is a key dimension.

c. Measures to ensure safety include factoring in safety considerations into choice of technology and establishing and adhering to standard operating procedures for biomedical waste management and infection control, and setting standards for infrastructure safety.

Patient-centred/Acceptable:

a. Defined as Health care which is respectful and responsive to preferences and aspirations of individual service users, the dignity and autonomy of the individual, and the cultures of communities.

b. The central issue in this is the quality of interaction between provider and service user. Provider empathy with the patient, and complete absence of rude or impolite or harsh behaviour must characterise this interaction. Adequate time taken to listen to and communicate with patient is also important dimensions. Respect for privacy when examining patients, respect for confidentiality with regard to health details of individuals, and respect for patient information and autonomy when making decisions on treatment are other important dimensions of patient centred care.

c. Patient amenities- in terms of comfortable waiting halls, clean toilets, hygienic and aesthetic environments, adequate spacing of beds, safe drinking water, better hospital diet management, and clean linen are also important.

Accessible/timely: health care that is timely (reducing waiting period and harmful delays), geographically reasonable, and provided in a setting where skills and resources are appropriate to medical need;

Efficient: delivering health care in a manner which maximizes resource use and avoids waste in particular waste of equipment, supplies and time

Measures to Achieve Quality of Care:

There is considerable international and national experience on successful achievement of quality of care in both public and private health care facilities. It has now become a desirable for most private health care facilities to undergo a quality improvement process based one or other variant of a total quality management approach and obtain quality certification by an external accreditation agency.

It is recognized by private providers that irrespective of motivation, the attention given to organization of work processes, the training of those in charge of processes, and the measurement of quality outcomes leads to enhanced patient satisfaction, better clinical outcomes, greater professional satisfaction and better hospital profits. In the public sector, the senior management is at a distance from the facility, and the approach to quality remains largely regulatory and disciplinary, with little attention to process details and process re-engineering, training and leadership as central to the achievement of quality. Yet there is considerable evidence, especially from the work of NHSRC in India, and from international experience that public hospitals can show significant improvements in quality of care if brought under a quality of care framework- even in the absence of a profit motive. Countries such as UK, Thailand and Brazil have put in place a quality framework for measuring and rewarding quality achievements in primary care as well. Even when the components mentioned above are implemented universally a more comprehensive system of measuring and rewarding quality in outreach and community level services and population based primary health care would need to be piloted and evolved.

Three measures are thus proposed under the quality of care framework:

1. A renewed commitment to achieve the Indian Public Health Standards (IPHS) with respect to ensure the minimum allocation of human resources, infrastructure, equipment and supplies.
2. Implementing the Ministry of Health & Family Welfare's Quality Assurance Framework for Public Hospitals. (MoHFW 2013). This has the following elements:

    (i) A set of standards organized into the following eight groups: i) services to be provided; (ii) inputs needed for these services- which is an overlap with IPHS; (iii)safeguarding of patient rights; (iv)organization of clinical services; (v) organization of support services; (vi), infection control including bio-waste management;(vii) quality measurement and improvement systems and (viii) health outcomes.

(ii) Key hospital functionaries including hospital managers and health administrators are trained on how to map and improve processes so as to achieve these standards.

(iii) A commitment is made by the facility tem and institutional mechanisms created to periodically measure and score achievements against these standards.

(iv) Forms of social recognition and team awards for achievement of quality improvement as measured are put in place.

(v) Creation of Quality Assurance Committees at state and district level that will ensure implementation and capacity building for all the above

3. Implementation of the Clinical Establishments Act- either the central act, or a state act- which ensures that all private health care providers are also obliged to a minimum quality assurance framework.

While there is no magic bullet to improve the quality of primary healthcare overnight, persistent efforts and commitment at various levels, improving leadership capacity of the public health facilities, continuous learning, innovation and the ability to implement changes are key.

In the immediate to short term, even while the process of strengthening infrastructure and human resources is ongoing and more resources are being mobilized, five elements of quality improvement in primary care could be immediately put in place everywhere:

1. Notification and adherence to Standard Treatment Guidelines.
2. Implementation of Infection Control Measures
3. Implementation of Bio-Waste Management Measures.
4. Periodic Patient satisfaction surveys preceded and followed up by training and sensitization programmes to ensure improved provider-patient interaction.
5. Baseline quality measurements and scoring for all public hospitals under the district health system.

CHAPTER

seven

Social Determinants of Health

Social Determinants

The World Health Organization has defined social determinants of health as "conditions in which people are born, grow, live, work and age". It furthers states that such circumstances are 'artificial' and are shaped by "distribution of money, power and resources at global, national and local levels". Social determinants act as the most important factors responsible for health inequities, acting as 'causes for causes'. Social determinants relate to supportive and protective environment available at the level of the family, the community and the government. Social determinants also relate to inequity between regions and between different social groups, in the level of protection and support these institutions provide and in the access to essential entitlements which flow from citizenship and as a basic human right.

At the level of the family it is the care that the family provides and addresses issues of inner family inequity- so that women and children also have a fair share of the available resources. Family level care by family members, especially for health and wellness, needs to be highlighted. It is an area that is unrecognized and undervalued. A recent report (Lancet Commission on Women and Health) has costed family members' contribution in care of the sick in India. It is valued at Rs 2,13,000 Crores a year (Indian women's contribution is 1,75,000 Crores and that of men is 38,000 Crores). We must recognize this and include it as an important element in primary health care in the country. The family is also the custodian of cultural practices and behaviours that promote and sustain health and pass the knowledge down generations. The family role is strengthened through health communication efforts and by the regular visits and contact by frontline workers. The ability of the family to protect is directly related to its access to resources (income, natural resources etc) and to public services.

At the level of the community, the social and cultural practices and the means used to provide for knowledge and mechanisms to influence access to services are important. The government plays an important role in building institutions that provide for health care, care for the pre-school child, education for the school child and social welfare measures to reach to those with special needs.

In terms of access to entitlements, we focus on some important domains and recommend action in each of these areas:

1. Hunger and Malnutrition, with its close relationship to poverty, livelihoods and employment.
2. Safe Drinking Water and Sanitation.
3. Pre-school and School Education:

Hunger and Malnutrition:

(i) Correlating illness and mortality in the community with levels of malnutrition and anaemia, would emphasize the relationship between community and governments and help focus action on this. The data on malnutrition is available from other sectors and from the health department also. It only needs to be correlated, interpreted and used. Though the correlation is largely with under-nutrition, over-nutrition patterns and their disease correlation are also likely to become more important in the future. Health Information Systems would be geared to this.

(ii) Ensure through sensitisation of community institutions that entitlements related to food

security- access to food supply through public distribution systems, access to food supplements in integrated child care centres, mid-day meal programmes, access to the MNREGA and other livelihood and income reach those who need it most. Where Village Health, Sanitation and Nutrition Committee (VHSNC) have been exposed to such perspectives and where they are trained and supported by the ASHA/ASHA Facilitator they have been effective on this front.

(iii) Special emphasis on food access to those at greater health risks.

(iv) Infant and Young Child Education Programme through joint and independent efforts of ANMs, AWWs and ASHAs.

Safe Drinking Water and Sanitation:

(i) The incidence of water-borne diseases and disease outbreaks would be correlated to gaps in safe water and sanitation at the local level. Joint inter-sectoral response to address these outbreaks and prevent future outbreaks would be developed. The patterns and response to such outbreaks have a different patterns in urban and in rural areas, and the primary health care system needs to be geared to addressing both. This requires integrated health and health related information systems.

(ii) Awareness of good hygiene and sanitation processes with respect to prevention of water-borne disease in the community would be undertaken. Anganwadi workers and ASHAs supported by Village Health, Sanitation and Nutrition Committees (VHSNCs) and ICDS structures would be trained and supported.

(iii) VHSNC capacity for collective action to protect water sources and promote sanitation would be built. Areas of focus would be a) solid waste disposal and drainage improvements b) protection of springs, and tube-wells with hand-pumps, undertaking chlorination of community tanks and other drinking water sources, c) undertake source reduction for vectors, and d) maintain village level data on outbreaks.

School and Pre-school Education:

(i) Promote the concept of every school and pre-school also being a primary health care facility- for all relevant screening, health education, health promotion, dietary supplementation, and ensuring continuity of health care in some contexts and even the management of common illness. This requires a school health programme organised by the department of schools and supplemented by the health department.

