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राष्ट्रीय स्वास्थ्य मिशन

सत्यमेव जयते
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
MINISTRY OF HEALTH AND FAMILY WELFARE

NHSRC

RESEARCH TO ACTION

Insights and Policy Implications

2023

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PREFACE

MoHFW is well cognizant of the fact that health systems research including implementation research plays a critical role in strengthening of health systems, thus enabling them to evolve responding to changing health needs. Health systems in India have always supported the exercise of validation, evidence, and research across domains of health care service delivery, as a part of the common pool of knowledge. Since its inception, National Health Mission (NHM) has introduced several ambitious life-saving interventions to strengthen the Indian health system and improve health outcomes. NHM with its key objective of meeting people's health needs in rural and urban areas, included research related interventions as one of the actions linked to defined priorities and to overcome identified constraints.

NHM framework while defining institutional framework reiterated the need of research and mandated National Health Systems Resource Centre to undertake Implementation Research and evaluations to provide support for policy and strategy development, through collating evidence and knowledge from published work and experiences. Recognizing the role of evidence and field learnings in health, the National Health Policy released in 2017 has reiterated the importance of research and specified the how it can contribute to development of nation's health; thus, need towards increasing investments in health research.

With an objective of creating a strong and coherent institutional mechanism to enhance generation of useful evidence-based knowledge, and to facilitate timely application of relevant learnings to health systems and policies, the MoHFW established the Implementation Research for Health Systems Strengthening platform under NHM to support health systems research in India and continue being aligned with national and state specific priorities and knowledge requirements of decision makers in the Indian health system.

The National Health Systems Resource Centre in its capacity as think tank to MoHFW and secretariat to IR HSS platform has been supporting research related activities across the domain areas of NHM. With MoHFW establishing Knowledge Management Division, which came into function in 2021, the domain specific research activities and relevant health systems studies are being anchored by KMD. While the divisions within NHSRC have been undertaking studies independently or in collaboration with the KMD, the findings and recommendations are simultaneously shared with respective states and relevant program divisions for relevant actions towards program implementation.

To further strengthen the research capacities, NHSRC in last two years has established a platform for effective collaboration with Institutes of National Importance including public health research and academic organizations, medical colleges, as well as individual public health experts both within health systems as well as independent researchers. The collaborations in this duration have expanded to go global and also explore international universities and institutions in public health to facilitate research activities with a grander scope.

The ongoing activities for health systems research including implementation research have been aligned with national and state level health systems priorities. These studies have a potential for a huge magnifier effect, in extending the impact of health interventions. Also, this would help answer questions about why effective interventions are not reaching the people who could benefit from them. Additionally, it is useful in understanding how health system failures create barriers to the delivery of policies or programs.

With an objective to establish a broad, systematic, and multidisciplinary approach to conduct health systems research under NHM, NHSRC is continuously working with states, to utilize the available expertise and deliver timely results which would inform policy and strategy level decision making, and thus achieve overall health outcomes.

REFLECTING ON EVIDENCE FOR HEALTH SYSTEM STRENGTHENING

The Government of India's (GoI) ambitious National Health Mission (NHM) promises the achievement of universal access to equitable, affordable & quality health care services that are accountable and responsive to people's needs. To execute this, it has entrusted the National Health Systems Resource Centre (NHSRC) with the responsibility to serve as the apex body for technical support to the centre and states. A key imperative of NHSRC in addition to problem identification, analysis and problem solving in the process of implementation, is to undertake health system strengthening research to support the evidence generation for policy, knowledge networks and partnerships across multiple domains.

National Health Mission framework clearly defines the mandate of NHSRC in the field of implementation research, evaluations to support policy and strategy development. NHSRC as a think tank to MoHFW has a key role in generating evidence and knowledge from field insights and published work, thus also serving as institutional memory. Following the mandate, the organization has undertaken several policy-based reviews for health systems including reports of national activities like CRM and analysis from national surveys, thus capturing health systems responses to changing health needs, as well as understanding the health systems perspective across different national health programmes. This is aligned with NHSRC mandate to support health systems strengthening by providing documentation of country's efforts towards health systems, generating evidence and cross learning through published work, providing snapshot of interventions to reflect on key enablers and challenges, providing insights to inform policy level decisions. In this way, it is also supporting evidence based decision making and timely intervention to provide insights for mid-course correction.

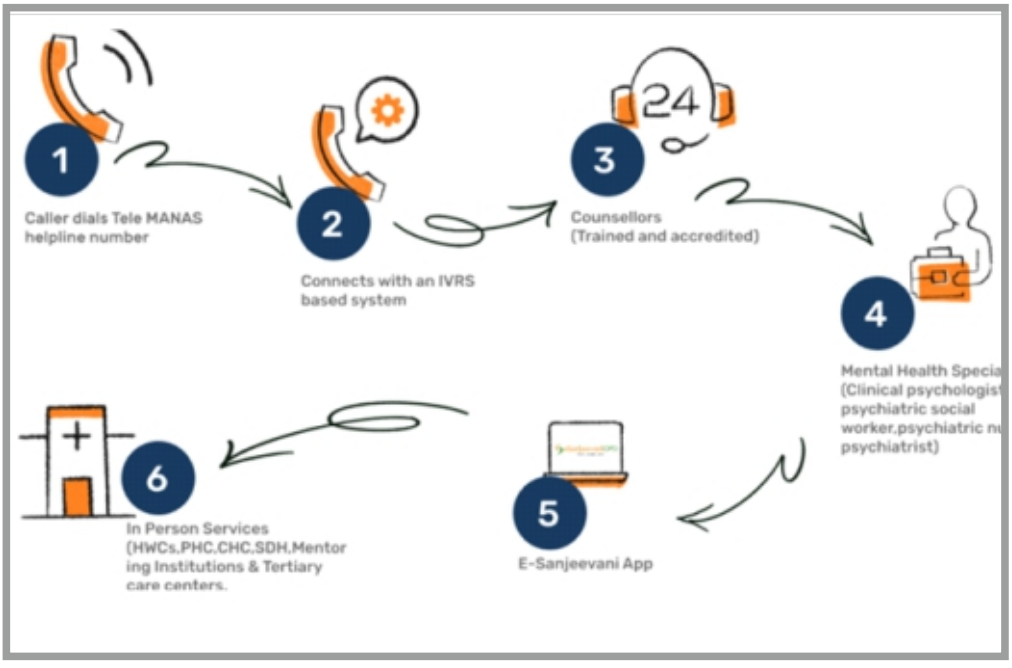
In essence, NHSRC conducts operational research on health systems and implementation research on implementation strategies for existing interventions to understand the enablers and barriers and also success stories. The focus is on research concerning health system challenges to improve health care delivery to vulnerable populations and strengthen the Indian health system. Furthermore, this research aids policy and strategy development by collating evidence and knowledge from published work, as well as experiences in implementation, and serves as institutional memory. This is also aligned with the National Health Policy 2017 that proposes institutions to facilitate interdepartmental collaboration for research and innovation to achieve the UHC and deliver quality health care services to all at affordable cost in a comprehensive integrated way.

The research conducted at NHSRC is paramount towards health systems strengthening and contributes to the achievement of NHM's goals including Universal Health Coverage (UHC) and the health-related Sustainable Development Goals (SDG). Much of this research has the potential to translate into strategies, technologies, policies and interventions that can be effectively and appropriately delivered to benefit the people, in particular the poor and hard-to-reach populations. A well-known obstacle in developing countries is that health policies are seldom well-informed by research evidence, either because the evidence base on many topics is inadequate or because health research capacity is limited to begin with. Nevertheless, the research team at NHSRC not only shines a light in this path, but also bridges the gap between evidence and well-informed policy decisions. Some of the research conducted at the institute that has contributed towards health system strengthening is briefly discussed in the succeeding paragraphs.

Although interest in health system strengthening research intensified following increasing recognition of the importance of research in achieving key goals such as UHC and the SDGs, the COVID-19 pandemic further attributed to its momentum. Priority areas to conduct research were identified throughout the course of the pandemic at NHSRC. Lessons learned from understanding the extent of disruption to essential healthcare services during the COVID-19 pandemic significantly helped in maintaining an undisrupted health service delivery and strengthened the health system at a very crucial hour.

As we progressed further into the pandemic, with the coming together of the government, public and private sector, and civil society to ensure a steady decline in COVID-19 cases, we witnessed issues related to vaccine hesitancy. NHSRC then conducted rapid evidence synthesis to understand the determinants of and strategies for COVID-19 vaccine acceptance in LMICs as well as to inform the knowledge base on vaccine acceptance to increase the acceptance of the COVID-19 vaccine. The evidence generated improved health service delivery and further strengthened the health system. India's response to the COVID-19 pandemic in terms of health system resilience was also evaluated and published as a viewpoint. This demonstrated the plethora of initiatives the GoI had developed towards its “whole-of-government” and “whole-of-society” approach and evaluated the strengths and weaknesses of the health system to build resilience for future crises and strengthen the health system. Furthermore, a systematic review of excess all-cause mortality estimation studies in India during COVID-19 pandemic was also conducted to generate definitive evidence on modelling techniques that emerged as areas of controversy during the pandemic. Based on a rigorous analysis, the review suggested emphasizing on the need to invest in robust systems for reporting of mortality in real-time to understand the real impact of the pandemic at the community level.

During the COVID-19 pandemic, new measures introduced towards its prevention and management also urged the global population to adapt to huge lifestyle modifications. Although challenging for everyone, this was particularly difficult for persons with mental illnesses who were among the vulnerable and warranted extra support and care. As such, NHSRC conducted a narrative synthesis on the National Mental Health Programme of India to expand the evidence base on mental health by identifying the current challenges in terms of the development process, administration, financing, human resources, monitoring and evaluation, Public-Private Partnership, community participation and IEC activities related issues, coverage, and provision of treatment to suggest the way forward. Moreover, when the GoI launched the country's first tele mental health programme, Tele MANAS, NHSRC published a viewpoint to generate mental health and programme awareness and increase mental health literacy among the population, as well as increase the effective uptake of mental health services and improve health outcomes. All these efforts, ultimately attribute towards health system strengthening.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Caller dials Tele MANAS helpline number
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Counsellors (Trained and accredited)
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Mental Health Specia
(Clinical psychologis
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psychiatrist)
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E-Sanjeevani App
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In Person Services (HWCs,PHC,CHC,SDH,Mentoring Institutions & Tertiary care centers.


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In addition to COVID-19 and mental health, assessments of the implementation of various health programmes under NHM were undertaken by utilizing the historical data from one of the annual monitoring activities, the Common Review Mission (CRMs). The CRM reports are important knowledge resources enabling status assessments of several health system domains within and across the Indian districts and states. Through this exercise, a review was undertaken to understand the existing mechanisms under the elderly care programme in the country. Reports over the years were thematically analyzed and synthesized to identify the enablers and barriers, opportunities, areas needing urgent attention, and evidence-backed recommendations to strengthen the ongoing efforts.

Throughout the years, the CRMs have highlighted noticeable yet differential improvements in the availability of medicines and diagnostic services, especially their role in enhanced public health service utilization. The differential access and availability warranted the need to review, analyze and identify the key health system factors augmenting or limiting access to medicines and diagnostic services in the country. The reviews brought out the core themes relevant to medicines and diagnostic services, their determinants and interlinkages influencing their access, availability, and affordability. The analyses underscored the necessity for strengthening the overall health system to accelerate the achievement of universal access to free essential medicines and assured package of diagnostic services at the public health facilities.

The information management platform at the NHSRC was utilized for reviewing and analyzing national surveys to generate evidence. For instance, the factors influencing life satisfaction and discrimination among the Indian elderly were analyzed to gain insights from the Longitudinal Aging Study in India (LASI). The analysis highlights the role of education, finances, social support and healthy lifestyle on the reported life satisfaction, and the role of living arrangements, place of residence, health conditions and health-seeking behavior on the perceived discrimination by the elderly.

Additionally, NHSRC conducted a multivariate analysis to assess the association between health facility utilization (inpatient and outpatient) and Health Seeking Behavior across all age groups of the elderly. The evidence guides both policy and programme to adopt a holistic approach to address the social determinants of health through collaboration with relevant line-ministries for facilitating social support alongside reinforcing the health system preparedness for assured services and access to healthcare for healthy ageing of the population. This is especially crucial for nation-wide preparedness for the impending demographic transition.

Furthermore, NHSRC also researched on the less studied components. A paucity of evidence pertaining to National Health Programmes in the urban areas, such as for the HBNC programme was identified. To close the evidence gaps, a secondary data analysis of the HBNC programme in Urban areas was done, which highlighted pertinent issues associated with infrastructure gaps, human resources requirement, coverage of intrapartum, post-natal care and immunization services, and the reported neonatal health outcomes at the urban areas. The study has been tone-setting for signaling field-level scrutiny of various health programmes delivered in urban areas, to support evidence generation on NUHM's roles in redressing inequity in access and utilization, and to direct focused actions for contextualized deficiencies. With the ongoing reinforcement of the urban-component of the National Health Mission, evidence-generation through secondary analysis and primary studies are imperative while revisiting the existing programmes and strategies to redress the identified gaps and ideate newer strategies to circumvent them.

Human resources for health (HRH) are the lifeline of any health system and crucial to attain UHC and SDGs. And in order to reach UHC, health systems must be oriented towards a primary health care approach. For primary healthcare systems to bring primary care closer to the communities, the availability of appropriate human resources is a prerequisite. For that, the government has positioned a Community Health Officer (CHO) to head the primary care team at sub-health centre level and serve as the key focal point for service organization and delivery. Given the wide prevalence in the deployment of CHOs, NHSRC collated recent evidence on the role of Non-Physician Health Workers (NPHWs) as Mid-Level Health Providers (MLHPs) in improving access to primary healthcare services in the form of a narrative review. This research also established the enablers and barriers in integrating them in primary care teams thus making recommendations towards strengthening the primary health system.

The NHSRC also analyzed the recent initiatives for transforming healthcare in India based on the political economy of health framework analysis. The viewpoint apprises the national and global audience on the implications of economic forces on health systems strengthening, major health care initiatives in India since 2005, and various policy prescriptions and interventions across the spectrum of healthcare to address infrastructure, service delivery gaps. It also highlights various governmental initiatives that are both patient and citizen-centric in their essence. A review of the initiatives over time adds value to the scarce evidence available in the Indian context, highlights their population-level impact, as well as the linkages of political actions on various determinants of health and health outcomes.