(ii) Leverage and strengthen the school mid-day meal programmes by measuring for and responding to child malnutrition and adding to it, other nutrition related interventions like weekly iron and folic acid supplements, de-worming etc. Again this is organised by the school department with support by the health department.

(iii) Ensure that the school and its environs itself are a site of behaviour change that encourages safe health practices- including hand washing, use of sanitary latrines, menstrual hygiene etc.

There are several other areas where there is scope for action on social and environmental determinants of health. These may not be the prime responsibility of the health department – but there are important tasks to which the primary health care team would have to contribute. An illustrative list could include:

1. Prevention of tobacco use, alcoholism and abuse of other substances.
2. Prevention and response to gender related violence.
3. Safe Sexual Practices- especially focussed on those at higher risk and vulnerability.
4. Road Safety Issues and the prevention of accidents.
5. Indoor Pollution and Respiratory Disease.

In many of these areas, viable interventions applicable at the community level exist. The challenge would be in deciding at each level and in different contexts, the priority to be accorded to these issues, given the limited resource and synergising with the efforts of other concerned departments.

CHAPTER
eight

Community Participation and Equity Concerns in Health

(i) The role of community participation is integral to comprehensive primary health care. Community participation fosters people's initiative in health across several domains – in demand generation, in local planning and action, and in accountability. However enabling community participation requires investments in community education on primary health care, building capacities of community groups and individuals to enable understanding and diffusion of preventive and promotive practices.

(ii) The ASHA and Village Health and Sanitation Nutrition Committee (VHSNC) are starting points for community engagement. Vibrant VHSNC with the capacity for local level action for health could provide the initial catalytic spark for community action, but ultimately the involvement of all strata of the community is essential for sustained action and to leverage collective community action. Building the capacity of the Panchayat system and in particular the Gram Sabha as an institution to undertake community planning, action and accountability is critical and must be a medium term goal in ensuring Comprehensive Primary Health Care. The MoPRI is currently developing a strategy to build the capacity of Gram Panchayats members in health, and this should be supported in all states.

(iii) Specific forms of community participation include community planning and action for surveillance and action on vector borne disease control programmes, addressing risk modification for NCD, and undertaking social health campaigns. Activities such as identifying and addressing sources reduction for vector borne diseases, for undertaking activities such as physical exercise and promoting sports for young people in the community to promote healthy life styles, by supporting the primary care team in outreach activities, in reaching remote hamlets, and in taking action against alcohol, tobacco and other forms of substance abuse. Organizing patient support groups facilitated by the ASHA or other frontline workers around particular disease conditions is a useful mechanism to improve treatment compliance and engaging not only those with the disease condition but also family members.

(iv) A special area of focus in community participation is action on issues of gender equity- addressing patriarchy and gender stereotypes that are inimical to the health and safety of women – such as violence, early age at marriage, son preference, and higher education for girls. Engaging with existing women's groups and ensuring greater participation of women in the VHSNC is also an important strategy.

(v) Community led accountability processes should be viewed by the community and the primary care team not as a process of blaming, but one that informs and mutually empowers in order to make people active participants in improving health outcomes. From the VHSNC the process should gradually move to the Gram Panchayat committee, supported by the ASHA and other frontline staff in using public services monitoring tools, assessing and addressing intra-Panchayat inequities for improved community health status with active collaboration of the health system.

(vi) Comprehensive primary health care must ensure priority reach and coverage with comprehensive primary health care to the poorest and socially

vulnerable who would not be the last to receive the benefits of care but rather are purposively reached by the primary care team and by making equity of care and access to entitlements a key focus of community action. The ASHA and the VHSNC would have an important role to play in mapping such individuals and communities, and ensuring service reach and follow up.

(vii) The role of the ASHA in addressing inequities has been initiated in building her understanding of marginalization and the need for social mobilization to address the most vulnerable. This must also be part of the training of the primary care team. Enabling people's access to services and entitlements must be a key goal of the team. The enrolment of all families would purposively target the socially and economically vulnerable and specific follow up would be needed so as to ensure appropriate coverage for these groups.

(viii) The Primary Care team through its outreach work must consider community meetings and engagement with the VHSNC and Gram Panchayat as a key function that would yield improved health outcomes. Community meetings and joint planning with the community on a set of activities that would serve to improve preventive and promotive behaviour and improve equity would be a part of the annual plan of the team, and one of the measures by which they would be assessed.

(ix) Financing of the VHSNC over and above the untied funds would be linked to performance on a set of functions. The functions could include organizing community events –such as health campaigns, promotion of awareness for particular issues and source reduction measures. This should be determined at the local level and paid for by the block or district, with leveraging of resource from the Panchayat fund as is being done in Kerala.

CHAPTER
nine

Human Resource Policy to Support Primary Health Care

This section touches on only those aspects of human resources for health that immediately relate to the operationalization of primary health care proposed in this report. We identify a number of challenges and suggest measures for the consideration of states. We also acknowledge that upstream changes would be required to implement larger systemic reforms related to human resources. Overall our recommendations address the following five questions:

- If universalised, operationalizing primary health care would mean that almost 3 to 4.5 lakh workers (mid level care provider or paramedical) are deployed in health and wellness centres. How does the government ensure that persons with the skill sets necessary for providing this level of care in the health and wellness centres are ensured?
- Primary health care teams would require primary care physicians as well as family medicine specialists – the latter defined as those who can manage referrals pertaining to the basic specialities at the level of the block/district hospital. What approach to HRD would make available adequate number of such providers who would be willing and committed to serve in rural areas and work with under-serviced communities?
- How does the government act so as to provide the professional recognition, stature and in-service support required for sustaining this cadre?
- If states were to expand the work-force in such a manner how would the state leadership ensure that it performs?
- The ASHA (or community health worker) is a critical human resource in the provision of primary health care, playing many important roles. What is the Human Resource policy with regard to her continued training and sustenance?

HR Challenge I: Issues with Current Medical Education

a. The current medical curriculum does not prepare doctors with the necessary attitudes, skills or orientation to provide primary care. Doctors graduating from this system feel fulfilled only if they go on to become specialists and work in high technology settings. Primary care is also implicitly considered as having low professional status.

b. The second issue related to medical education is the mushrooming of not only private medical colleges but also nursing, midwifery and technical education institutes, with serious issues related to the quality of infrastructure, poor faculty student-ratios, and an overall low quality of education.

Possible solutions to address these:

(i) Increase the number of non capitation fee based publicly financed medical and nursing colleges and limit the growth of capitation fee based medical and nursing colleges. The latter category of institutions create doctors or nurses ingrained in a culture where illegal payments are the norm and who are driven by the motive to earn the investment in capitation fees.

(ii) Develop an examination on the pattern of the National Eligibility Test (NET), (for college teachers), to serve as a qualifying examination for public service, that is entirely focused on primary care. Care must be taken to ensure

that the examination is designed so that only primary care competencies are assessed, and that such competencies are not equated with or limited to RCH alone, but includes primary care for communicable and non communicable disease and action on social determinants and preventive care. Standard treatment guidelines used in national health programmes and issued by the state, should be the basis of problems related to therapeutics. Unlike most entrance examination that focus on highly theoretical details related to complex diagnosis, this would be a creatively designed examination, associated with considerable status in clearing it successfully. Even for those who do not opt for public service, such an exam would do much to emphasize the importance of primary care related skills.

(iii) Introduce a strong programme of community orientation and primary care into teaching in medical and other allied professional colleges. Changes made though the Medical Council will take time and must move in parallel. Innovative programmes even if not accredited, have helped, as demonstrated in Assam and Chhattisgarh.

(iv) Strengthen the primary care posting during internship with more innovative teaching and exposure to ensure that a set of essential primary care provision and leadership skills are imparted.

(v) Link each government medical college to a field practice area in a district (or at least to a block with a population of about 200,000) with accountability for better service utilization and health outcomes in this area, and ensuring the efficient functioning of all public health facilities in that district (or block). This would require every medical college to have an adequate baseline measurement of the health of the population of the district- on all important indicators of RCH, communicable and non communicable disease, a periodic measure of change in these indicators and good documentation of what is tried and what change results. The MCI could be persuaded to make this mandatory for private medical colleges as well.

(vi) Sponsor and support professional associations of primary care and family medicine, so as to enhance their status. This would include sponsoring conferences and encouraging research publications in primary care and linkage with similar primary care physicians and movements world-wide.

HR Challenge- 2 : The Rural and Remote Area Placement Challenge

It is difficult to attract health care professionals (doctors, nurses, midwives), to public services and even more difficult to retain them. Part of the reason is the economic loss, and part due to the professional and social isolation that a young professional is likely to face. There are also problems of timely recruitment, with long delays after the advertisement for filling up of regular posts.

Measures to address this:

(i) While there is a wealth of experience on what works to overcome this problem, such experience also indicates that there is no one single remedy. An appropriate package of measures that is constantly adapted and modified to match changing contexts and perceptions needs to be offered. Such a package is envisaged to have four elements- educational, regulatory, incentives and better work-force management including positive practice environments.

(ii) Evidence shows that educational strategies that emphasize targeted admission policies for students from under-serviced areas work well. This is often achieved by locating the college in under-serviced areas. This is relatively easier to manage with nursing and paramedical education than for medical education. Frequent exposure to rural settings under the guidance of carefully chosen mentors also helps.

(iii) For *regulatory strategies,* compulsory rural service bonds work best if a) the forfeit amount is set high enough, b) there is a system of campus recruitment with counselling and placement even before they have completed their internship, c) if combined with reserved seats for in-service candidates or some form of incentives and d) there is some form of mentoring and support during their rural placement. In the absence of these measures, regulation alone seldom works. Mandatory public service in rural areas before PG admission, if it survives challenges in court, would still need these four measures for successful outcomes. A reluctant and under-skilled doctor forced to somehow work for some time in a rural area is not very likely to provide the leadership role in primary care.

(iv) Monetary *incentives* graded for difficulty of posting are supportive, but there is enough

international evidence that they make a difference only if they are high enough, or are part of a package of other incentives. For non monetary incentives, giving additional marks in the entrance examination is perhaps what has made the most difference in the Indian experience.

(v) Though international experience is encouraging about building positive practice environments, there are almost no Indian case studies in this regard. At best better opportunities for professional skill upgradations have been discussed, but there is no documented experience.. The major conclusion is that this is not as intractable problem as it is made out to be, and political support is usually available, but it requires more administrative will and competence than has been possible to mobilize in some of the states which are most in need of such measures.

(vi) Contracting in private providers has been suggested often as a way of addressing HR shortages. Public private partnerships (PPP) have seldom been a general solution for getting doctors to remote areas. However it is important to emphasize that there are situations where dedicated providers have been willing to settle in rural and remote areas, or are already working there. Providing the administrative space for being able to accredit these agencies as the equivalent of a government health care facility and contracting them in for these functions in such niche situations would certainly be useful. PPPs would do better where health facilities are to be staffed with only non-medical personnel, or in areas like urban slums, which are also under-serviced.

HR Challenge 3: Work-force Management Policies

Current Work-force Management policies have several limitations. They include: (a) the increasing number of contractual workers, paid far less than regular workers for the same tasks, (b) Issues related to sanctioning of posts and recruitment. (c) Lack of clear policies and timely implementation of promotions, transfers and postings (d) opportunities for career advancement, (e) lack of any system of performance measurement and incentives, and (f) current quality of leadership that is expected to manage this large workforce.

Measures to address these workforce management issues:

(i) The best practice on managing contractual work force is seen in Tamilnadu. Processes for selection and recruitment of contractual and regular workers are identical. As and when regular posts become vacant, contractual staff, based on seniority are regularised. Wage differentials are kept low-and work allocation undertaken without reducing the work load of the regular staff.

(ii) It is also important to ensure that the critical minimum number of posts (based on IPHS) are created and commensurate filling of posts undertaken as the workload per provider reaches the threshold levels. (this threshold would be adjusted for equity considerations- so that tribal and hilly areas have greater density of providers per unit of population). Sanction of additional posts to a district (keeping for now to the IPHS norm) should be in line with the total footfalls in the health care facilities within the district. However allocation between facilities could be decided by the district based upon caseloads in each facility.

(iii) Timeliness of promotions and postings should be made an important measurable performance indicator for senior administrators of the departments. ICT based HR management with transfers and postings through a web-based transparent approach would largely solve this problem. Karnataka state has been the best practice in this regard. Vacancies are displayed, and based on the seniority list, those wanting a transfer, name their options and the system completes the allocation. A specialist cannot be posted to a facility which does not have the infrastructure to support her/his services, because the web-based system does not allow any vacancy to be shown there.

(iv) While there is no clear evidence that individualised Performance based incentives are useful, there is some evidence that team based incentives for achieving clear output measures are easier to implement and lead to substantial performance improvements. Distribution of team incentives especially in the case of monetary incentives need a set of guiding principles within which each health team has some flexibility as well. Monitoring and disciplinary action too, is best done at the level of team functioning rather

than of individuals. If a facility is found to be consistently poor performing, affixing blame on an individual, should be decided after a facility – review, because that may show other problems that need to be addressed as a priority.

HR Challenge 4 : Setting Professional Boundaries and Task Shifting

The government has pursued the approach of creating a new professional entity to staff primary care programmes. These include the three year B. Sc in Community Health, or building capacity to impart the necessary skills to AYUSH providers or nurses, thus creating a mid-level care provider, with a set of skills beyond those of the ANM/MPW but less than that of the MBBS doctor and with substantial competency in public health. Though proposed for some time now- and broadly accepted in principle, this has been slow to take off, due to legal, professional and implementation challenges.

Measures to address these:

(i) Investment in training institutions – both infrastructure and human resources and linkage to district hospitals for clinical material and primary centres for community level care would have to be put in place. To quick start this process, consortia between government training institutes, health NGOs and not for profit health care providers who have experience in such training and such trainer-professionals on their roles would be facilitating instruments.

(ii) Legally many essential drugs for primary care come under Schedule H, which only a registered MBBS practitioner can provide. Even Over the Counter (OTC) drugs require a qualified pharmacist. However under a 1983 amendment to Schedule K, community health workers and nurses who are part of government programmes can be allowed to give those drugs which are part of government health programmes. Inclusion in this list however needs clearance by the Drug Technical Advisory Board which is constituted exclusively of tertiary care professionals with little or no orientation to primary care needs. This will need to be addressed so that while drugs can be doctor initiated, community health workers and nurses can provide subsequent doses and follow-up.

(iii) Professional resistance is an important barrier to the creation of such mid care providers. Overcoming this requires a greater effort at sensitisation of professionals, and more inclusion of reputed primary care specialists and advocates in decision making bodies as regards drugs or provider skills. A related challenge is certification. Who certifies a B. Sc Community Health, or a nurse -practitioner, or an AYUSH doctors skilled to provide allopathic curative care in addition to preventive and promotive public health? The National Board of Examinations (NBE) has been proposed for the first, the national or state nursing council for the second, and an independent body set up by the health department, linked to flexing Schedule K for the third.

HR Challenge 5 : The Specialist Challenge

Primary health care teams would require referral support at the CHC (block hospital) level from specialists. Currently the gap of specialist is large and ever widening. It has been practically impossible to get four or five types of specialists into each CHC, with less than one percent of CHCs having achieved this. Further, having only one specialist in each category of specialization is sub-critical for ensuring reliability and continuity in service availability.

Measures to address this:

(i) There is a need therefore to rapidly introduce and scale up distance education approaches that build elements of wide ranging referral skills in all MBBS medical officers and specialists posted in CHCs and DHs, so that they refer less and resolve more. This has been successfully deployed in Brazil, Sri Lanka, and there are successful examples in India as well.

(ii) Scale up MDs in family medicine or general practice (as in Nepal) which train medical officers not only to the diploma level but for one year of basic surgery so that common first referral surgical work can also be handled. Thus a team of 3 family medicine specialists can provide all the referral work at the block hospital level,

(iii) Recruit and deploy specialist mentors to work in district hospitals with teams to ensure start up of an entire range of specialist services in every district hospital. Every district hospital should be assigned to one or more medical colleges, including the new All India Institutes of Medical

Sciences (AIIMS) and to volunteer specialists who opt to do this as service in return for a modest honararium. This has been tried with good results in Bihar.

(iv) undertake the minimum administrative reform of creating a specialist cadre with enhanced salary package and ensure workforce management policies that ensures they are posted only where they can practice their specialist skills.