Just as importantly, NHSRC has advocated the importance of formulating a legislative framework for public health corresponding to the remerging concerns as no public health legislation can remain stagnant. Research was conducted to analyze various existing legislations pertaining to the subject of 'public health', to understand the current needs of a dynamic health system. It was suggested that the existing legislations need to be rationally revised and effectively implemented to improve health outcomes. A balance between essential elements such as ethics, laws, dignity, freedom, and public health will promote positive health, prevent future outbreaks, and strengthen the Indian health system.

In essence, NHSRC is continuously designing and conducting scientifically sound studies while adhering to the principles of health system strengthening research. In doing so, it is developing a robust evidence base of health systems literature that is salient to the MoHFW, States and relevant stakeholders to facilitate the process of developing, implementing, and planning healthcare programs. It also provides an in-depth understanding of the current status of Indian health system to address healthcare challenges in an ecological context. Moving forward, NHSRC intends to continue this procedure as an ongoing process for the MoHFW to ensure the delivery of efficient and effective healthcare with the aim of improving patient outcomes across all levels of care. This will be bolstered through the research conducted within the Implementation Research for Health System Strengthening (IR HSS) Platform established by MoHFW within NHSRC, that will support the uptake of findings at the policy as well as the grassroot level.

A list of NHSRC's published work has been attached as Annexure I.

Annexure I

1. Ahmed T, Dumka N, Kotwal A. Tele MANAS: India's First 24X7 Tele Mental Health Helpline Brings New Hope for Millions. Indian Journal of Mental Health. 2022 - Vol 9. Issue 4: p403-406. Available at: https://indian mentalhealth.com/pdf/2022/vol9-issue4/14-Viewpoint-Article-
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PRIMARY RESEARCH STUDIES

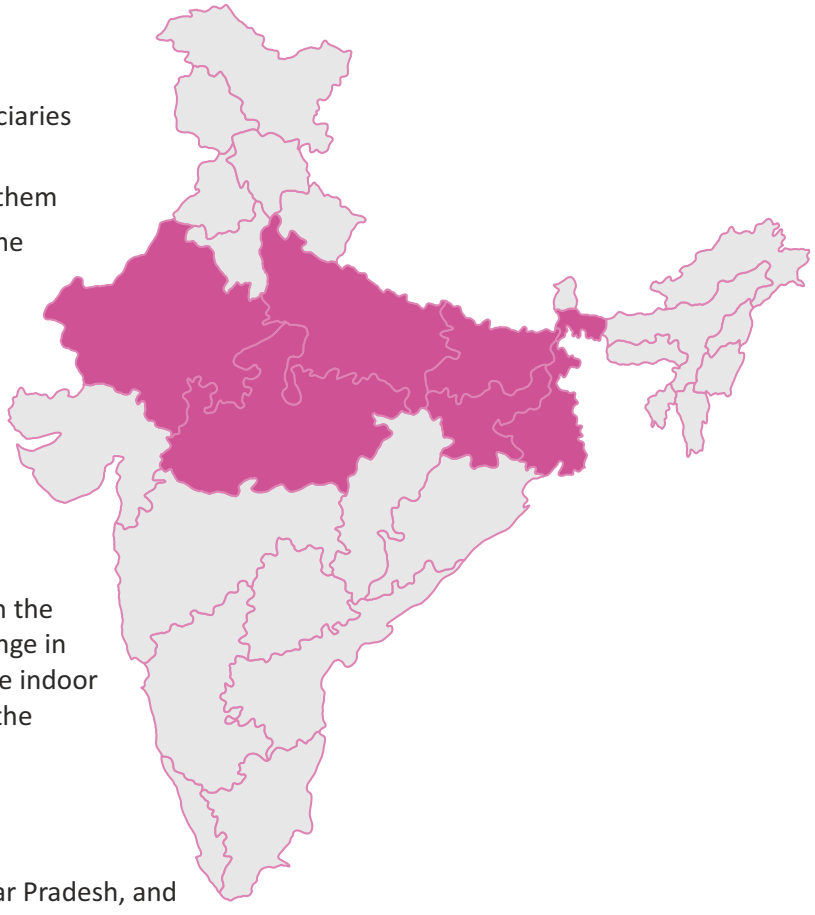
ASSESSMENT OF "PRADHAN MANTRI UJJWALA YOJANA (PMUY)" – A CLEAN FUEL SCHEME IN RURAL HOUSEHOLDS OF INDIA

Background

The Pradhan Mantri Ujjwala Yojana (PMUY) is a flagship scheme to increase the availability of Liquefied Petroleum Gas (LPG) to rural and deprived households, and thereby create a positive impact on the health of rural women and the environment. Given the objectives of the scheme, a study was undertaken in six Indian states to assess the health benefits and changes in the quality of life of its beneficiaries.

Objectives

- To assess the health status of the PMUY beneficiaries concerning their respiratory health
- To assess a change in the quality of life among them
- To assess the indoor PM2.5 concentrations in the villages
- To understand the challenges faced by the beneficiaries for LPG refill.



Methods

Study type

The assessment was designed as a quantitative ambispective study. The information required from the PMUY beneficiaries on their health status and change in the quality of life was retrospective in nature, while indoor air quality was measured for a month proceeding the household survey.

Study setting

Bihar, Jharkhand, Madhya Pradesh, Rajasthan, Uttar Pradesh, and West Bengal.

Sampling

A multi-stage sampling strategy was used to select the study sites. Six states, twelve districts and twelve villages were selected for the household survey purposively based on defined criteria: highest and lowest number of PMUY connections, accessibility, and not prone to violence and/or political unrest.

Assuming the minimum proportion of LPG beneficiaries under the PMUY scheme across the villages as 35%, a sample size of 207 households was estimated for each village (confidence level: 95%, margin of error: ± 6.5). After accounting for non-responses, a sample size of 2640 households (i.e. 220 HHs per village) was estimated for the study.

Data collection

The study was conducted in 2021. A pre-tested digital tool developed through open source software and operable on

basic android phones was used for the data collection. The household survey was completed in 2 months duration. Additionally, sixteen low-cost sensors were installed in four states (Bihar, Jharkhand, Rajasthan, and Uttar Pradesh) in the kitchens of the respondents to capture the indoor air quality for a duration of three months.

Results

Health and quality of life

Of the 2366 surveyed households, 40 percent of the LPG users reported an improvement in the general health of the primary cooking person; 55 percent reported fewer episodes of respiratory illnesses post-PMUY connections; and 40 percent reported decrease in the number of visits to doctor since LPG use under the PMUY. Improvement in the quality of life in terms of the time spend on cooking (99.1%) and ease of cleaning the utensils (97.3%) were reported. The reported changes in health and quality of life were statistically significant (p=0.000).

Access to LPG cylinders and re-fills

More than one-third (38%) of the beneficiaries refilled their cylinders less than two times in the last six months preceding the survey. The bottlenecks identified were inconvenience (6%), availability issues (4%), no perceived value in refilling the cylinder (4%), cost (47%) and impact on food consumption due to the cost of re-fill (52%). The study identified that households continued to frequently use biomass fuel as they were easily available.

Indoor PM2.5 Concentrations

Also, the average PM2.5 concentration in the villages with high PMUY connection was 10 - 20 percent less than the villages with low PMUY connections.

Policy implications

- The findings from such evaluations would not only set a base for policy makers to understand the social determinants of health but also support the planning of activities for inter-sectoral convergence.
- The evidence would support in developing action plans for utilizing community-based platforms for increasing the uptake of social sector schemes impacting population health.

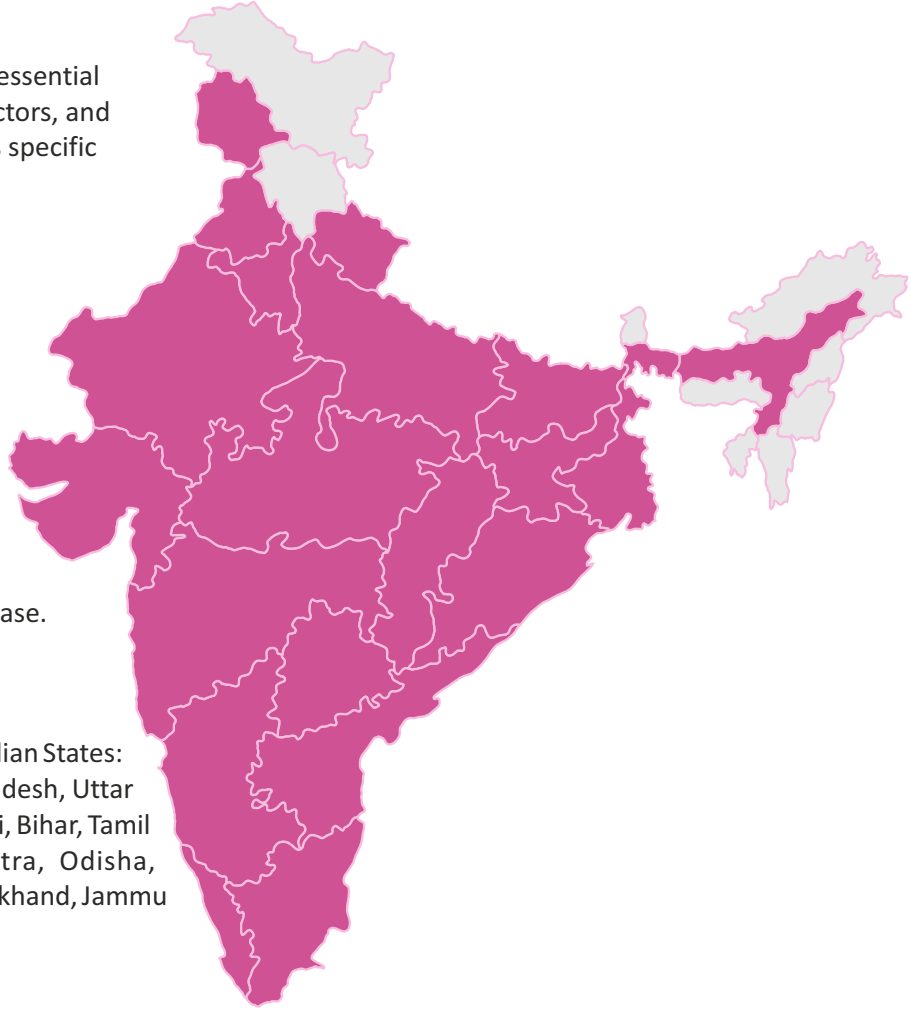
EFFECT ON ESSENTIAL HEALTH SERVICES DURING COVID-19 AT THE PRIMARY LEVEL IN INDIA

Background

Coronavirus disease (COVID-19) led to increased demand on the Indian health system due to the pandemic as well as other communicable and non-communicable diseases. Guidance was thus issued by the Ministry of Health and Family Welfare (MoHFW), India, in April 2020 to maintain the delivery of essential health services.

Objective

To determine the extent of disruptions of essential healthcare services, identify associated factors, and establish pertinent correlations to address specific needs.



Methods

Study type

In view of the COVID-19 pandemic, a telephonic survey was considered most appropriate for this study. The Mother and Child Tracking Facilitation Centre (MCTFC), established by the MoHFW, GOI, undertook the survey using the contact details provided through an existing database.

Study setting

The study was conducted in twenty-one Indian States: Chhattisgarh, Haryana, Punjab, Andhra Pradesh, Uttar Pradesh, Rajasthan, Madhya Pradesh, Delhi, Bihar, Tamil Nadu, Kerala, Uttarakhand, Maharashtra, Odisha, Gujarat, Telangana, Assam, Karnataka, Jharkhand, Jammu and Kashmir, West Bengal were included

Sampling

Twenty-one State were included based on the COVID-19 caseload as in April 2020. Likewise, one district within each state with the maximum caseload was selected for the study.

Primary respondents for the assessment included the FLWs (ASHA and ANM) and the beneficiaries (women in their antenatal and postnatal period). The ASHA and ANM were specifically selected because they are community health workers instituted to deliver essential health services in the country. Women in their antenatal and postnatal periods were selected as RMNCH services, included a huge proportion of the essential health services delivered in India. The sample size was determined using the sample size formula for an infinite population with a 95% confidence interval (CI) and a margin error of 5% using 1.96 z score for 95% CI. For that, 800 participants for each category were recruited.

Data collection

The data collection for the study was conducted between June 2020 and August 2020. A computer-generated random sequence technique was used for the selection of respondents based on the list maintained by MCTFC to represent the target population and eliminate selection bias. Data were analyzed using STATA version 16. A descriptive univariate analysis was conducted using the Chi-square test for indicators that were common among a selected group of respondents. An alpha level of 0.05 was used to determine the statistical significance. Ethical clearance was obtained from the Institutional Review Board, National Institute of Health and Family Welfare, New Delhi, India.

Results

Service Delivery

Essential services were satisfactorily delivered by the frontline workers. Provision of medicines for Non-Communicable Disease (NCD) patients was lesser among both ASHAs and ANMs. Provision of Routine Immunization (RI) services through outreach services was lower among ANMs. Approx. 82% of pregnant women received their last ANC at a health facility with a similar proportion receiving it at public and private facilities. Around 98% of women delivered at a health facility and more than two-third delivered at a public health facility. Commonly cited reasons for delivering at a private health facility or home were individual preference, lockdown, and lack of facilities at a public health facility. Approximately 90% mentioned their child received vaccination after birth and around 80% received calcium in the last two months. Roughly two-thirds were visited by the ASHAs in their postnatal period, and less than one-third received family planning information and calls to inquire about their child's health status.

Accessibility

Approximately 80% of ASHAs and ANMs reported that referral transport services were functioning as earlier. Less than one-fifth mentioned they were irregular or delayed, and a minor proportion stated their unavailability. Other lesser mentioned issues were the non-availability of services at a health facility, multiple referrals, and movement restrictions. The difference in response between ASHAs and ANM for these findings was not statistically significant. Around 9% of pregnant women were unable to access ANC due to the pandemic. Less than 3% of pregnant women mentioned they faced challenges due to transport unavailability, movement restrictions, health facility being closed, or unavailability of services at the private/public health facility, respectively. Issues regarding the availability of free referral transport were highlighted by the postnatal women; only one-third were able to avail it, and one-fourth had access to the drop-back facility. Around 5% of postnatal mothers faced problems due to ambulance unavailability or multiple referrals, respectively.

Facilitators and barriers to service delivery

The ASHAs were offered maximum support by the ANMs, followed by the ASHA facilitators and medical officer (MOs) at the health facilities. Only around 1% reported not receiving any support during the pandemic. The FLWs faced several barriers while undertaking their roles. A univariate analysis conducted among the common variables showed that a higher proportion of ASHAs experienced problems than ANMs concerning their experiences with the community members ($P = 0.000$) and availability of services at the health facility ($P = 0.000$).