HR Challenge 6 : Integrating Community Health Workers: ASHA/ ANM/MPW

There is considerable overlap and confusion in roles between the ASHA, the Anganwadi worker, the MPW –Female, (commonly referred to as the ANM), the MPW Male (of uncertain and varied qualifications and role description), and the staff nurse (usually with a GNM qualification). This team has often also been portrayed as excessive.

Measures to address this:

(i) In terms of norms of minimum density of skilled workforce required anywhere in the world, this complement of staff is essential for primary care. It is certainly not excessive. However it would be excessive if the only expected and monitored deliverable of such a large workforce is only growth monitoring and food supplementation (for the AAW) and immunization and antenatal care and the promotion of contraceptive use and institutional delivery for all the rest. The problem of excessive staff could be potentially resolved if the entire set of tasks outlined in the comprehensive primary care package (see Annexure 4) is entrusted to this team. The appointment of two female MPWs and one male MPW is essential to carry out the entire range of PHC tasks.

(ii) The common reference to ANM and Staff Nurses is that midwifery is the primary role of the ANMs and conversely that midwifery is inappropriate for a staff nurse. India's policy on nursing has been to integrate nursing with midwifery and not create a separate cadre for the latter. But there is a need to ensure a higher level of skills in midwifery to nurses (of ANM or GNM qualification) who are required to conduct deliveries, and even promote the emergence of some who would be specialised only in midwifery service. This however is not a requirement for all sub-centres/Health and Wellness Centres.

(iii) ASHAs also need to be recognised as an institution that would be required in perpetuity, but with roles that evolve from predominantly RCH care in states with persistent high fertility and poor maternal and infant survival rates, to a much wider vision of community level care including palliative and geriatric care and care for chronic diseases in states that have achieved their epidemiologic and demographic transition.

(iv) It is worth reiterating that clear job descriptions, career progression and long term HR strategies for all for all these personnel, including for the ASHA is a must.

A common concern related to expansion of work-force in such a manner is the ability of the state leadership to ensure effective performance. Another concern is the creation of a suitable leadership cadre for public health. This issue is discussed in the chapter on governance.

CHAPTER
ten

Governance Financing, Partnerships and Accountability

1. The mechanisms for governance and accountability for primary health care would be similar to those for other levels of health care. No separate institutions for governance of primary health care are envisaged. It is important that the provision of primary care has political accountability. The current institutional arrangements with the Secretary of Health, the Directorate, and the State and District Health Societies would continue to remain the basis. It is better to strengthen and reform these committees and addressing their short-comings, rather than create new and parallel institutions.
2. The main aspects of strengthening these existing institutions are enhancing the participation of elected local government representatives, improved coordination between the Directorates and civil service leadership, building capacity for their respective roles, measures to reduce fiduciary risk and professionalising management through the introduction of a public health management cadre.
3. There is now a considerable body of experience and evidence on what works in governance reform and under what circumstances. Reviewing the evidence, one report concludes that "promoting competition among agencies responsible for public health functions does not improve efficiency- on the contrary, it impedes collaboration and technical assistance and can compromise the effectiveness of activities such as surveillance and health promotion. Organization reforms that rely on provider competition (such as purchaser-provider splits) are therefore not applicable to essential public health functions." Similarly contracting works for preventive services that are measurable and discrete, such as immunization […] but for essential public health functions where measurement is complex, expensive and requires strong information systems contracting imposes transactions and monitoring costs that make efficiency gains unlikely and reduce effectiveness". User fees are dismissed as "not an option for essential public health functions because of their public goods characteristics." On incentives, the conclusion is that where used "it should be team or network based rather than individualized and should not neglect the role of non- financial benefits." There are also measurement challenges related to decisions on incentives. (24)
4. One key recommendation is to consider the institutional environment—that is, the formal and informal rules and norms at work in government and society at large. These are an influential determinant of government effectiveness, and especially for essential public health functions. "As a result, efforts to build management capacity through training are helpful but not sufficient to improve managerial effectiveness… Public sector norms and rules that impede effective administration should be changed where possible. If this is not possible, alternatives, such as insulating programs from these norms and rules or promoting organizational cultures and accountability arrangements that achieve this indirectly—should be pursued instead."(24). One way of reducing inefficiencies in the public health system would be to introduce systems of monetary and non monetary incentives that are team based, and align such incentives to improve performance. An essential pre-requisite is the development of performance indicators that address the complex nature of primary health care.

5. One set of rules that need strengthening relate to vertical accountability within the public health system. Vertical accountability requires clear definition of responsibilities with allocation of powers that go with it, not just for the peripheral staff, but also for those charged with key administrative actions such as recruitment, postings, promotions, procurement, supply chain management, timely financial flows, and respecting the sanctity of signed contracts. All of these are key features of the institutional environment, essential for good performance. Decentralization has been tried as a measure to address these problems, but the results are varied and disappointing. While there are issues with a lack of administrative capacity, it is more often the rules that prevent much flexibility or space for innovation. Major innovations and success stories in the public sector are associated with a charismatic leader who is able to mobilise the influence required for more flexible interpretation of the rules with the finances and autonomy to build on this.
6. Another set of rules relate to the cumbersome and often inappropriate processes defined under the rules for procurement of goods and services. These require to be modified by empowered authorities to suit specific categories of tasks and contexts.
7. A third set of rules relate to financial flows, often delayed or not commensurate with the needs and patterns of utilization at facilities leading to inefficiencies. The recommendation regarding financing to operationalize comprehensive primary health care is that fund flows to districts be organized so that while safeguarding against misuse, sufficient flexibility be allowed so that allocation is more responsive and efficient. One way to achieve this is to sanction funds for a limited number of heads, with some of the heads sanctioned on a fixed basis and others related to utilization. The fund flows related to utilization constitute a simple form of output based financing, with Health and Wellness Centres which have a higher number of cases receiving additional financing. This process could include additional funding for completion of initial population screening and the ensuring data entry for digitisation of records. A quality of care framework and score could ensure a proportionate increase in funds for quality scores, since this would ensure outcomes as well. The rules for financial flow under each head could vary. Thus, for example, additional human resources could be linked to additional quantity and range of services, infrastructure sanction would depend on gaps as assessed against IPHS. For drugs, diagnostics and other supplies, districts would have a budget, with facilities and teams being able to access funds in kind.
8. District Health Societies and Hospital Development Committees are expected to supervise the receipt of funds and their internal allocation. To strengthen the functioning of these committees the recommendation is that a results based framework (linked to finances) be prepared for each committee and progress monitored by the committee leadership at the next higher level. Joint planning meetings must also be undertaken. Joint training programs for the members of committees from different stakeholder groups (so as to ensure a uniform level of sensitization) could also be explored. District Health Societies and Hospital Development Committees have a framework of rules approved by the State Health Society, within which there is adequate space for flexible planning and enable need based allocations.
9. One specific recommendation to building the necessary leadership for operationalizing primary health care, is to put in place a public health management cadre. The approach to public health management is at present, with a few exceptions fragmented. The essential features of this cadre, as shown by experiences in the country are: a) mandatory training (a diploma or a degree) in public health or public health management to enable capacity for change management- b) Potting this cadre is in charge of primary care, national health programmes and all aspects of preventive and promotive care and action on social determinants c) a career path that ensures speedier promotions and greater profile in administration, but with a non practicing allowance and a strict “no” to private practice d) periodic programmes of skill up-gradation in public health followed by training in institution building and policy development. It would be desirable for this cadre to have entry from both medical and non-medical streams, though there may be a need to keep these two as separate sub-cadres. Some space should also be allowed for lateral entry at higher levels of suitable talent.