Knowledge and practices of frontline workers and beneficiaries

Approximately 92% of FLWs received training related to COVID-19, and around 99% were involved in awareness generation. While most of the FLWs and beneficiaries demonstrated adequate knowledge and COVID-19 appropriate behavior, findings varied across different variables. However, a greater proportion of beneficiaries demonstrated appropriate COVID-19 behavior as compared to the FLWs in most variables ($P < 0.05$).

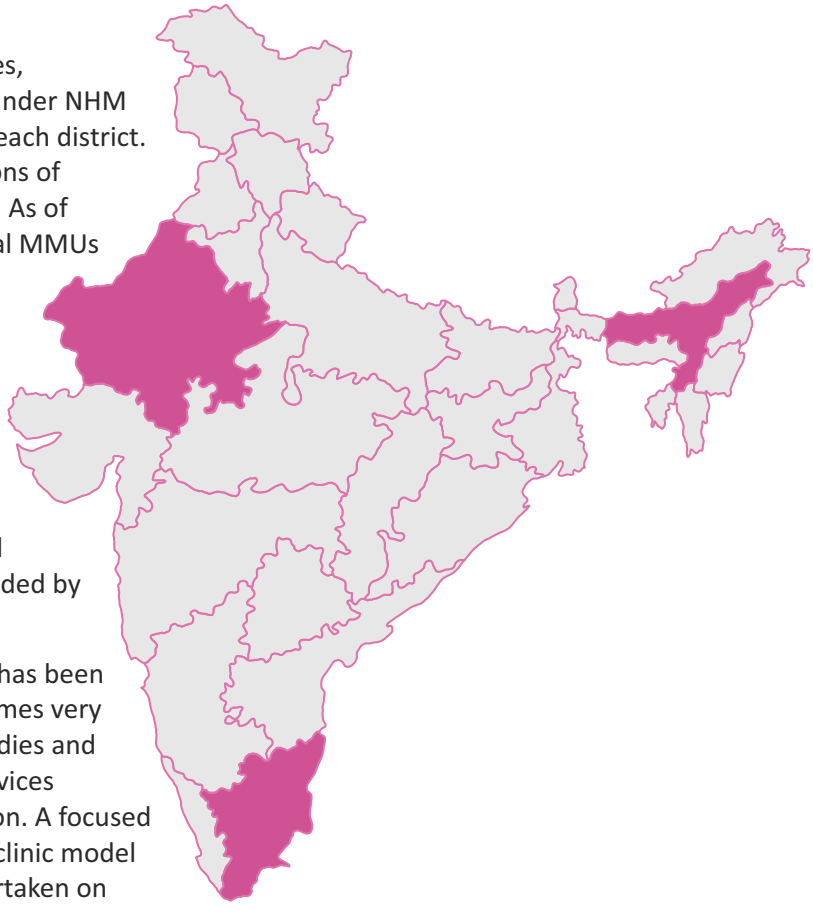
Policy implications

Given the public health system's goal of providing seamless healthcare services, perspectives of the frontline workers and end-users in healthcare services and evidence on factors leading to service disruption would inform strategies and policy-level decisions for providing uninterrupted essential services in the event of future crises.

COMPARATIVE ASSESSMENT OF VARIOUS MODELS OF MOBILE MEDICAL UNITS FOR PROVISION OF SERVICE IN REMOTE AND UNDER-SERVED AREAS

Background

Over the last decade, there is huge advancement in the health care. Despite this, there is significant disparities in rural-urban population. In rural areas, the distance between health care facilities and community is larger due to low population density, there are limited range of services available, lack of manpower and deficient quality of services. Similar challenges are faced by urban marginalized populations with lack of accessibility, affordability, and availability of health care.



To enhance equitable distribution of health services, Government of India has taken several initiatives under NHM including provision of one Mobile Medical Unit in each district. MMU plays an important role in all three dimensions of healthcare for remote and vulnerable populations. As of March 2018, there were a total of 1427 operational MMUs across the country.

There are three broad models suggested, under which the MMUs can be operationalized: i) Government operated MMU, ii) Operation of MMU on outsourcing basis- where capital expenditure, drugs and supplies are provided by Government, iii) Out-sourcing of MMU services including both capital expenditure and operational expenses. However, drugs and supplies to be provided by the Government.

At this point of time, when the network of MMUs has been implemented in almost the whole of India, it becomes very important to take up implementation research studies and understand the impact of MMUs in healthcare services provision to unreached and underserved population. A focused analysis of the relative value of the mobile health clinic model has not been elucidated, hence, a study was undertaken on various models of MMUs providing services in remote and underserved areas.

Objectives

- To compare various models of MMUs for provision of services in selected remote districts of India.
- To assess functioning of MMUs in terms of services provided, beneficiaries covered, reach to remote and under-served areas, mechanism of Monitoring & Evaluation, Quality of Care and Cost of service provision.

Methods

Study type

A mixed method study was undertaken which included in-depth interview, checklists and record review.

Study setting

The study was conducted in Assam, Rajasthan and Tamil Nadu.

Sampling

Selection of state and districts: To represent various geographical zones of country and presence of functional MMUs as per 2018, Assam, Rajasthan and Tamil Nadu were selected. With consultation of state officials and functioning of MMU two districts were selected from each state: Assam (Majuli and Tinsukhia), Rajasthan (Jodhpur and Pali), Tamil Nadu (Kanchipuram and Thiruvallur).

Respondents: The interviews were conducted with the district coordinators, medical officer in charge of MMU, state and district level program managers. The Medical Officer in-charge of the MMU, MMU staff such as the pharmacist, nurse and lab technicians, were also interviewed.

Data collection

The study duration was planned for 18 months but was extended due to COVID pandemic from May 2019 to December 2020. The data was collected using combination of various methods, that included i) Desk review, where situation analysis on number and types of MMUs in selected states was done in March 2020, ii) Interviews of State and District Health Officials regarding the mode of service delivery under MMUs, condition and functioning status of the MMUs, barriers faced in provision of services, referral linkages etc. iii) Site visits, where the research teams from state partners visited two MMU in each State and iv) Review of records, registers, reports, etc.

Results

Advantages and disadvantages of models

MMU models	Advantages	Disadvantages
Government Operated	• Good co-ordination with local health system • Active participation in VHSND	• Downtime for vehicles is more
Outsourced	• Better maintenance of the vehicles • No down-time as maintained by out-sourced agency	• Poor co-ordination with local health system • No participation in VHSNC or MAS • Poor record maintenance of costs, vehicle and equipment
Capital cost by Govt & Operational cost by co-operative agency	• Good co-ordination with local health system • Active participation with VHSND	• More downtime for vehicles

Services and reach of MMUs

MMU models	Rajasthan (Mixed)	Assam (Outsourced)	Tamil Nadu (Govt)
MMU operational	80% and 100% of sanctioned MMUs were operational in Jodhpur and Pali district respectively	100% of sanctioned MMUs operational in both districts	80% functional MMU in Kudrathur and 96% in Nemam Block

MMU models	Rajasthan (Mixed)	Assam (Outsourced)	Tamil Nadu (Govt)
Camps	On an average 20 camps for each MMU in a month	Approx. 30 visits in a month	Approx. 60 visits per month
Vehicle	Owned by Govt. and average downtime for 5 to 10 days in a year	Vehicles are outsourced No downtime of MMU van	Owned by Govt. Downtime of 10 days per year
Drugs and equipment procurement	Drugs: directly suppled through District Drug Welfare 50% of drugs available Equipment: pre-installed at time of vehicle purchase	Assam Govt. provides free drugs and consumables through District Health Society 34% drugs and consumables available All equipment provided by service provider	Required drugs are indented by Block PHC through Tamil Nadu Medical Service Commission 56% of drugs and consumables available Equipment: as provided initially
Services provided (as per guidelines covered ANC, immunization NCD services)	IUCD services not provided	Immunization and IUD services were not provided as done through SC	IUD services were not provided
Range of services provided	40 patients per day	49 patients per day	30 patients per day
Monitoring system	Information not available	Poor record maintenance	Monthly or quarterly review
Referral linkage	Referral to GH Number of referrals not available	Referral to DH Number of referrals not available	Referred to appropriate center Number of referrals not available

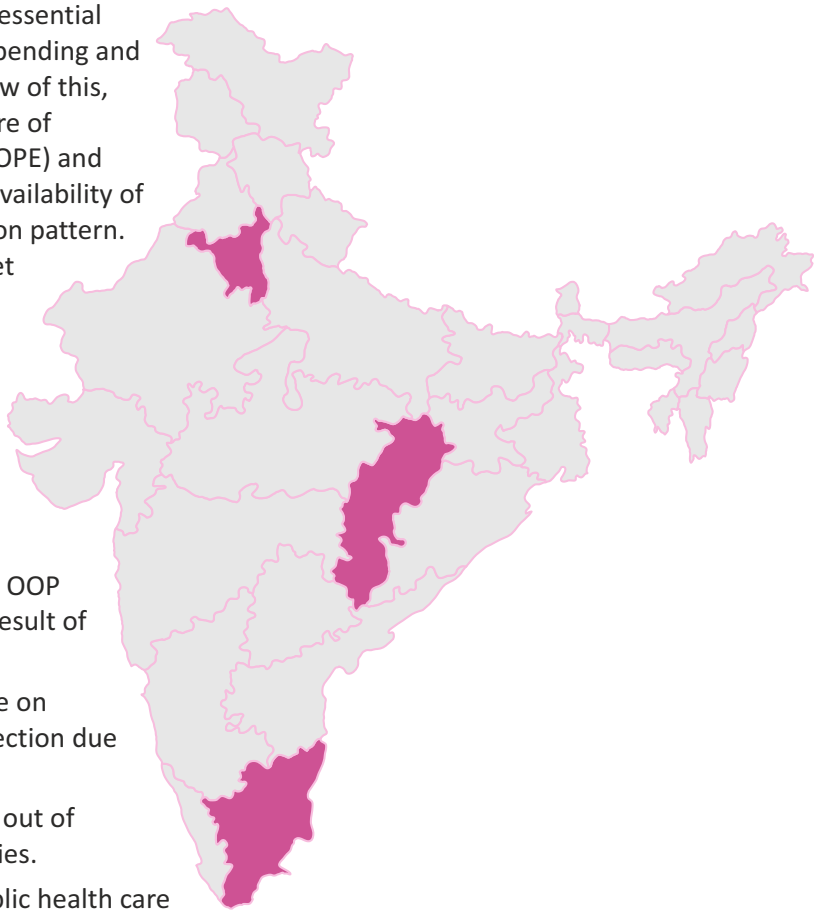
Policy implications

- Mobile Medical Units play a crucial role in bridging health disparities faced by communities inhabiting in remote and far-flung areas. They play an essential role in addressing accessibility constraints and bringing care closer to the community, thereby ensuring government's commitment in leaving no one behind.
- The comparative assessment of MMU models enhance understanding of various mechanisms that are best suitable for the community served while also weighing their advantages and disadvantages.
- The evidence would strengthen capacities of MMUs for specific studied-models, across all components encompassing infrastructure, medicines, diagnostic services, human resources, quality of care, extent of outreach and referral linkages to produce the expected outcomes.

IDENTIFICATION OF FACTORS CONTRIBUTING TO OUT-OF-POCKET EXPENDITURE ON MEDICINES (2019-2020)

Background

Providing affordable and quality healthcare is a major challenge in low-and middle-income countries (LMICs). Households in India bear significant financial burden on account of medical treatment and over three-fourth of all healthcare payments are paid out of pocket (OOP) at the point of service delivery. Medicines account for the single largest component approximately 63% of these payments. There may be numerous factors contributing to high out-of-pocket expenditure such as poor availability of essential medicines, poor affordability, inadequate public spending and lack of adequate health insurance coverage. In view of this, the present study was done to investigate the share of medicines in overall out of pocket expenditure (OOPE) and financial risk protection as a result of medicines, availability of medicines in public health facilities and prescription pattern. The study focuses upon the extent of out-of-pocket expenditure on medicines, catastrophic health expenditure and determinants of out-of-pocket expenditure. The study explored the extent of availability of medicines and prescription practices in public sector health facilities.



Objectives

- To investigate the share of medicines in overall OOP expenditure and financial risk protection as a result of medicines, using a novel methodology.
- To assess the determinants of OOP expenditure on medicines and the extent of financial risk protection due to OOP expenditure for medicines.
- To estimate the extent of availability and stock out of essential medicines in public health care facilities.
- To analyse the drug prescription pattern at public health care facilities.

Methods

Study type

The assessment was designed as a cross-sectional survey.

Study setting

The survey was conducted in primary, seco ndary and tertiary healthcare facilities of public sector of three diverse states: Chhattisgarh, Haryana and Tamil Nadu.

Sampling

A multi-stage stratified random sampling was employed for the selection of public health facilities. In the first stage, states were classified into three categories according to share of medicines in the overall OOP expenditure (low, medium and high), One state was randomly selected from each stratum namely Tamil Nadu (Low), Chhattisgarh (Medium) and Haryana (High). From the selected states, all the districts were stratified into three categories (low, medium and high) based on their human development index (HDI) scores. One district from each of these strata was selected randomly. Geographical representation was ensured at the time of selection of states and districts.

In the second stage, a total of 13 public health facilities were selected covering all the three levels of healthcare service delivery (primary, secondary and tertiary) from each state. The selected facilities included a tertiary care hospital/medical college (selected on the basis of patient load), three DHs (one from each district), three CHCs (under the three selected DHs), and six PHCs (under the three selected CHCs.

In the third stage, the district level sample size was distributed across facilities in the district as per their patient load. This was further distributed among OPD and IPD services in the ratio of 70:30. This was done considering 60-70% of OOPE incurred on the OPD services. The respondents included officials and end-users at the facility.

Data collection

The survey was conducted over a period of three months (September to November 2020). Both primary and secondary data was collected during the survey. Structured interviews were conducted with facility officials responsible for handling procurement and dispensing of medicines at the facilities using inventory management tool. The chief pharmacists were interviewed and record registers inspected for details on medicine availability at the facility. A "Medicine availability tool" was prepared and used to gather information on medicine availability. Patient exit interviews were done with both OPD and IPD care patients. The OPD patients were recruited at their exit from the pharmacy co-located at the facility, while IPD patients were recruited at the time of discharge from the facility.

Results

Availability of medicines in primary, secondary and tertiary public health facilities in selected states of India

All the public healthcare facilities in Haryana, Chhattisgarh and Tamil Nadu have dedicated storage space with proper temperature control system and cold storage facilities for medicines. Average duration of two successive indents of medicines was 30 days at the facilities in Chhattisgarh, Haryana and DH in Tamil Nadu, while it was 90 days at PHCs and CHCs in TN. Average interval for receiving the medicines after indenting was longest for Chhattisgarh (9-10 days) and shortest for Tamil Nadu (3-5 days). Stock out duration of essential medicines was variable across the states. In Chhattisgarh - anti-viral, anti-spasmodic and anti-depressant/anti-epileptic were unavailable for 4-6 months, whereas, antacid and anti-helminthic were unavailable for 1-3 months. In Haryana - anti-fungal drugs, anti-asthmatics and anti-viral were stocked-out for less than a month, while the rest of the categories were unavailable for 4-6 months. In Tamil Nadu, all drugs unavailable for the survey had been stocked-out for the last 6 months. The availability of medicines against the prescription was variable too. It ranged between 92-97 percent in the PHCs, 92 to 97 percent in the CHCs and 93 -100 percent in the DH/medical colleges across the states.

Drug prescription pattern in primary, secondary, and tertiary public healthcare facilities

The study found that the average number of medicines prescribed across the states was variable with Chhattisgarh having the most (3.9) and Tamil Nadu the least (2.7). Amongst the healthcare facilities, DH had the most drugs prescribed from EDL (78.9%). The highest proportion of injections were prescribed in Chhattisgarh (30.2%) and antibiotics in Haryana (48.6%). The incidence of polypharmacy was highest in Chhattisgarh (29.6%), followed by Haryana (13.2%) and least in Tamil Nadu (4.9%).

A novel methodology to estimate the contribution of medicines in out of pocket expenditure

The mean OOPE incurred by patients for out-patient care (OPD) was INR 815.2 (private-INR 1212.1; public- INR 340.9) and for in-patient care (IPD), the mean OOPE was INR 4840 (private- INR 13212; public- INR 1724.3). The major share of OOPE in public facilities were contributed by medicines (19.1%), diagnostics (28.8%) and non-medical items (42.8%). While for private facilities, the major contributors were medicines (6.9%),and hospital charges (41.2%). The study identified that there is a slight reduction in the estimated shared of medicines for OPD (from 32% to 30.7%) and IPD (from 6.2% to 5.7%) when adjusted. When compared with NSSO's 75th round reports, the OOPE for OPD is found to be nearly two times more than the findings of the present study, while it's almost similar for IPD. The study's estimates on expenditure on medicines at the public and private health facilities is found to be less than the NSSO's estimations. For in-patient settings, the mean OOPE reported by the NSSO is higher than the study's findings for both public and private health facilities.

Determinants of out-of pocket expenditure

The study results showed higher mean out of pocket expenditure among literates, the uninsured and among the patients who visited specialists. There was an increasing trend in OOPE with increase in wealth quintile and number of medicines prescribed. Individuals receiving all medicines free of cost from the facilities and prescribed from EDL reported to have incurred less OOPE as compared to others who had to purchase from outside the facilities. Odds of catastrophic health expenditure (CHE) were significantly higher among those receiving treatment from private health care providers, living in urban areas and among poor and literates.

Policy implications

- In line with GoI initiatives providing accessible, affordable and quality healthcare, the evidence on the availability of essential medicines in public healthcare facilities is crucial for strengthening the ongoing initiatives.
- The evidence on the share of OOPE, their determinants and the extent of financial protection in varying contexts would help understand policies and strategies adopted by states for improving accessibility and affordability to quality medicines, as well as for identify areas needing improvement.
- The study would also provide a base to assess key determinants of OOPE on medicine, thus enabling system's understanding to address challenges pertaining to financial risk protection.
- Given the GoI's initiative towards prescription audits, the study also throws light on prescription patterns across public health care facilities. This may feed into existing actions of NHM towards translation of prescription guidelines, developed by MoHFW.

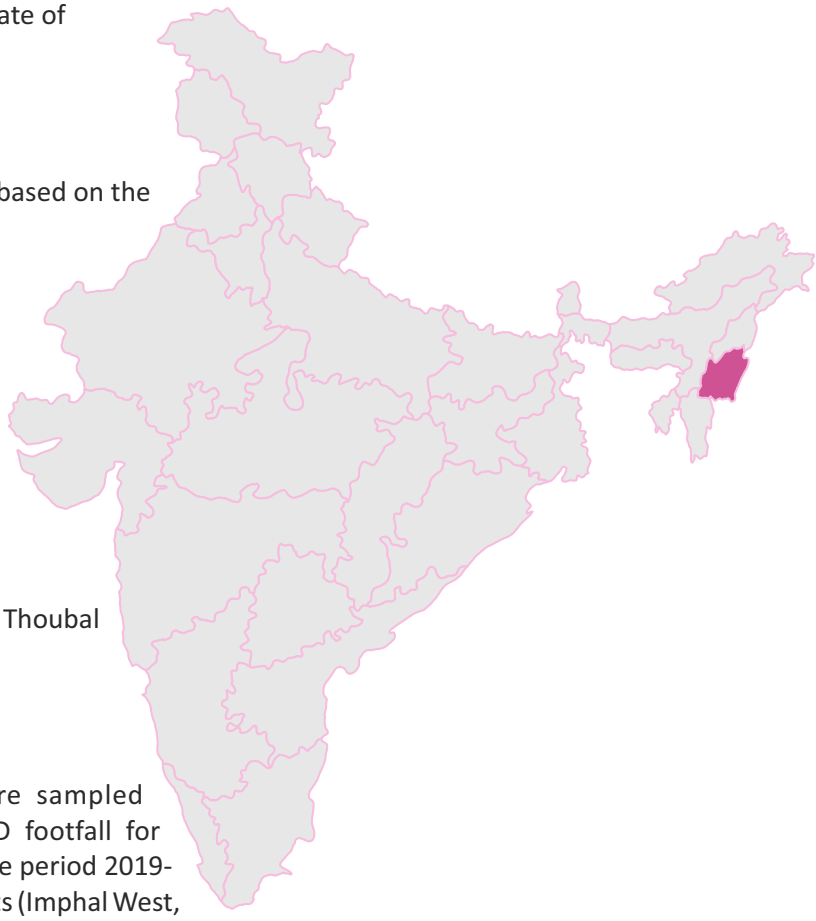
RAPID ASSESSMENT OF NCD SERVICES ROLLOUT IN HEALTH AND WELLNESS CENTRES IN NORTH-EASTERN INDIAN STATE: A CROSS-SECTIONAL STUDY

Background

The creation of Health and Wellness Centres (HWCs) to deliver Comprehensive Primary Health Care (CPHC) is a programmatic response to the changing demographic and epidemiological profile in India. Since the north-eastern states face distinct challenges to routine healthcare services, and it has been two years since the rollout of Non-Communicable Diseases (NCD) services through the HWCs, a rapid assessment of the rollout with respect to all components of CPHC was undertaken in the NE state of Manipur.

Objective

To assess the rollout of NCD services under CPHC based on the functionality criteria of HWCs in Manipur.



Methods

Study type

The assessment was designed as a cross-section study using mixed-method approach.

Study setting

The assessment was undertaken in Imphal West, Thoubal and Kakching districts of Manipur.

Sampling

The districts chosen for the assessment were sampled purposively using the selection criteria as NCD footfall for hypertension and type 2 diabetes screening for the period 2019-20. Out of sixteen districts in Manipur, three districts (Imphal West, Chandel, and Bishnupur) with high footfalls and three (Ukhrul, Tamenglong and Thoubal) with low footfalls were identified from a state-based reporting system. Among them, Imphal West and Thoubal were selected as they had more operationalized HWCs within their groups.

From each selected district, three HWCs operationalized for more than a year were selected purposively. In addition to them, an HWC-PHC from Thoubal district and an HWC-SC from Kakching district (earlier a part of Thoubal dist.) meeting the selection criteria were also covered during the field visit. In total, eight HWCs were covered for the assessment. From each facility, all providers, two community health workers, and four beneficiaries were included as respondents.

Data collection

The assessment was undertaken in October, 2021. A facility checklist was used to collect quantitative data from facility-based records. Semi-structured tools adapted from pre-tested HWC-assessment tools were used for assessing the infrastructure, human resources, logistics, service delivery, health promotion, finance, support & monitoring; and

thereby delivery of NCD services through the HWCs. An interview schedule was used to conduct face to face in-depth interviews from community health workers and the beneficiaries. Field notes were made during in-depth interviews and to record observations. Primary data was triangulated through the verification of records.

Results

Infrastructure and linkages

Most of the visited facilities (71%) had upgraded infrastructure with branding done as per the prescribed norms. Allocation of dedicated spaces for undertaking NCD activities was differential across the HWC-SCs. The referral linkages were satisfactory in Imphal west, while need attention in Thoubal. The situation there coexisted with poor roadways and a lack of public transport facilities. Emergency mobilization and transportation of patients was an area of concern. The HWCs faced inadequacy of basic amenities like power supply, potable water, gender-specific toilets, etc. In view of poor network connectivity, power supply and COVID-19 related restrictions, the HWCs resorted to telephonic consultations with higher-level providers.

Expanded service delivery

The assessment identified that the delivery of the pre-existing services was satisfactory in Imphal West but hampered in Thoubal and Kakching districts. The status of NCD rollout was differential at most of the visited HWCs. The administration of the Community Based Assessment Checklist (CBAC) varied across the districts. Challenges faced in population-based screening (PBS) include seasonal migration, unavailability of unique identity cards (i.e. Aadhar) and resistance from the community members. Among other NCDs, screening for cervical cancer was an area of concern owing to multiple constraints like inadequate infrastructure for privacy, community resistance and HR shortage. The momentum gained in mobilizing patients to avail NCD services faced hindrances due to shortfall of drugs and diagnostic paraphernalia. The rationalization of HR due to the ongoing COVID-19 pandemic further contributed to the disruption of routine NCD services.

Human resources

The HR at all HWCs was as per the required norms. The CHOs assumed a leadership role, and there was no conflict of interests observed or reported at the facilities. They were reportedly supportive and often provided handholding in learning new tasks or information to their teams. It was observed that well-functioning facilities had CHOs with demonstrable administrative skills. Role delineation was practiced on consensus between the CHOs and ANMs. The regular ANMs delivered pre-existing services while the CHOs and the contractual ANMs delivered the expanded range of services.

Funds and provider payment reforms

The provider payment reforms initiated in the state were challenged by resource constraints resulting in irregularities in the remuneration/ honorarium to the CHOs, ASHA facilitators and the ASHAs. Delays in the disbursal of untied funds were reported across all facilities. Almost all (86%) managed the resulting fund-shortage by using their own financial resources for routine activities (consumables, drugs, hiring help, water, electricity bill etc.) and for contingencies (patient mobilization).

IT Support

While the HWCs had trained HR for data entry in the respective portals, some of them faced constraints in using both device and application (CPHC-HWC portal, NCD application). Factors like inadequate training, technical glitches, poor internet connectivity and infrequent power supply contributed to the constraints.

Community mobilization and health promotion

Health promotion through IEC materials was commendable in all the visited facilities. While most facilities had VHSNCs and even held monthly-Village Health and Nutrition Day (VHND) sessions (71%), the constitution of the community-level

collectives needs strengthening. The state guidelines encourage constituting VHSNC for each ASHA - catchment yet only a singular committee was constituted for all facilities. A few committees (29%) were not adequately represented by the CHO or local body members. The VHSNC meetings and VHND sessions were disrupted by the pandemic.

Community perspectives

The upgradation of the primary healthcare facilities into HWCs was widely recognized by the community members for the introduction of NCD services. It was marked by an increased footfall for availing NCD related services and medications at the facilities. The beneficiaries opined to streamline the availability of medications and HR for seamless services.

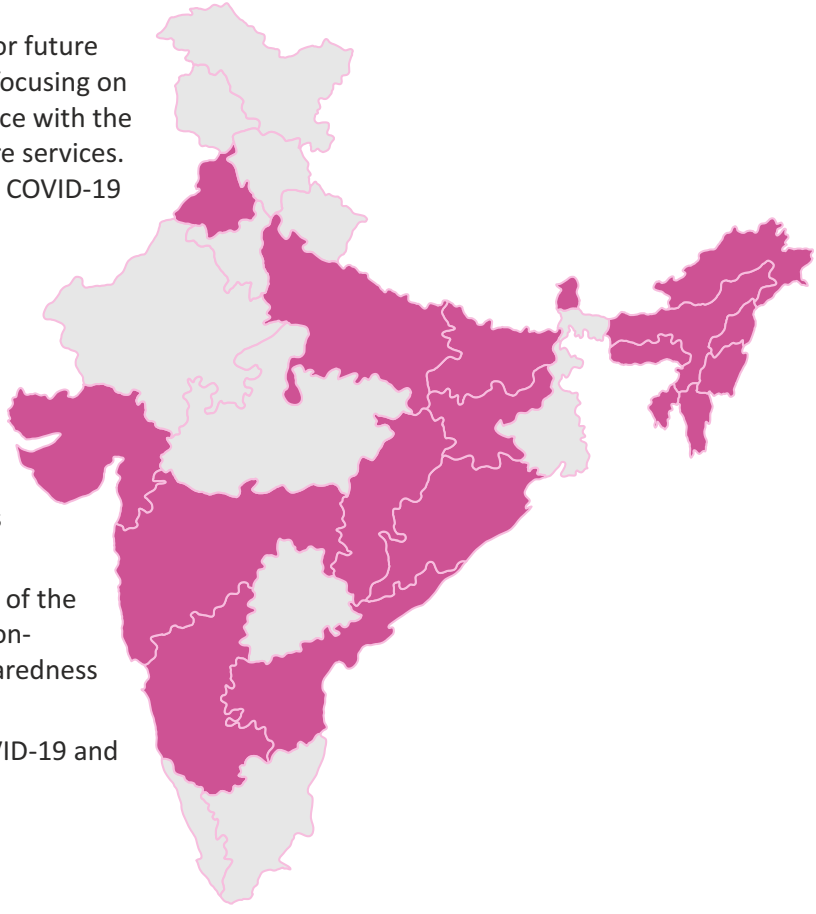
Policy implications

- The evidence from such formative assessments would support early identification of barriers impeding the envisaged rollout of services and thereby, early-course corrections to achieve the intended scale of rollout and service provisioning.
- The study also highlighted potential areas of program specific strengths and enablers, thus enhancing cross learning for other districts within state, as well as other NE states, to strengthen their programme implementation.