10. Though the government is the main provider of primary health care, there are situations where suitable not for profit health organizations are available and could be contracted in for provision of primary health care. Past efforts in this direction have not done well because contracting in of NGOs, is viewed as a cost-saving mechanism, because the institutional capacity to develop and manage contracts is deficient, or because the same governance issues compromise such provisioning as well. Adherence to contractual obligations- the sanctity of the contract- is often weak and there are no grievance redressal mechanisms for such contracted agencies, which discourages dedicated not for profit agencies, which have low capital assets from participating. The biggest barrier to primary health care provision by NGOs remains human resources (recruitment, skill building, community rapport building, and establishing a bond between community and providers). Partnerships that are based on being only a financing proposition, on a contractual basis seldom manage to secure or retain or ensure performance of their workforce over a longer period of time. Within these constraints there is still scope to identify and contract in a substantial number of dedicated agencies for primary care work.
11. Another important recommendation related to governance and professional management is access to knowledge resources and choice of technology. This requires that every state and every district has an identified technical support agency, which for technical support and capacity building inputs. Potential technical support agencies would also require state investment to build, retain and constantly upgrade their own capacity. This requires an appropriate financing strategy linked to MOUs which mandate engagement with districts or states allocated to them for this purpose. Public health institutions for knowledge management that act at the interface of academia and implementation, such as State Health Resource Centres (SHRC) and the State Institutes of Health and Family Welfare (SIHFW) and the national apex institutions of public health, such as the National Health Systems Resource Centre (NHSRC), National Institute of Health and Family Welfare (NIHFW), National Centre for Disease Control (NCDC), All India Institute of Public Health and Hygiene(AIIPH), National Tuberculosis Institute (NTI), National Institute of Epidemiology(NIE), etc are also essential to provide the technical leadership that a comprehensive primary health care programme requires. State level institutions such as the SHRC and SIHFW require sustained attention to upgrade competencies and establish organic linkage with their national counterpart organizations.
12. A related recommendation for knowledge building is learning from India's long tradition of primary health care projects organised and implemented by dedicated, and professionally competent NGOs. These have informed the course of primary health care development in the country. These primary health care models were implemented in a range of varying contexts and such model-building is an important source of knowledge and problem solving. A recent well documented demonstration of the objectives of primary health care that can be met even in resource poor settings by effective organization of work elements is the work of Jan Swasthya Sahyog in rural Bilaspur of Chhattisgarh. There is a need to document these case studies and carefully evaluate each of these models so as to learn from them for scaling up within government systems. There is also a need for partnership with such non government organizations that could serve as resource groups for the roll out of primary health care.
13. Related to this recommendation, we make the case for state governments to initiate block level programmes, not so much as a proof of concept pilot, but as a way of building perspective within district and sub district teams, build the requisite capacity and systems required to scale up and to create demonstration sites for training and estimating resource requirements more accurately.
14. Horizontal accountability to local communities is vital. Mechanisms to enable this, include community monitoring, data sharing and sharing relevant information with local government bodies and their supervision.
15. One key challenge of implementation and accountability – both vertical and horizontal is monitoring. The process of monitoring and the contribution of ICT to enabling this have been discussed earlier. Effective monitoring requires not just a careful choice of indicators but also a

well constructed hierarchy of indicators. Some indicators would be selected for their utility for programme management at the local level, with a fewer number selected for monitoring at higher levels. At the national level a few key indicators that guide policy and provide an overview of performance would suffice. The box below has a list of 25 indicators that could serve as the basis of national monitoring for comprehensive primary health care.

BOX 1: INDICATORS FOR MONITORING

Indicator A- sent by District to State and National Level	Indicator B- available at District	Source	Remarks
Out-patient (OP) visits per capita population in each district/state	OP visits per capita for each facility	HMIS	
Hospitalization Rate (per 100,000 population) in each district/state	1. Beds per lakh pop. 2. Bed Occupancy Ratio	HMIS	
Annual Primary Care Registration Rate- proportion of families in district who are registered with a health and wellness centres	Same indicator by each HWC facility	HMIS	Every registered family has a card, a basic screening completed, and data is uploaded
Three ANC rate: Proportion of pregnant women receiving three ANCs	Also 1. Anaemia in pregnancy rate 2. Hypertension in pregnancy rate 3. full ANC rate	HMIS	
SBA assisted delivery rate/ Institutional Delivery Rate:	Also 1. C-Section Rate 2. Complicated Pregnancy rate 3. Medical Termination of Pregnancy rate 4. Stillbirth rate 5. weighing efficiency & Low Birth Weight rate	HMIS	
Maternal deaths – absolute numbers per district	Maternal deaths by cause of death. Death of women in 15 to 45 year age group due to unknown causes	HMIS & RGI	
Perinatal Mortality Rate by district	Late still births Early neonatal deaths	HMIS & RGI	
Under 5 mortality Rate by district	Neonatal deaths 0- 1 .Infant deaths 1 to 4 deaths	HMIS & RGI	
Full Immunization Rate	Rates by each vaccine	HMIS	
Child Malnutrition Rate by district	Severe Acute Malnutrition (SAM), Moderately Acute Malnutrition (MAM) rates Mild, moderate and severe malnutrition rates	ICDS-MIS	
Exclusive breast-feeding at time of DPT 3	Breastfeeding within first hour.	HMIS	
Paediatric Hospitalization rate	Hospitalization specifically for: Sick newborn, pneumonia, diarrhoea-dehydration, and All others	HMIS	

Indicator A- sent by District to State and National Level	Indicator B- available at District	Source	Remarks
Proportion of Diarrhoea/Acute Respiratory Infection (ARI) in children under 5 who got appropriate treatment	Oral Rehydration Therapy (ORT) for diarrhoea rate Appropriate treatment for ARI rate. Any notified vaccine preventable disease	Community survey done annually on fixed PPS protocol	
Hypertensives (HT) under primary care rate	% of population @ risk screened. % of screened with HT % of HT under primary care	HMIS	
Diabetics under primary care rate	Same as above for diabetes	HMIS	
Cardiovascular mortality in the 15 to 60 year age group.	Mortality disaggregated by gender	RGI	
Accidental death rates	Mortality disaggregated by type of accident.	RGI & Police	
Major surgeries per 1 lakh population.		HMIS	
Leprosy: Annual New Case detection Rate/100,000 population Prevalence rate/100,000 New cases with Grade II Disability Treatment Completion Rate	Proportion of new cases detected : MB case incidence Child Cases. Grade II Disability Child Case with disability	HMIS/ NLEP	
Case detection rate for tuberculosis	Also Treatment completion rate MDR rate	TB-MIS	
Annual parasite index for malaria	Also % PF, SPR	Malaria-MIS	
HIV in ANC clinics rate/STD clinics		NACO_MIS	
Rate of Chronic NCDs on primary care rate- of any sort on regular medication or other follow up in the HWC	Rates for specific diseases- HT, diabetes, COPD/asthma, epilepsy, mental illness, etc- where specialist initiates but regular follow up and medication locally	HMIS	
Average Medical Out of Pocket (OOP) Cost of Care per hospitalization episode	Also break up of cost of care in drugs, diagnostics and the rest- and by public and private facility	Based on exit interviews on fixed protocol	
Average OOP cost of care on ARI or diarrhoea for children under five		Based on annual community survey on fixed protocol	

annexure

one

State Wise List of Key Indicators

India/State/ Union Territory #	CBR	IMR	MMR	TFR	Under-five mortality rate	Neo Natal mortality rate
	2013	*2013*	2011-13	*2013*	*2013*	*2013*
INDIA	21.4	40	167	2.3	49	28
A & N ISLANDS #	14.6	24	NA	NA	NA	NA
ANDHRA PRADESH	17.4	39	92	1.8	41	25
ARUNACHAL PRADESH	19.3	32	NA	NA	NA	NA
ASSAM	22.4	54	300	2.3	73	27
BIHAR	27.6	42	208	3.4	54	28
CHANDIGARH #	14.7	18	NA	NA	NA	NA
CHHATTISGARH	24.4	46	221	2.6	53	31
DADRA & NAGAR HAVELI #	25.5	31	NA	NA	NA	NA
DAMAN & DIU #	17.9	20	NA	NA	NA	NA
GOA	13	9	NA	NA	NA	NA
GUJARAT	20.8	36	112	2.3	45	26
HARYANA	21.3	41	127	2.2	45	26
HIMACHAL PRADESH	16	35	NA	1.7	41	25
JAMMU & KASHMIR	17.5	37	NA	1.9	40	29
JHARKHAND	24.6	37	208	2.7	48	26
KARNATAKA	18.3	31	133	1.9	35	22
KERALA	14.7	12	61	1.8	12	6
LAKSHADWEEP #	14.8	24	NA	NA	NA	NA
MADHYA PRADESH	26.3	54	221	2.9	69	36
MAHARASHTRA	16.5	24	68	1.8	26	17
MANIPUR	14.7	10	NA	NA	NA	NA
MEGHALAYA	23.9	47	NA	NA	NA	NA
MIZORAM	16.1	35	NA	NA	NA	NA
NAGALAND	15.4	18	NA	NA	NA	NA
NCT OF DELHI #	17.2	24	NA	1.9	26	16
ORISSA	19.6	51	222	2.1	66	37
PUDUCHERRY #	15.7	17	NA	NA	NA	NA
PUNJAB	15.7	26	141	1.7	31	16

India/State/ Union Territory #	CBR	IMR	MMR	TFR	Under-five mortality rate	Neo Natal mortality rate
	2013	*2013*	2011-13	*2013*	*2013*	*2013*
RAJASTHAN	25.6	47	244	2.8	57	32
SIKKIM	17.1	22	NA	NA	NA	NA
TAMIL NADU	15.6	21	79	1.7	23	15
TRIPURA	13.7	26	NA	NA	NA	NA
UTTAR PRADESH	27.2	50	285	3.1	64	35
UTTARAKHAND	18.2	32	285	NA	NA	NA
WEST BENGAL	16	31	113	1.6	35	21

annexure

two

Shortfall in Health Infrastructure

State/ UT	Total Population in Rural Areas	Tribal Population in Rural Areas	Sub Centres				PHCs				CHCs			
			R	P	S	Short fall %	R	P	S	Short fall %	R	P	S	Short fall %
Andhra Pradesh	56361702	5232129	11969	12522	*	*	1965	1709	256	13	491	292	199	41
Arunachal Pradesh	1066358	789846	318	286	32	10	48	117	*	*	12	52	*	*
Assam	26807034	3665405	5850	4621	1229	21	954	1014	*	*	238	151	87	37
Bihar	92341436	1270851	18637	9729	8908	48	3099	1883	1216	39	774	70	704	91
Chhattisgarh	19607961	7231082	4885	5161	*	*	774	783	*	*	193	157	36	19
Goa	551731	87639	122	207	*	*	19	21	*	*	4	4	0	0
Gujarat	34694609	8021848	8008	7274	734	9	1290	1158	132	10	322	300	22	7
Haryana	16509359	0	3301	2542	759	23	550	454	96	17	137	109	28	20
Himachal Pradesh	6176050	374392	1285	2068	*	*	212	489	*	*	53	78	*	*
Jammu & Kashmir	9108060	1406833	2009	2265	*	*	327	637	*	*	81	84	*	*
Jharkhand	25055073	7868150	6060	3958	2102	35	966	330	636	66	241	188	53	22
Karnataka	37469335	3429791	7951	9264	*	*	1306	2233	*	*	326	193	133	41
Kerala	17471135	433092	3551	4575	*	*	589	829	*	*	147	224	*	*
Madhya Pradesh	52557404	14276874	12415	8764	3651	29	1989	1157	832	42	497	334	163	33
Maharashtra	61556074	9006077	13512	10580	2932	22	2201	1811	390	18	550	360	190	35
Manipur	2021640	791126	509	421	88	17	80	85	*	*	20	17	3	15
Meghalaya	2371439	2136891	759	422	337	44	114	108	6	5	28	27	1	4
Mizoram	525435	507467	172	370	*	*	25	57	*	*	6	9	*	*
Nagaland	1407536	1306838	455	396	59	13	68	126	*	*	17	21	*	*
Odisha	34970562	8994967	8193	6688	1505	18	1315	1305	10	1	328	377	*	*
Punjab	17344192	0	3468	2951	517	15	578	427	151	26	144	150	*	*
Rajasthan	51500352	8693123	11459	14407	*	*	1861	2082	*	*	465	567	*	*
Sikkim	456999	167146	113	147	*	*	18	24	*	*	4	2	2	50
Tamil Nadu	37229590	660280	7533	8706	*	*	1251	1369	*	*	312	385	*	*
Tripura	2712464	1117566	691	972	*	*	109	84	25	23	27	18	9	33
Uttarakhand	7036954	264819	1442	1847	*	*	238	257	*	*	59	59	0	0
Uttar Pradesh	155317278	1031076	31200	20521	10679	34	5194	3497	1697	33	1298	773	525	40
West Bengal	62183113	4855115	13083	10356	2727	21	2153	909	1244	58	538	347	191	36
Andaman & Nicobar Islands	237093	26715	50	119	*	*	8	22	*	*	2	4	*	*

State/ UT	Total Population in Rural Areas	Tribal Population in Rural Areas	Sub Centres				PHCs				CHCs			
			R	P	S	Short fall %	R	P	S	Short fall %	R	P	S	Short fall %
Chandigarh	28991	0	5	16	*	*	0	0	0	0	0	2	*	*
Dadra & Nagar Haveli	183114	150944	56	51	5	9	8	7	1	13	2	1	1	50
Daman & Diu	60396	7617	13	26	*	*	2	3	*	*	0	2	*	*
Delhi	419042	0	83	27	56	67	13	5	8	62	3	0	3	100
Lakshadweep	14141	13463	4	14	*	*	0	4	*	*	0	3	*	*
Puducherry	395200	0	79	53	26	33	13	24	*	*	3	3	0	0
India	**833748852**	**93819162**	**179240**	**152326**	**36346**	**20**	**29337**	**25020**	**6700**	**23**	**7322**	**5363**	**2350**	**32**

Notes: The requirement is calculated using the prescribed norms on the basis of rural population from Census, 2011.

All India shortfalls are derived by adding state-wise figures of shortfall ignoring the existing surplus in some of the states.

R: Required; P: In Position; S: Shortfall;* Surplus

Source: RHS 2014

annexure

three

Human Resource Status at Sub Health Centres/Primary Health Centres

State/UT	Population as per Census 2011	Number of Sub centre Existing	Population Catered per SC	ANMs In Position	No. of ANMs per SC 1	Population coverage per ANM	No, of PHCs existing	MOs at PHCs	No. of MOs per PHC	No. of CHCs existing	MOs at CHCs	Population coverage per MO PHC/CHC
Andhra Pradesh	84665533.0	12522.0	6761.3	20920.0	1.7	4047.1	1709.0	3118.0	1.8	292.0	469.0	23603.4
Arunachal Pradesh	1382611.0	286.0	4834.3	348.0	1.2	3973.0	117.0	92.0	0.8	52.0	105.0	7018.3
Assam	31169272.0	4621.0	6745.1	9220.0	2.0	3380.6	1014.0	1355.0	1.3	151.0	384.0	17923.7
Bihar	103804637.0	9729.0	10669.6	18630.0	1.9	5571.9	1883.0	2521.0	1.3	70.0	285.0	36993.8
Chhattisgarh	25540196.0	5161.0	4948.7	5666.0	1.1	4507.6	783.0	383.0	0.5	157.0	302.0	37285.0
Delhi	16753235.0	27.0	620490.2	40.0	1.5	418830.9	5.0	20.0	4.0	0.0	0.0	837661.8
Goa	1457723.0	207.0	7042.1	150.0	0.7	9718.2	21.0	56.0	2.7	4.0	10.0	22086.7
Gujarat#	60383628.0	7274.0	8301.3	6938.0	1.0	8703.3	1158.0	889.0	0.8	300.0	747.0	36909.3
Haryana	25353081.0	2542.0	9973.7	4540.0	1.8	5584.4	454.0	395.0	0.9	109.0	208.0	42044.9
Himachal Pradesh	6856509.0	2068.0	3315.5	2002.0	1.0	3424.8	489.0	571.0	1.2	78.0	194.0	8962.8
Jammu & Kashmir	12548926.0	2265.0	5540.4	4654.0	2.1	2696.4	637.0	1224.0	1.9	84.0	465.0	7429.8
Jharkhand	32966238.0	3958.0	8329.0	6678.0	1.7	4936.5	330.0	372.0	1.1	188.0	757.0	29199.5
Karnataka	61130704.0	9264.0	6598.7	12144.0	1.3	5033.8	2233.0	2155.0	1.0	193.0	240.0	25524.3
Kerala	33387677.0	4575.0	7297.9	7950.0	1.7	4199.7	829.0	1168.0	1.4	224.0	1017.0	15280.4
Madhya Pradesh	72597565.0	8764.0	8283.6	12580.0	1.4	5770.9	1157.0	999.0	0.9	334.0	864.0	38968.1
Maharashtra	112372972.0	10580.0	10621.3	18594.0	1.8	6043.5	1811.0	2506.0	1.4	360.0	478.0	37658.5
Manipur	2721756.0	421.0	6465.0	966.0	2.3	2817.6	85.0	199.0	2.3	17.0	94.0	9289.3
Meghalaya	2964007.0	422.0	7023.7	892.0	2.1	3322.9	108.0	114.0	1.1	27.0	74.0	15766.0
Mizoram	1091014.0	370.0	2948.7	666.0	1.8	1638.2	57.0	49.0	0.9	9.0	11.0	18183.6
Nagaland	1980602.0	396.0	5001.5	928.0	2.3	2134.3	126.0	126.0	1.0	21.0	51.0	11189.8
Odisha	41947358.0	6688.0	6272.0	8153.0	1.2	5145.0	1305.0	973.0	0.7	377.0	463.0	29211.3
Punjab	27704236.0	2951.0	9388.1	4342.0	1.5	6380.5	427.0	441.0	1.0	150.0	380.0	33744.5
Rajasthan	68621012.0	14407.0	4763.0	16258.0	1.1	4220.8	2082.0	2111.0	1.0	567.0	1011.0	21979.8
Sikkim	607688.0	147.0	4133.9	272.0	1.9	2234.1	24.0	38.0	1.6	2.0	4.0	14468.8
Tamil Nadu	72138958.0	8706.0	8286.1	9096.0	1.0	7930.8	1369.0	2139.0	1.6	385.0	1694.0	18820.5
Tripura	3671032.0	972.0	3776.8	661.0	0.7	5553.8	84.0	160.0	1.9	18.0	68.0	16101.0
Uttarakhand	10116752.0	1847.0	5477.4	1828.0	1.0	5534.3	257.0	160.0	0.6	59.0	54.0	47274.5
Uttar Pradesh	199581477.0	20521.0	9725.7	23731.0	1.2	8410.2	3497.0	2209.0	0.6	773.0	0.0	90349.2
West Bengal	91347736.0	10356.0	8820.8	18301.0	1.8	4991.4	909.0	711.0	0.8	347.0	902.0	56632.2
A& N Islands	379944.0	119.0	3192.8	199.0	1.7	1909.3	22.0	42.0	1.9	4.0	13.0	6908.1
Chandigarh	1054686.0	16.0	65917.9	25.0	1.6	42187.4	0.0	0.0	0.0	2.0	17.0	62040.4
D & N Haveli	342853.0	51.0	6722.6	88.0	1.7	3896.1	7.0	7.0	1.0	1.0	5.0	28571.1
Daman & Diu	242911.0	26.0	9342.7	39.0	1.5	6228.5	3.0	5.0	1.7	2.0	4.0	26990.1