AYUSHMAN BHARAT HEALTH AND WELLNESS CENTRES: ASSESSMENT IN 18 STATES

Background

The Government of India launched Ayushman Bharat- Health & Wellness Centre (AB-HWC) in April 2018, aligning with the National Health Policy 2017's aim of shifting from selective to comprehensive primary health care. This initiative seeks to address all dimensions of universal health coverage (UHC) through reforms in service delivery, human resources, financing, access to medicines and diagnostics, community participation, and governance. To assess the progress and challenges of AB-HWC implementation and suggest design adaptations for future scale-up, a formative assessment was conducted focusing on inputs, processes, early outputs, and the experience with the rollout of Non-Communicable Diseases (NCDs) care services. The assessment also considered the impact of the COVID-19 pandemic on the initiative and vice versa.



Objectives

- To assess the pace of rollout of HWC in different states and to identify specific challenges in their rollout.
- To assess inputs and processes that contribute to the functionality of HWCs and early changes in outputs
- To understand the experience with the roll-out of the first of the expanded package of services on Non-Communicable Diseases (NCDs) care and preparedness to implement the remaining service packages
- To understand the bi-directional impact of COVID-19 and the roll-out.

Methods

Study type

Cross-sectional study design using a mixed-method approach of both quantitative and qualitative methods.

Study setting

A total of eighteen states were covered in two phases, eight in Phase 1 (Andhra Pradesh, Chhattisgarh, Gujarat, Karnataka, Maharashtra, Manipur, Punjab, Uttar Pradesh); and ten in Phase II (Arunachal Pradesh, Assam, Bihar, Jharkhand, Meghalaya, Mizoram, Nagaland, Odisha, Sikkim, Tripura).

Sampling

The states were selected to cover the entire spectrum of epidemiological transition levels as defined by the Global

Burden of Disease (GBD) India study, with a higher focus on north-eastern states. Multi-stage random sampling was employed to reach the sample. In each state, one district was selected based on the maximum number of functional HWCs, and with minimum of two functional HWC-PHCs. Within the district, facility selection was undertaken by a mix of random and probability proportion to size sampling. A total of ten HWCs (6 SHC-HWC, 2PHC-HWC, and 2 UPHC-HWC), and an equal number of control facilities were selected in the same district. Ten users of the selected facility were surveyed based on OPD records within last 14 days of the facility visit.

Data collection

Data from the reporting facilities was retrieved from the AB-HWC portal through NHSRC for the period July 2019 to March 2021. Quantitative data were collected from selected health facilities using a Facility Assessment Checklist (as per IPHS/HWC norms), Secondary data from intervention facilities were retrieved to assess the trend in the footfalls after conversion (with and without COVID). The qualitative data collection included in-depth interview of a wide range of stakeholders from state level officials to community level stakeholders to total 54 interviews in a state.

Results

Overall findings

The launch of the AB-HWC scheme has facilitated the transition from selective to comprehensive primary healthcare, as outlined in the National Health Policy 2017. The implementation of the scheme is progressing well in most states, with clear plans to achieve the set targets by December 2022. Despite challenges such as limited infrastructure and peripheral health facilities, there has been an improvement in equitable access to healthcare. Effective communication between districts, primary health centres (PHC-HWCs), and sub-health centres (SHC-HWCs) has facilitated the translation of policy decisions into action. Clients have shown higher satisfaction with services provided by HWCs compared to non-HWCs, particularly in the areas of treatment, medicines, diagnostics, and cleanliness.

Achievements

Several achievements have been observed, including the development of conversion plans and roadmaps by all states, timely flow of funds from the central government, the use of performance-based payments for Community Health Officers (CHOs), and the implementation of teleconsultation services using e-Sanjeevani software. Primary level facilities have also improved their readiness to deliver care for non-communicable diseases (NCDs) and other services beyond NCDs through collaborations with academic institutions and NGOs. The addition of CHOs has enhanced the capacity of HWCs to provide an expanded range of services, which has proven beneficial during the COVID-19 pandemic. There was a clear trend of shifting to digital method of indenting and inventory management. Jan Arogya Samitis (JAS), a multi-stakeholder facility-based committee for improved community ownership and provider accountability of SHC and PHC are in the process of being established.

Challenges

Infrastructure limitations, delayed fund allocation, complexity in calculating performance parameters, and lack of incentives for Auxiliary Nurse Midwives (ANMs) were identified as barriers. Implementation of ICT initiatives and referral management systems face obstacles such as poor internet connectivity and inadequate use of technology. Additionally, the rapid scale-up of services has strained the system's capacity, leading to staffing deficiencies and concerns related to training and deployment of CHOs. The roll-out of AB-HWCs was also impacted by the pandemic. Laboratory services, diagnostics, and health promotion activities needed strengthening.

Policy implications

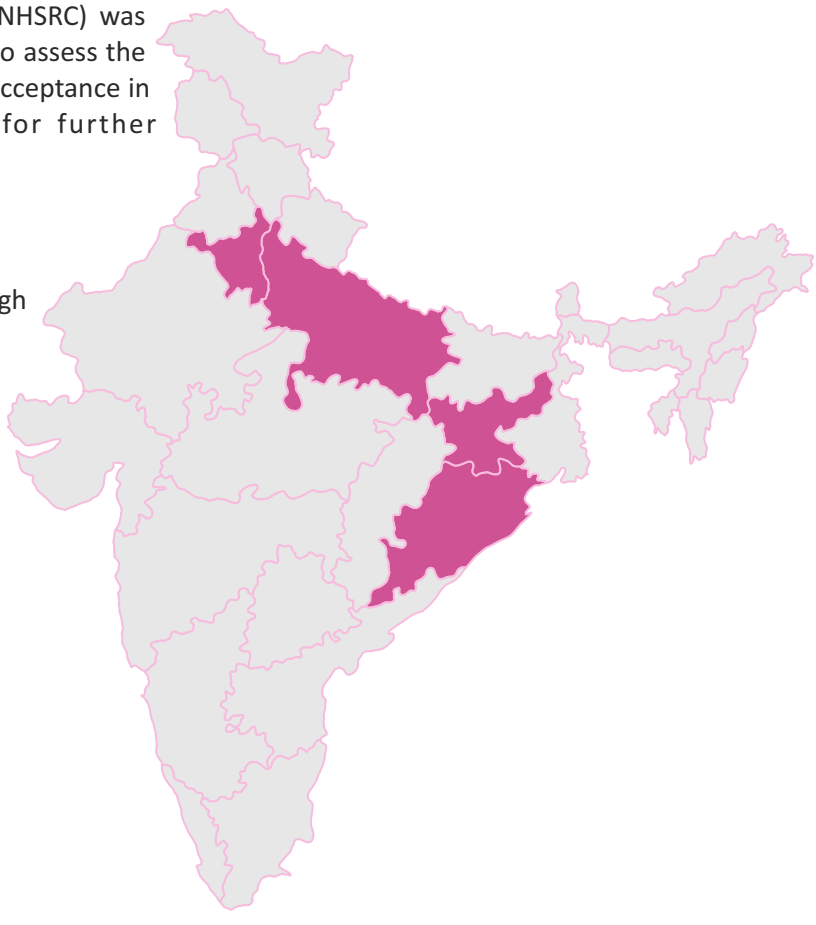
The evidence from such formative assessments would support early identification of strengths, opportunities and/or barriers impeding the envisaged rollout of services and thereby, early-course corrections to achieve the intended scale of rollout and service provisioning.

- Given the ongoing phase of implementation, such an assessment was effective in highlighting the areas that would need attention of implementers and policy makers to define the plan of action at states and level below.
- Evidence in context to the implementation of CPHC through AB-HWCs is significant to reinforce coordination and convergence between the health sector and other relevant departments at the level of HWCs, state and the centre.

EVALUATION OF KILKARI

Background

Kilkari delivers free, weekly, time-appropriate 72 audio messages about pregnancy, childbirth, and childcare directly to families' mobile phones from the second trimester of pregnancy until the child is one year old. It was launched in High Priority Districts (HPDs) of Madhya Pradesh, Jharkhand, Odisha, Rajasthan, Uttarakhand and Uttar Pradesh during the first phase of its implementation in a phase-wise manner. Kilkari Program was later expanded to 17 States/UTs in 2021. The National Health Systems Resource Centre (NHSRC) was mandated to undertake a third-party evaluation to assess the quality of services and understand its reach and acceptance in the community and provide suggestions for further improvement and strengthening.



Objectives

- To assess the quality of services provided through Kilkari during 2019-2021.
- To understand its reach and acceptance in the community, and provide suggestions for improvement

Methods

Study type

Mixed-method cross-sectional evaluation

Study setting

Haryana, Uttar Pradesh, Jharkhand, and Odisha

Sampling

Multi-stage cluster sampling technique was used. The selection of states was done in consultation with the MMP cell and finalized based on their performance in the years preceding to the time of survey. The criteria for selection were two good-performing (Uttar Pradesh and Odisha) and two low-performing states (Haryana and Jharkhand) to understand the enablers and barriers in the program. From each selected state, two districts were chosen who were the first and last in implementing the program. The target respondents were the district and the state health officials, and the users (pregnant women and mothers of infants) of Kilkari. A sample size of 210 users was estimated for each district (1680 in total).

Data collection

The study was conducted between June and August, 2022. The health officials and the beneficiaries were interviewed using semi-structured interview guides. 1874 beneficiaries (Pregnant women and mothers) and across the selected states interviewed.

Results

Utilization by beneficiaries

Among the interviewed beneficiaries, the mean age was 26 years old and a majority of them were economically dependent on their spouses.

Awareness

77.75% of respondents interviewed were unaware of Kilkari, especially the beneficiaries from Uttar Pradesh (90.31%). Among those aware of Kilkari, 91.1%-100% reported having received Kilkari messages. The respondents reported inability to comprehend messages, calls during work-hours, language barriers and issues in using or accessing their phones are the common reasons for not responding to Kilkari calls.

Messages

77.3% of the respondents discussed the messages with their families. Almost all the respondents found the content of Kilkari to be informative, the tone of delivery as pleasant, and the messages convincing and useful in their daily routines. Around 68.1% of the beneficiaries at the national level responded that they received information about financial schemes by the government through Kilkari.

Practice

The beneficiaries who attended the Kilkari messages reported that they made behavioural changes as a result of Kilkari. Almost all recipients had followed Kilkari's advice on maternal health indicators, particularly the administration of two Tetanus Toxoid (TT) vaccine doses and Iron Folic Acid (IFA) supplements. During their pregnancy, all of the responders underwent ante-natal check-ups. However, only 9.2% of all recipients received four PNC visits.

State/district officials' perspectives

Interaction with various stakeholders shed light on the functioning and challenges faced during the implementation of the program. Some of them felt that Kilkari greatly aided in the dissemination of health-related information in remote areas. They felt that if the messages are effectively imbibed, they would aid in closing the information gap left by the ASHAs and help in improving MCH indicators.

Analysis of reports submitted by the agency

UP had the most subscriptions during the last three years, that increased from 23.09% to 45.56% between FY 2019-20 and 2021-22. Jharkhand had the lowest subscriptions during the last three fiscal years (3.25% - 3.33 %). Odisha had the largest listenership with 75-90% of the targeted population.

Field observations

There was insufficient program monitoring at the state and district levels. Monthly or annual reports were not submitted by the districts to their respective states. Additionally, implementing agency for Kilkari did not have any officials in place at districts to monitor the program-related activities.

Policy implications

GoI has implemented m-health interventions to complement and strengthen existing maternal and child health programmes. While such interventions are on ground for a given time, it is important to assess and understand the quality perspectives of them. Timely assessment of these programmes would not only guide policy makers, implementers and programme officers to understand its reach and acceptance in the community but would also provide a base to understand the beneficiary perspective and accordingly strengthen the interventions.

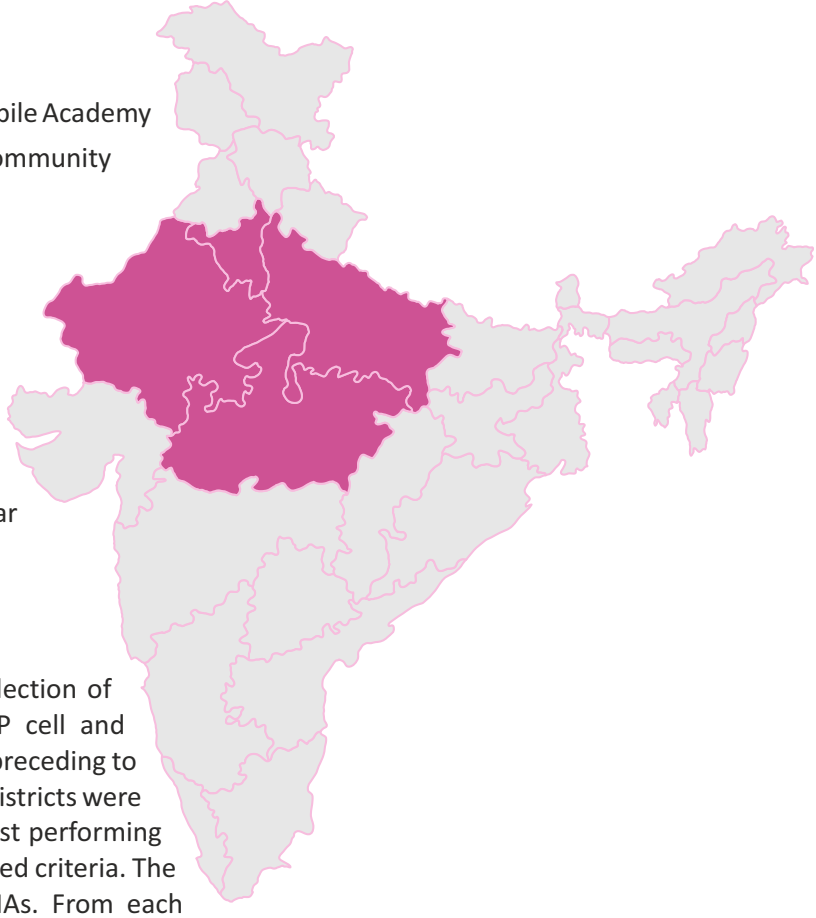
EVALUATION OF MOBILE ACADEMY

Background

Mobile Academy is a free audio training course designed to expand and refresh the knowledge base of Accredited Social Health Activists (ASHAs) and improve their communication skills. Mobile Academy is presently in operation in 16 states. National Health Systems Resource Centre (NHSRC) was mandated to undertake a third-party evaluation to assess the quality of services and provide suggestions for improvement as necessary.

Objectives

- To assess the quality of services provided by Mobile Academy
- To understand its reach and acceptance in the community



Methods

Study type

Mixed method cross-sectional evaluation

Study setting

Haryana, Madhya Pradesh, Rajasthan and Uttar Pradesh

Sampling

A multi-stage cluster sampling was used. The selection of states was done in consultation with the MMP cell and finalized based on their performance in the years preceding to the time of survey. From each selected state, two districts were chosen who were categorized as the best and least performing district in Mobile Academy ascertained using defined criteria. The target respondents for the study were the ASHAs. From each district, the selection of ASHAs were done purposively from the PHCs or HWC-PHCs with high catchment population. Additionally, state and district health officials were selected purposively to understand the technical and administrative aspects of the Mobile.

Data collection

The study was conducted between June and August, 2022. Quantitative data from reports/data submitted by the implementing agency to MoHFW during the period of 2019-2021 were retrieved from the MMP cell for analysis. Qualitative data was collected in form of in-depth interviews from the health officials, administered using semi-structured interview guides. 41 Focus-group discussions participated by 372 ASHAs were conducted across the states.

Results

State/district official perspectives

While the officials regarded Mobile Academy useful in terms of its content in enhancing ASHAs' knowledge of the routine services, concerns were raised for having no activity, content update or training in the last two years since its implementation. The recently enrolled ASHAs were unable to access the course even after registration in the portal. The provision of mobile number edit was unavailable in the RCH/MCTS/PCTS portal, which was reported a challenge across all states.

Perspectives of ASHAs

Most of the ASHAs demonstrated interest and acceptance of the Mobile Academy course. Those who attended the course were able to recall the chapters, quizzes, and processes; and would revisit the topics when required. The 'affect' component of Mobile Academy training course was pleasant and easily comprehended by everyone. The mechanism of 'e-certificate' boosts the confidence level of the ASHAs who undertook the course. The ASHAs suggested to update topics to keep up with the recently launched initiatives which are highly demanded by the community.

Analysis of reports submitted by the agency

The data on the program performance was maintained by the implementing agency, who then reported to the ministry through an IT platform linked to a Management Information System. Out of the four states, the percentage of ASHAs who completed the Mobile Academy training was highest in Haryana (93.66%) during the FY 2019-20; Rajasthan (35.17%) for the FY 2020-21; and Haryana (82.84%) for the FY 2021-22.

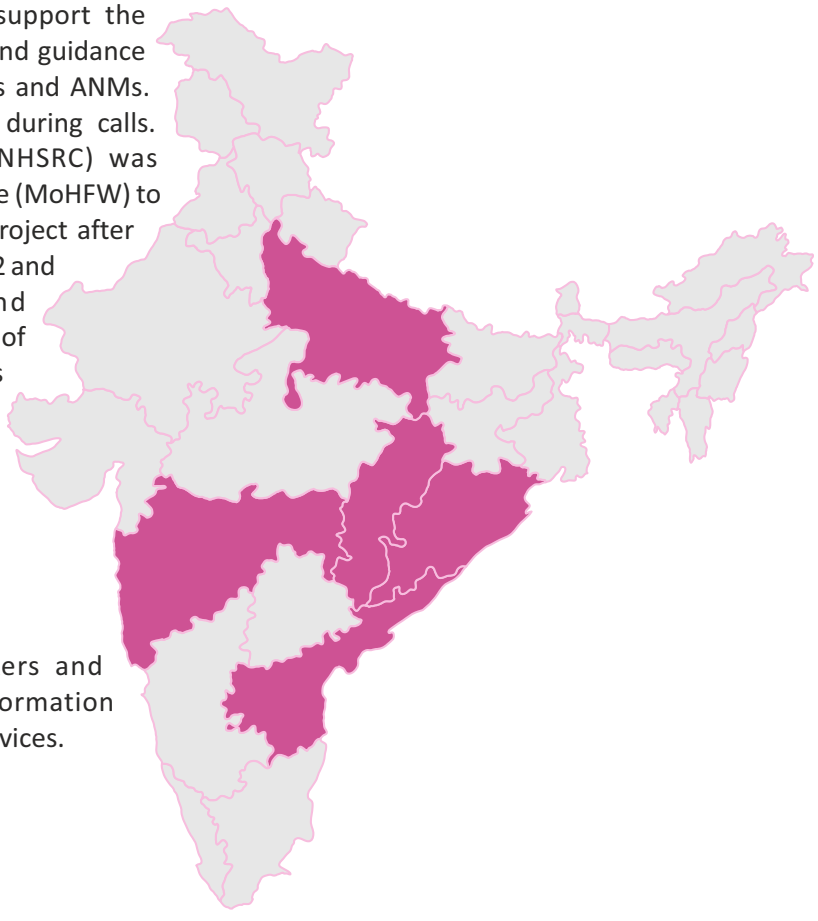
Policy implications

- Since ASHAs play an important role in community outreach, mobilisation and health promotion activities, assessment of the existing capacity building platforms is crucial for strengthening of such platforms as well as for wide-spread adaptation.
- GoI has implemented m-health interventions to complement and strengthen the capacities of Community health worker (ASHA) through mobile academy. While such interventions are on ground for a given time, it is important to assess and understand the quality perspectives of them. Timely assessment of these programmes would not only guide policy makers, implementers and programme officers to understand its reach and acceptance amongst ASHAs, but would also provide a base to understand their perspective and accordingly revise and strengthen the training content.

EVALUATION OF MOTHER AND CHILD FACILITATION CENTER (MCTFC) IN INDIA

Background

The Mother and Child Tracking System (MCTS) was introduced in 2009 to register pregnant women, parents of children up to nine months, ASHAs, and ANMs, with the aim of expanding coverage of health services and tracking their provision. The MCTS evolved into the Reproductive and Child Health (RCH) Portal, capturing information on maternal health, child health, family planning, and immunization. In 2014, the Mother and Child Tracking Facilitation Centre (MCTFC) was established as a call center to support the MCTS/RCH Portal, providing health information and guidance to beneficiaries and frontline workers i.e., ASHAs and ANMs. The MCTFC also collects feedback on services during calls. National Health Systems Resource Centre (NHSRC) was mandated by Ministry of Health and Family Welfare (MoHFW) to conduct a third-party evaluation of the MCTFC project after the end of its five-year project period in March 2022 and to provide feedback for its extension and strengthening. The evaluation assessed the quality of calls made by MCTFC, awareness of health workers and beneficiaries on key health messages, information imparted, and awareness of available health services.



Objectives

- To assess the quality of calls made by MCTFC
- To assess the awareness of health workers and beneficiaries on key health messages, information imparted, and awareness of available health services.

Methods

Study type

A cross-sectional evaluation study was conducted using qualitative research methods.

Study setting

Andhra Pradesh, Chhattisgarh, Maharashtra, Odisha and Uttar Pradesh

Sampling

Five out of 21 states covered by MCTFC calls were purposively selected to represent North, East, South, West, and the central regions of the country. From each state, two districts namely Andhra Pradesh (Vishakhapatnam and West Godavari), Chhattisgarh (Koriya and Raipur), Maharashtra (Nagpur and Pune), Odisha (Balangir and Khorda), and Uttar

Pradesh (Meerut and Saharanpur) were selected based on the highest number of calls being made to ASHAs preceding six months of the study. Purposive sampling was employed to select beneficiaries and health workers who had received MCTFC calls within the past 6 months. A sample of 350 respondents were estimated (70 per state). The target respondents included: State and district level nodal officials, ASHA, ANMs, pregnant women and parents of children up-to 9 months. Additionally, 40 call recordings, 10 from each category of the target group were selected based on a random sampling method.

Data collection

The study was conducted between August and September 2022. In each select district, in-depth interviews were conducted with - 6 ASHAs, 6 ANMs, 10 Pregnant women, and 10 parents of children up to 9 months using semi-structured interview guides. A total of 289 interviews were conducted with respondents due to the limited number of calls made to ANMs and ASHAs in some states and districts. 30 in-depth Interviews (IDIs) of key programme stakeholders were conducted - two State Nodal Officers per state and two District Nodal Officers per district. A review of programme documents and reports was conducted and discussions with the MCTFC team were done to understand the programme operations and reporting systems. Qualitative analysis tools were used for the analysis of information and data collected.

Results

The data from interviews indicate that a majority of respondents (over 90%) responded positively to key questions regarding call quality and adherence to essential protocols. Nearly all respondents (99%) confirmed that the caller followed the protocol by confirming the name of the person they wanted to speak to. Additionally, a majority found the language, tone, and pace of the calls appropriate and satisfactory (Language – 99%, Tone – 98%, Pace – 96%). Between 97% and 99% of respondents affirmed that the caller paraphrased questions and provided sufficient time to understand the information. Moreover, 100% of respondents stated that each question was explained clearly, while 99% reported that information was explained clearly and patiently. However, the data also revealed that 39% of calls lasted less than 15 minutes, which indicates a rushed approach and potential compromise in call quality.

When asked about the key questions and information discussed during the call, respondents predominantly mentioned healthcare and diet plans for mothers and children, vaccination schedules, ANC/PNC, benefits/schemes for pregnant women and delivery, ambulance services (102 & 108), and family planning. Notably, more than 50% of pregnant women were able to recall the key topics discussed during the call.

In contrast to the interview findings, an assessment of call recordings presented a slightly different picture. Thirty percent of the assessed calls lasted less than 10 minutes, and in approximately 48% of calls, the callers did not explain each question clearly and patiently. Thirty percent of calls were perceived to have an uncomfortable tone, while 25% were deemed fast-paced. Furthermore, 25% of calls were assessed negatively in terms of explaining questions again and ensuring understanding in case of difficulties.

In-depth interviews with program managers at the state and district level revealed a lack of coordination between states and the MCTFC program. Many officials were not fully aware of MCTFC activities since the calls were made directly to beneficiaries and reports from the MCTFC were not regularly shared with the states. As a result, follow-up actions based on MCTFC feedback have been limited in states. Furthermore, states expressed that the number of calls made in each state and district was insufficient to make a significant impact or generalize the feedback. They also felt that most MCTFC calls were unreasonably long in duration.

Policy implications

GoI has implemented MCTFC call centres to complement and strengthen the RCH interventions and providing support for awareness generation activities. While such interventions are on ground for a given time, it is important to assess and understand their reach and penetration in the community, also with their quality perspectives. Timely assessment of these programmes would not only guide policy makers, implementers and programme officers to understand its reach and acceptance within community but would also provide a base to understand beneficiary's and health workers' perspective to strengthen the intervention.

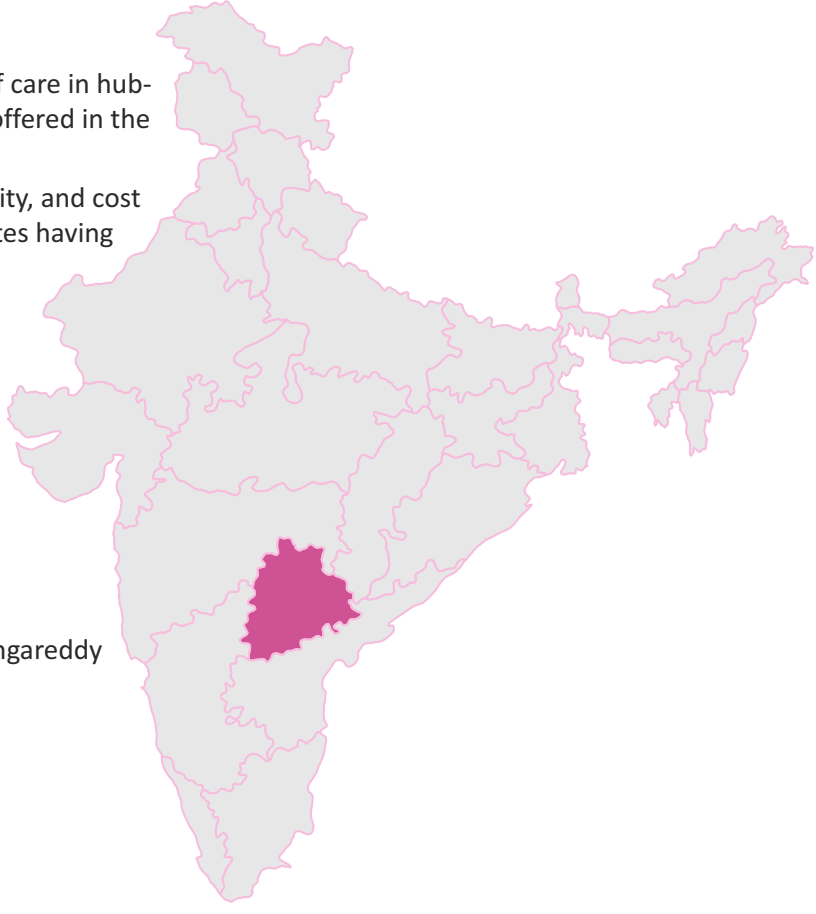
T-DIAGNOSTIC MODEL: IMPROVING ACCESS TO QUALITY DIAGNOSTIC SERVICES IN TELANGANA

Background

Nearly 65% of India's population lives in rural areas. Free diagnostics Service Initiative aims to reduce Out of pocket expenditure on diagnostics in India. Telangana was the first state in the country to roll out an expanded menu of routine and advanced tests up to the primary healthcare level through an in-house, hub and spoke model (T-diagnostic).

Objectives

- To evaluate the impact on access and quality of care in hub-and-spoke model of diagnostic services being offered in the Telangana State
- To compare the operational effectiveness, quality, and cost of providing laboratory services with other States having non-hub and spoke or mixed model.



Methods

Study type

A prospective study was conducted across the 3 districts in Telangana, India from 2018-2019.

Study setting

40 spoke public health facilities in Hyderabad, Sangareddy and Rangareddy - Telangana.

Sampling

Three states having different models of operation.

Data collection

Exploratory field visits, review of records, focus group discussions/key informant interviews, and literature review was used as tools to collect data and evaluate the overall impact on access and quality of care and cost of providing laboratory services.

Results

A total of 4.8 lakh patients from 223 spoke health facilities have been tested and 27 lakh tests were conducted at the hub laboratory during the study period. The single hub laboratory conducts a daily average of 5000 routine and advanced tests. A comprehensive analysis of the operational model of the state revealed increased access to laboratory services and improved quality of laboratory tests. The equipment infrastructure, human resources, supply chain of consumables, development of referral linkages, sample transportation and enhancing community participation are essential for strengthening the rural healthcare system in the country.

Policy implications

The study is first of its kind for urban sample collection and transport in Hub & Spoke model. The model can be used for scaling up diagnostics in urban setup under NUHM. The study gives an understanding of operational effectiveness, quality and cost implications for hub and spoke model of diagnostics, which would inform strategy level decisions both at state level and below.