State/UT	Population as per Census 2011	Number of Sub centre Existing	Population Catered per SC	ANMs In Position	No. of ANMs per SC 1	Population coverage per ANM	No, of PHCs existing	MOs at PHCs	No. of MOs per PHC	No. of CHCs existing	MOs at CHCs	Population coverage per MO PHC/CHC
Lakshadweep	64429.0	14.0	4602.1	48.0	3.4	1342.3	4.0	9.0	2.3	3.0	11.0	3221.5
Puducherry	1244464.0	53.0	23480.5	233.0	4.4	5341.0	24.0	38.0	1.6	3.0	18.0	22222.6
All India	**1210193422**	**152326.0**	**7944.8**	**217780**	**1.4**	**5557.0**	**25020.0**	**27355.0**	**1.1**	**5363.0**	**11399**	**31227.6**

Data for 2013 repeated

1 The variations in the number of ANMs per sub centre are due to the availability of 2 ANMs mostly in the high focus districts and the areas where the patient load is high.

Doctors Include only allopathic medical officers

annexure

four

Suggested List of Services for Primary Health Care

S.N.	Health Condition: Numbers / 1000/yr	Care in the Community/Household visits/Community level meetings/ School health Delivered by ASHA/AWW/School teacher	Care at the Health and Wellness Centre and outreach sessions Delivered by ANM/Mid level service provider	Care at the first referral site- PHC/CHC/DH
1.	Care In Pregnancy-Maternal Health. 20 to 30/1000 population	Early diagnosis of pregnancy, Counselling, support throughout pregnancy and delivery and motivation for institutional delivery, Nutritional information, Hygiene, Nutrition, Enabling Take Home Rations (THR) for pregnant woman through Anganwadi Worker, Identifying high risk births, facilitating referrals, helping birth planning, post partum complication identification/support	Early registration, Regular Ante-natal check-ups; includes Screening for Hypertension, Diabetes, Anaemia, Immunization for mother - TT, Iron-folic Acid & Calcium Supplementation , MCH cards, Identification of High Risk Pregnancy and referral Antenatal High Risk Cases. Post Natal Cases High Risk, Abortions, ***Normal Vaginal Delivery in specified delivery sites where Mid level provider or ANM is trained as a Skilled Birth Attendant***	Antenatal in High Risk Cases. Post Natal Cases High Risk, Normal Vaginal Delivery, Complicated Deliveries Ante-Partum & Post-Partum Haemorrhage, Ecclampsia, Puerperal Sepsis, Obstructed Labour, Caesarean Section, Assisted vaginal deliveries, Severe Anaemia;
2	Neonatal and Infant Health (0 to 1 years of age) 20/1000 population	6 house hold visits in neo-natal period for improved newborn care practices, identification and care of low birth weight/preterm newborn (with referral as required) , counselling and support for early Breast Feeding, improved weaning Practices, Identification of Birth Asphyxia, sepsis. Identification of congenital anomalies and appropriate referral Family/community education of Prevention of infections -ARI/Diarrhoea- identification and initiation of treatment- ORS/	Complete Immunization, Vitamin A Supplementation, Monitoring and assisting VHND : Care of Common illnesses of new born, AGE with mild dehydration, pneumonia case management, Treat, stabilize and refer sever cases. Where deliveries take place: asphyxia management, newborn screening;	Birth Asphyxia, severe ARI, Diarrhoea management, treat,
3	Child health, Adolescent health 234 children/1-10 Years of age 143adol./11-18 years of age	Growth Monitoring, Prevention through IYCF counselling, access to food supplementation- all linked to ICDS Detection of SAM, referral and follow up care for SAM. Prevention of Anaemia, use of iodised salt; de-worming Prevention of diarrhoea, prompt and appropriate treatment of diarrhoea/ ARI, referral where needed. Pre-school and School Child: Biannual Screening, School Health Records, Eye care, De-worming; Adolescent Health services: peer counselling, life skills education, personal hygiene,	Detection & Treatment of Anaemia and other deficiencies in children and adolescents Early detection of growth abnormalities, delays in development and disability Prompt Management of ARI and fever, Skin Infection, acute Diarrhoeas, Adolescent health- counselling, referral as per need	Management of SAM children, severe anaemia, or persistent malnutrition, Severe Diarrhoea, & ARI management, Diagnosis and treatment plan for disability and delays in development

S.N.	Health Condition: Numbers / 1000/yr	Care in the Community/Household visits/Community level meetings/ School health Delivered by ASHA/AWW/School teacher	Care at the Health and Wellness Centre and outreach sessions Delivered by ANM/Mid level service provider	Care at the first referral site- PHC/CHC/DH
4	Reproductive health and Contraceptive Services 170 eligible couples-	Preventive education for early marriage, Identifying eligible couples, and motivating for Family Planning- delaying first child, spacing between two children, Access to spacing methods- OCP, ECP, condoms. Education and mobilizing for action against gender based violence Knowledge of and referral for RTI/ STI, recognition of gender based violence	Counselling for Family Planning. Access to all spacing methods including IUCD Medical abortion RTI treatment- Syndromic First aid for GBV- link to referral centre and legal support centre.	IUCD, Vasectomy, Tubectomy, RTI/STI diagnosis and treatment, Manual vacuum aspiration, Hormonal & menstrual disorders tract infections and
5	Management of Chronic Communicable Diseases- Approx. 6 to 20 cases. – plus 1000	Tuberculosis; HIV, leprosy, Malaria, Kala-Azar, Filariasis, Other vector borne disease- prevention, identification, use of RDT/prompt treatment initiation, vector control measures examination, follow up medication compliance- Prevention – mass drug administration in filariasis, immunization for Jap B, RDK testing and treatment for malaria	Tuberculosis; HIV, leprosy, Malaria, Kala-Azar, Filariasis, Other vector borne disease Diagnosis treatment plan, follow up diagnostics, RDK + Lab testing and treatment for all vector borne disease	Confirmation of diagnosis, Management of Complications, Treatment Plan
6	Management of Common Communicable Diseases & Basic OPD care- (acute simple illness)	Symptomatic care for fevers, URIs, LRIs, diarrhoeas, Skin infections/Abscesses- identify/ refer Symptomatic care for aches and pains	Diagnosis and management of common fevers, ARIs and diarrhoeas, and skin infections. (scabies, abscess) Management of common aches, joint pains, common skin conditions, (rash/urticaria) Indigestions, gastritis Acute febrile illness,	Diagnosis and Management of all fevers, gastroenteritis and skin infections,
7	Management of Common Non-Communicable Diseases	1. Hypertension- Screening, Primary and Secondary Prevention 2. Diabetes mellitus – Screening , Primary and Secondary Prevention 3. Silicosis, Fluorosis – Preventive action, early case identification, 4. Chronic Obstructive Pulmonary disease (COPD), and Asthma: Early detection, prevention- primary and secondary, 6. Epilepsy- early case identification, Mobilize +35 age group for NCDs for screening at Village Level	Hypertension- Medication, enable specialist consultation, Follow up measurements, Diabetes mellitus –Medication, follow up diagnostics, enable specialist consultation early referral for complications Cancers - Cervical, Breast, Oral- Screening, early referral. Silicosis, Fluorosis – follow up care Chronic Obstructive Pulmonary disease (COPD), and Asthma- Medication, follow up care Epilepsy- Medication, early referral for complications	Hypertension- Medical management Diabetes mellitus – Medical management including complications Diagnosis, part of treatment and follow up- Cervical, Breast, Oral Silicosis, Fluorosis – diagnosis, Chronic Obstructive Pulmonary disease (COPD), and Asthma- diagnosis, treatment plan Epilepsy- diagnosis, treatment plan
8	Management of Mental Illness	Screening for mental illness- using screening questionnaires/tools Community education and Preventive measures against Tobacco use and Substance Abuse, Identification of people for De-Addiction Centres,	Detection and referral of mental illness, follow up medication, counselling/support Confirmation and referral for de-addiction Management of Violence related concerns	Diagnosis and Treatment Plan for mental illness.

S.N.	Health Condition: Numbers / 1000/yr	Care in the Community/Household visits/Community level meetings/ School health Delivered by ASHA/AWW/School teacher	Care at the Health and Wellness Centre and outreach sessions Delivered by ANM/Mid level service provider	Care at the first referral site- PHC/CHC/DH
9	Dental Care	Education on Oral Hygiene & Substance Abuse, in community and schools- dental fluorosis- recognition	Dental hygiene - Screening for gingivitis, dental caries, oral cancers Treatment for glossitis, candidiasis (look for underlying disease), fever blisters, aphthous ulcers;	Tooth abscess, dental caries, scaling, extraction,
10	Eye Care/ENT care	School : Screening for blindness and refractive errors, Community screening for congenital disorders and referral, Counselling and support for care seeking for blindness, other eye disorders -first aid for nosebleeds, screening for congenital deafness, recognizing acute suppurative otitis media, other common ENT conditions, referral	Eye care in newborn, Screening for visual acuity, cataract and for Refractive Errors, Identification & Treatment of common eye problems- conjunctivitis; spring catarrh, xerophthalmia, first aid for injuries, referral Management of common colds, ASOM, injuries, pharyngitis, laryngitis, rhinitis,URI, sinusitis	Cataract Blindness, Glaucoma, Trachoma,
11	Geriatric Care	Support to family in palliative care	Management of common geriatric ailments; counselling, supportive treatment, Pain Management and Provision of palliative care with support of ASHA	Referral care, diagnosis and treatment plans
12	Emergency Medicine	First Aid and First responder training for school teachers, Anganwadi workers and ASHAs.	Snake bites, scorpion stings, insect bites, dog bites Stabilization care in poisonings, trauma of any cause Minor injury, abscess management	Treatment of poisoning, management of simple fractures, basic surgery and surgical emergencies.

annexure
five

Lifecycle Approach to Primary Health Care and Social Determinants

Lifecycle Stage	Services	Primary Provider(s)	Initiatives Based on Social Determinant Factors
0-6 months	Birth Registration	ANM/ASHA	Availability of mechanisms for ANM to issue birth certificate.
	Exclusive Breast feeding	Family Member/ ASHA	1. Availability of policies related to maternity leave. 2. Provision of crèche at the workplace. 3. Support at family level.
	Immunization	ANM/ASHA	Schools and workplace initiatives to promote immunization for non-UIP vaccines, so as to prevent future epidemics.
	Screening for Birth Defects	RBSK team	
	First level assessment and care for common illnesses - fever, diarrhoea, ARI	ANM, ASHA and Family	1. Dissemination of knowledge regarding safe disposal of children excreta. 2. Knowledge on importance of hand-washing and water storage
	Management of common Illness	ANM	
	Need Based Referral	ANM, ASHA	
	Home based new-born care and prompt referral	ASHA, Family Members	1. Ensuring sanitation at household level. 2. Knowledge on importance of hand-washing.
	Counselling of Family members for - Exclusive Breastfeeding; Kangaroo Mother Care; Identifying Danger signs of Infection, Pneumonia and Dehydration; malaria; seeking care for illness	ASHA, ANM	
7-12 months	Initiation of Complementary Feeding	Family Members	Ensuring policies that discourage baby food supplements.
	Micronutrient Supplementation - IFA and Vit. A	ANM	
	Growth Monitoring	ANM	
	Immunization	ANM	
	Home based care/ Rehabilitative care	Family Members, ANM, ASHA	
	Management of Illnesses - fever, diarrhoea, ARI	ANM, ASHA	
	Counselling of family members on nutritional requirements (of mother and infant) and important milestones of infant development	ASHA, ANM	
1-5 years/ Preschool Years	Growth Monitoring	ANM	1. Ensuring hygiene and availability of clean water in Anganwadi. 2. Promoting girl child education.
	Nutritional Supplementation	ANM, ASHA	
	Screening for Childhood Diseases	RBSK Team	
	Screening for Deficiencies	RBSK Team	
	Screening for Developmental Delays and Disabilities	RBSK Team	

Lifecycle Stage	Services	Primary Provider(s)	Initiatives Based on Social Determinant Factors
6-10years	Deworming	ANM	
	Screening - Defects, Diseases, Deficiencies, Developmental Delays	RBSK Team	
	Growth monitoring	ANM	
	Inculcating Importance of Hygiene and Sanitation	ASHA, Family members, Teachers	
10-19 years	Facility-based adolescent reproductive and sexual health services – Counselling	MO and ANM	Promoting a positive growth environment in families and communities. Delaying Age of first pregnancy to over 20 years Provision of Sanitary napkins to adolescent girls Community based advocacy for prevention of exposure in exploitative labour market.
	Nutrition Supplementation with IFA and Albendazole,	ANM	
	Counselling for positive mental health	Family, Counsellor, PRIs, Peers, Teachers	
	Education on Sexual and Reproductive Health and on Gender Based Violence	Teachers, ANM, ASHA, MO	
	Counselling on harmful effects of substance abuse and mental health issues	Teachers, ANM, ASHA,	Discouraging tobacco and alcohol use by adolescents.
	Counselling on healthy lifestyle measures - physical activity and appropriate nutrition.	ANM, ASHA, Family members, Teachers	Promote healthy behaviours related to food habits and physical activity Improved health and quality of life
	Community based support groups/peer initiatives	Peers, ASHA, PRIs	
Reproductive Age Group	ANC	ANM	
	Malaria Prophylaxis in endemic zones	ANM	
	Safe Delivery Services - Institutional Deliveries	MO, Staff Nurse	
	Safe Delivery Services - Home deliveries	Family members, ANM, ASHA	
	PNC services	ANM, ASHA	
	Contraceptive services - Non Clinical		
	Contraceptive services – Clinical	ANM, Staff Nurse	
	Counselling on Family Planning measures	ASHA, ANMs	
	Advice/Counselling on safe abortion services	ANM, ASHA	
	Safe abortion services	MO	
	RTI/STI case, provide counselling, basic management and referral services	MO	
	Syndromic Management of RTIs/STIs	MO	
	Nutritional counselling for pregnant women	ANM, ASHA	
	Counselling on danger signs, importance of institutional delivery, pre-birth preparedness and complication readiness, care of new-born, demand feeding, supplementary feeding, RTI/STI	ANM, ASHA	
Geriatric/60+ Age Group	Screening for NCDs	ANM, MO	Access to social protection schemes and pension programs.
	Rehabilitative Care	Family members, ANM	
	Community Support Group	PRI	

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