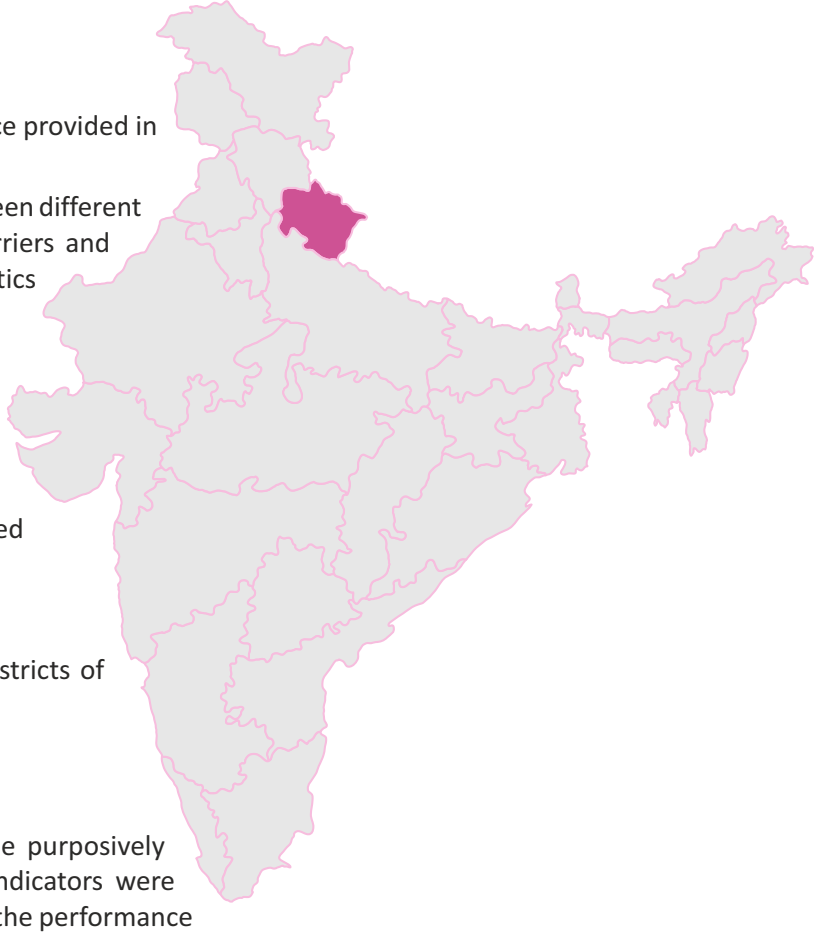
QUALITY OF FREE LABORATORY SERVICE IN UTTARAKHAND IN PPP MODEL

Background

Free Diagnostic Service Initiative (FDS) has been rolled out in the state of Uttarakhand in year 2016 through in-house mode under 'Mukhyamantri Swasthya Bima Yojana. The study aimed to evaluate and address gaps in the quality of free laboratory service provided in the State of Uttarakhand. The study also aims to compare the effective coverage of care between different levels of service delivery and identify the barriers and enablers of the implementation of free diagnostics service in the State.

Objectives

- To evaluate the quality of free laboratory service provided in the State of Uttarakhand
- To compare the effective coverage of care between different levels of service delivery and identify the barriers and enablers of the implementation of free diagnostics service in the State.



Methods

Study type

A cross-sectional mixed method study was conducted

Study setting

Pauri Gharwal, Almora, Dehradun and Nainital districts of Uttarakhand.

Sampling

The selection of districts and facilities were done purposively based on consultation with the state officials. Indicators were developed from the variables of interest to assess the performance of free diagnostic services. Four DHs, CHCs and PHCs were evaluated based on these parameters.

Data collection

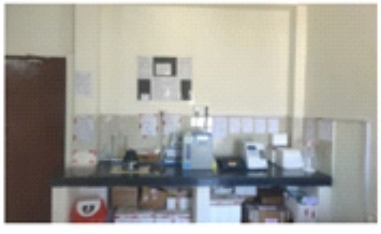
The study was conducted in December, 2022. Exploratory field visits, review of records, focus group discussions/key informant interviews, and literature review was used as tools to collect data and evaluate the overall impact on access and quality of care and cost of providing laboratory services. Additionally, qualitative data was obtained from the beneficiaries of the program to complement the quantitative findings.

Results

The diagnostic service delivery model implemented in the state was found to be in a hybrid mode (both in-house & outsourced). The service delivery is in the form of **'Hub & Spoke'** model. The service provider has set up one **hub lab** at each district Headquarters for the collection of samples from the spokes and undertaking analysis. A total of 262 tests are undertaken by the service provider across the state at all facilities DH/SDH, CHC & PHC level. Pathology laboratory services were being provided at discounted CGHS rates (45% OF CGHS rates) in the state.

The service provider has two mother labs one each at Dehradun and Haldwani respectively for undertaking high-end tests which were not done at the Hub labs. Samples are transported to the **Hub & Mother** labs by road through the roadways & couriers. The service provider has developed a LMIS mobile application for sample registration, identification using Bar coding and report sharing with the patients through a robust IT platform. However, critical test reports were not flagged either to the patient or the treating doctor. The reported average TAT for clinical pathology tests, biochemistry, sero-microbiology, and urine analysis at the mother lab was 4 hours, and for stool analysis was up to 2 days. TAT for advanced tests sent to the mother lab was 2 hours for DH, SDH and 10 hours for other facilities. The TAT was not calculated from sample collection time from the facility.

The feedback received from the patients interviewed at the other health facilities visited had mixed responses due to the long Turn Around Time (TAT). The in-house laboratory diagnostic services were limited at both CHC & DH levels and were available only during the OPD hours.



Pathology lab at CHC Khirsu

Hub Lab Shrinagar

Pathology lab at DH Pauri

In-House Lab Sample collection area DH Dehradun

PPP Sample collection area DH Dehradun

Mother Lab Dehradun

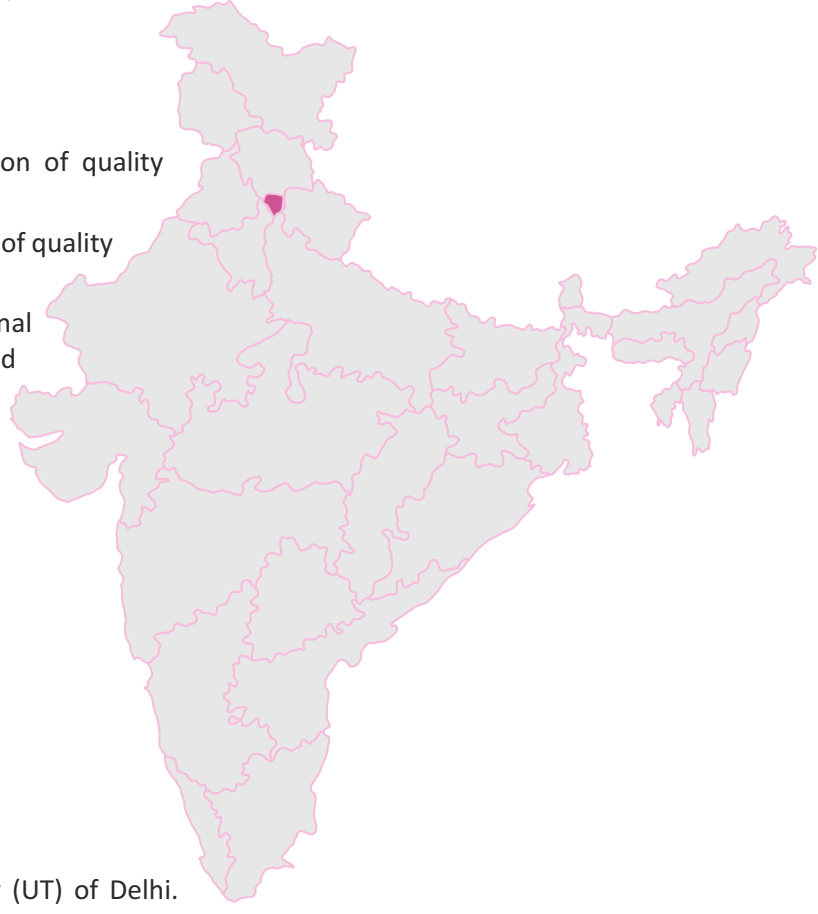
Policy implications

- The assessment underscored the need to strengthen the in-house laboratory services and to ensure that low-cost high-volume services are provided in-house.
- Internal and External Quality Assurance needs strengthening at the in-house labs for ensuring quality and parity of the lab results with the service provider results.

ASSESSING THE QUALITY OF HAEMODIALYSIS SERVICES AT DISTRICT HOSPITALS IN DELHI

Background

The implementation of the Pradhan Mantri National Dialysis Program in India has played a significant role in addressing the growing burden of Chronic Kidney Disease (CKD) and End Stage Renal Disease (ESRD) by providing accessible dialysis care to patients in their communities and alleviating financial burdens. However, at present, there are no guidelines for dialysis units on quality assurance at the facility level in the public domain. The study aimed to evaluate and address gaps in the quality of service provided to haemodialysis patients at the district hospitals of Delhi.



Objectives

- To identify the barriers to the implementation of quality hemodialysis services at district hospitals.
- To identify the enablers in the implementation of quality hemodialysis services at district hospitals.
- To compare the observed care against national (Clinical Establishments Act 2010) and international (CDC) standards.

Methods

Study type

Cross-sectional prospective study.

Study setting

Delhi

Sampling

The study was conducted in the Union Territory (UT) of Delhi. Seven functional dialysis units at district hospitals implementing the Pradhan Mantri National Dialysis Program (PMNDP) were selected purposively. All patients who were registered for maintenance dialysis at the district hospitals and undergoing haemodialysis for not less than six months were included in the study. The patients registered for peritoneal dialysis in the district hospital, patients in a critical state, and who didn't give their consent for participation were excluded from the study. A sample of 100 patients was estimated for the assessment.

Data collection

The data collection was done between January and May, 2023. An evaluation checklist for the facility was used to assess the quality of services provided. Data collection from the patients was completed using a validated tool Patient Satisfaction Questionnaire- 18.

Results

A total of 102 patients participated in the study of which 96.1% of patients availed free dialysis sessions at dialysis units under PMNDP. Patients had a mean age of 46.61 ± 14.44 years. 44.1 % of patients had a history of hypertension. A total of 64 functional haemodialysis stations are present under PMNDP. All dialysis units were well-equipped with equipment, personnel, and emergency drugs, and all district hospitals had the availability of laboratory testing and dispensaries. All dialysis units followed infection control protocols and dialysis adequacy as per Clinical Establishment Act, 2010 and CDC Standards. Patients were highly satisfied with Communication (90.69%) and Interpersonal Manner (90.20%) acting as enablers to its implementation. The lowest satisfaction among patients was found in the financial aspect (46.57%) which was associated with out-of-pocket expenditure on medicines.

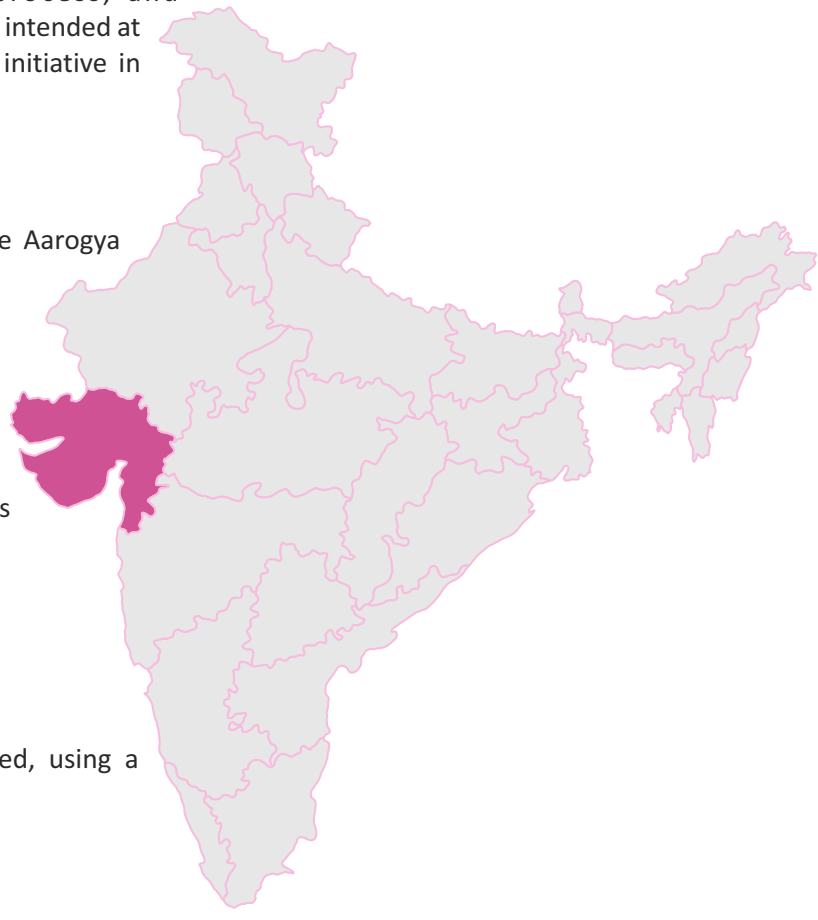
Policy implications

- The Pradhan Mantri National Dialysis Programme plays a key role in refining the extensive objective of ensuring fair, easily accessible, and affordable dialysis services. By scaling up the dialysis services, the program has addressed the critical need for renal care in India.
- The study is the first of its kind evaluating the characteristics of dialysis facilities and patient satisfaction among hemodialysis patients regarding service delivery. The study would also provide a clear picture on enablers and disablers for PMNDP implementation. More studies would be required from other states which would include other modes of implementation, and multiple service partners, to get a clear perspective of dialysis services in the country.

EVALUATION OF AAROGYA SAMANVAY AT AYUSHMAN BHARAT HEALTH AND WELLNESS CENTRES OF GUJARAT: A MIXED METHODS STUDY

Background

Aarogya Samanvay is an initiative by Gujarat aimed to provide integrated Allopathic, Ayurvedic and Yoga services spanning RMNCH+A, communicable and non-communicable diseases, oral care, geriatric and palliative care at Sub Health Centres-Health Wellness Centres. CHOs are trained for 21 days to provide Ayurvedic services, yoga, and home-based services at SHC-HWCs. The current study aimed at a comprehensive evaluation of the Aarogya Samanvay initiative including the curriculum, the training process, and implementation at SHC–HWCs. The study was also intended at assessing the replicability of Aarogya Samanvay initiative in other states/ UTs across the country.



Objectives

- To review the relevance and adequacy of the Aarogya Samanvay curriculum.
- To evaluate the perceptions of CHOs regarding the Aarogya Samanvay training and its implementation at Sub-Health Center-Health and Wellness Centers (SHC-HWCs).
- To understand the enablers and barriers to implementing Aarogya Samanvay services through SHC-HWCs.

Methods

Study type

A cross-sectional evaluation study was conducted, using a mixed-method approach.

Study setting

AB-HWCs in Gujarat

Sampling

Based on purposive sampling, the following districts Amreli, Aravalli, Dang, Khera, Mehsana, Sabrakanta, and Valsad were included. The respondents included Community Health Officers (CHOs), the implementation team (consisting of PHC medical officers, Multi-Purpose Workers (MPW)/ANMs), the program management team at district and state levels, and community members. A total of 105 Community Health Officers (CHOs) who had undergone training on Aarogya Samanvay were selected for the study using a simple random sampling technique.

Data collection

The study was conducted between January and February, 2022. The study had three components. This includes a desk

review of the curriculum of Aarogya Samanvay by a task force for its relevance and adequacy; interview of Community Health Officers (CHOs) using a structured questionnaire to elicit their perspectives about training on Aarogya Samanvay and its implementation at AB-HWCs; and qualitative data collection using Focused Group Discussions (FGDs) and In-depth interviews (IDIs) of the CHOs, MPWs, ASHAs, medical officers, district and state nodal officers, and community to understand implementation issues, challenges, and possible solutions.

Results

Out of the 19 task force members who were invited to review, nine gave their feedback. The task force members viewed that the curriculum was relevant to the delivery of Comprehensive Primary Health Care to be delivered by CHOs at SHC-HWCs and it was appropriate in terms of both content and skill level of CHOs. However, the task force opined that the training duration be modified based on the qualification of CHOs. The interview of CHOs revealed that video simulation and hands-on- training were perceived to be the best methods of transaction followed by didactic lectures and group work. Most of the CHOs (90%) felt the quality of the session was very good. Almost all CHOs (99%) agreed that the training is in alignment with their current role at SHC-HWC. Similarly, almost all CHO (97%) implemented Ayurvedic procedures i.e. yoga, snehan, swedan, diet counselling, dincharya etc. CHOs felt that home-based remedies were relevant and possible to be practiced by people at home. CHOs also felt that the implementation of Aarogya Samanvay services increased footfall at SHC-HWCs.

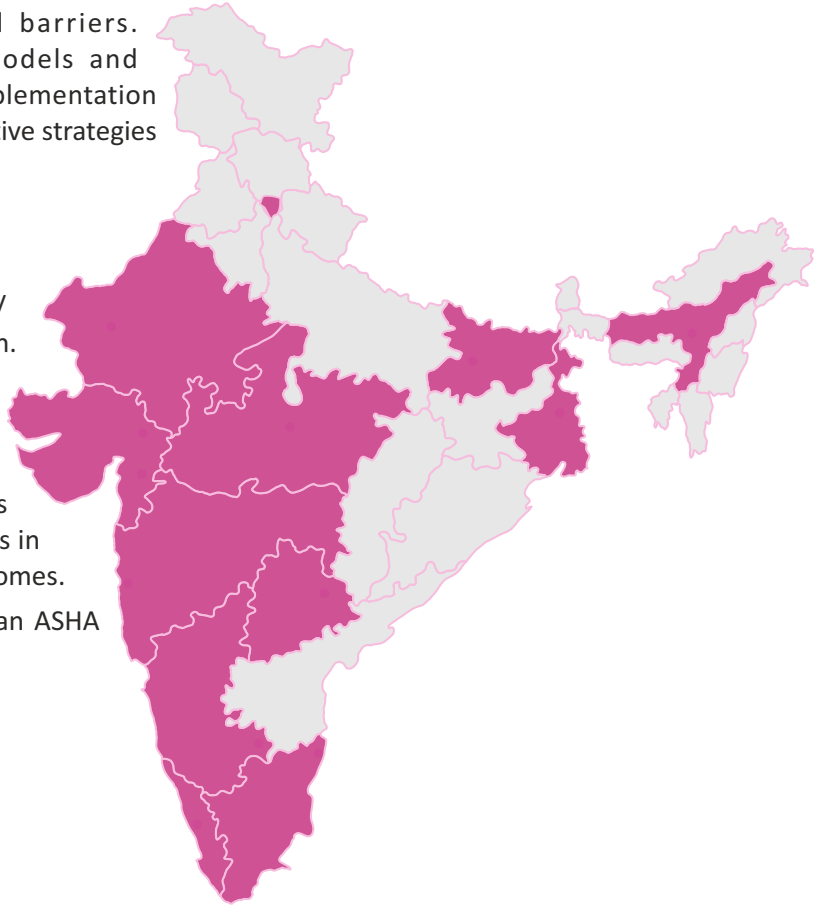
Policy implications

- While state specific interventions provide a platform for other states to learn and replicate the scalable models, there is a felt need to also assess these practices and understand the strengths as well as challenges in these interventions.
- The study not only provides the correct picture on adequacy and relevance of this interventions, but also describe the CHO's perceptions on such an initiative. Such assessments would provide field level insights to implementers before scaling it up on a larger platform, thus supporting midcourse corrections or revisions, if needed.

ASSESSMENT OF COMMUNITY HEALTH WORKER/ASHA PROGRAM IN URBAN AND PERI-URBAN AREAS

Background

The rising burden of non-communicable diseases and the COVID-19 pandemic has highlighted the importance of prevention and coordination between community and facility-based activities. The urban health system faces unique challenges such as migrant populations, poor living conditions of slum dwellers, and the diverse contextual characteristics of cities, etc. Community Health Worker (CHW) programmes play a vital role in bridging the healthcare gap in urban areas of India. However, the implementation of these programmes faces several challenges and barriers. Understanding the different programme models and identifying the key enablers to overcome implementation challenges can facilitate the development of effective strategies for improving urban healthcare delivery.



Objectives

- To identify and assess various models of CHWs/ ASHAs in urban areas and their implementation.
- To understand the challenges / barriers and enablers of Urban CHW program implementation.
- To analyze the effectiveness of different models in terms of performance of CHWs/urban ASHAs in the context of service delivery outputs and outcomes.
- Inform policy for replication of identified Urban ASHA models across wider settings in the country.

Methods

Study type

A cross-sectional qualitative was conducted.

Study setting

The study was conducted in 13 Indian cities, which include 7 megacities (Ahmedabad, Bengaluru, Chennai, Delhi, Hyderabad, Kolkata and Mumbai) and 6 million plus cities (Bhopal, Guwahati, Jaipur, Kochi, Patna and Surat).

Sampling

The selection of cities/states were done purposively. A total of 20 Urban Primary Health Centres (UPHCs) were included using simple random sampling, which includes two from each of the seven million-plus cities, and one from each of the six megacities. The respondents included the healthcare providers, programme officials at ULB/ district/ state levels, Urban ASHAs/ Link Workers/CHWs and urban community members.

Data collection

The study was conducted between March and August 2022. A total of 176 key-informant interviews and 44 Focus group discussions (FGDs) using apriori thematic interview and FGD guides respectively, were conducted with the health system and community respondents. In addition to the apriori themes, new themes that emerged during interviews and FGDs were also probed using appropriate open-ended questions. The health system respondents included ASHAs and other frontline health workers, medical officers, and programme management functionaries at district and state levels. Community members were included from the Mahila Arogya Samitis and the general community. The data was analyzed using the thematic analysis technique.

Results

Based on the mechanisms involved in the implementation of urban CHW programmes in these 13 cities, the three major models of CHW programmes were identified -Urban ASHA program administered by the urban local body; Urban ASHA program administered by the state Department of Health and family welfare and non-ASHA-based urban CHW program. Each of these models revealed key challenges/barriers and enablers.

The enablers were mapped to each of the identified barriers to overcome them in both million-plus and megacities. Some of the major enablers were: the setting up of a city-level Program Management Unit for focused implementation of urban ASHA programme in that city; a decentralized mechanism with a polling booth as a unit for selection of urban ASHAs and saturating the selection of ASHAs in across the polling booths; city level training centre to enable timely and need-based capacity building of ASHAs with on-job periodic refresher training sessions; and adoption of information technology that enable tracking of both outputs and incentive for timely disbursement of ASHA incentives.

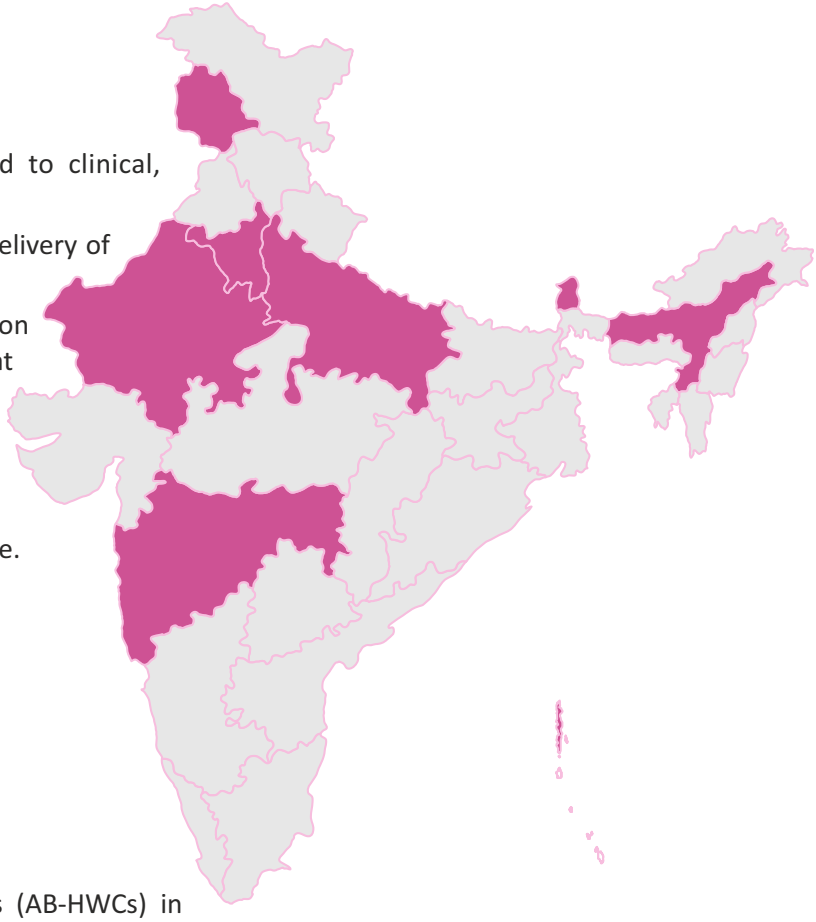
Policy implications

- Urban ASHAs being different in context from rural ASHAs, have always required different strategies and mechanism for overall support and interventions. The heterogenous aspect of urban areas, have made the programme needs very different from that of rural areas. While rural ASHA programme is already established and progressing in desired way, the urban ASHA programme is still not that mature and established. Given this difference and need of the intervention, an assessment at this level would be very critical to provide inputs from the field, that would seed into the policy and programme framework.
- The study not only provides a holistic picture of ASHAs in urban areas, but also generates evidence to analyse their effectiveness and key enablers and barriers in programme implementation.
- ASHA programme replication across states could be feasible by the identification of various good practices from these models.

ASSESSMENT OF COMMUNITY HEALTH OFFICER CADRE AT AYUSHMAN BHARAT-HEALTH & WELLNESS CENTRES

Background

In India, the establishment of HWCs with the Ayushman Bharat scheme demanded additional human resources to be placed at the SHC-HWC to provide ground-level services. To address this challenge, a new cadre of Community Health Officers (CHO)/ Mid-level health providers (MLHP) was introduced to be placed at the SHC-HWCs in addition to the primary healthcare team. The impact on health outcomes of the introduction of this new cadre is yet to be explored fully. There were also numerous factors that tend to influence the performance of CHOs.



Objectives

- To evaluate the knowledge of CHOs related to clinical, managerial and public health functions.
- To evaluate the performance of CHOs in the delivery of comprehensive primary healthcare at AB-HWCs
- To explore the factors influencing the motivation and challenges affecting functioning of CHOs at AB-HWCs.
- To understand the perspectives of stakeholders (Medical Officers, ANMs, CMO, DPM, District/ State HWC officials, SPM, community, PRI members) about the CHO cadre.

Methods

Study type

Cross-sectional mixed method study

Study setting

Ayushman Bharat- Health and Wellness Centres (AB-HWCs) in Andaman and Nicobar Island, Assam, Haryana, Jammu and Kashmir, Maharashtra, Rajasthan, Sikkim, and Uttar Pradesh.

Sampling

AB-HWCs operational for at least six months at the time of study were selected from High Focus States, Non-High Focus States, Union Territories, and North-Eastern States. From each group, one State with maximum number and one State with minimum number of operational SHC-HWCs. The respondents included healthcare providers, district and state level programme officers and the community members.

Data collection

The study was conducted between February and October,2022. Quantitative data was collected through Cross-sectional

survey among 251 CHOs. A structured questionnaire was used to evaluate the performance and factors influencing the functioning of CHOs in the delivery of a comprehensive range of services and the factors affecting their performance. Qualitative data was collected through in-depth interviews (IDI) with the CHOs, stakeholders of the program- State and District level nodal officers, MO at the linked PHC- HWC, frontline workers under the leadership of CHOs- ASHAs and MPWs. Focus group discussions were conducted with the community to understand the awareness and acceptance in the community towards CHOs and with the ASHA/MPW to understand the team dynamics at the Health & Wellness Centres.

Results

The study revealed that all the CHOs knew about the Ayushman Bharat scheme under which the existing SCs and PHCs were upgraded into HWCs. Most of them were well versed with neonatal and infant health care services, childhood & adolescent health care services, Family planning services, and serviced related to the management of Communicable and NCDs with limited knowledge about newer packages. In context to service delivery, all the CHOs (100%) were aware of the use of several IT applications like the HWC portal, ANMOL, CPHC NCD IT application etc. for recording service delivery. The CHOs had sound knowledge regarding their role in facilitating community-level actions for health promotion & prevention of diseases. They were also aware of their role as a leader of the primary healthcare team and clinical management of diseases as their prime role. Stakeholders of the program observed efficient healthcare service delivery nearer to the community and improvement in early detection and management of NCD cases, supply chain management, referral mechanisms, and diagnostic services.

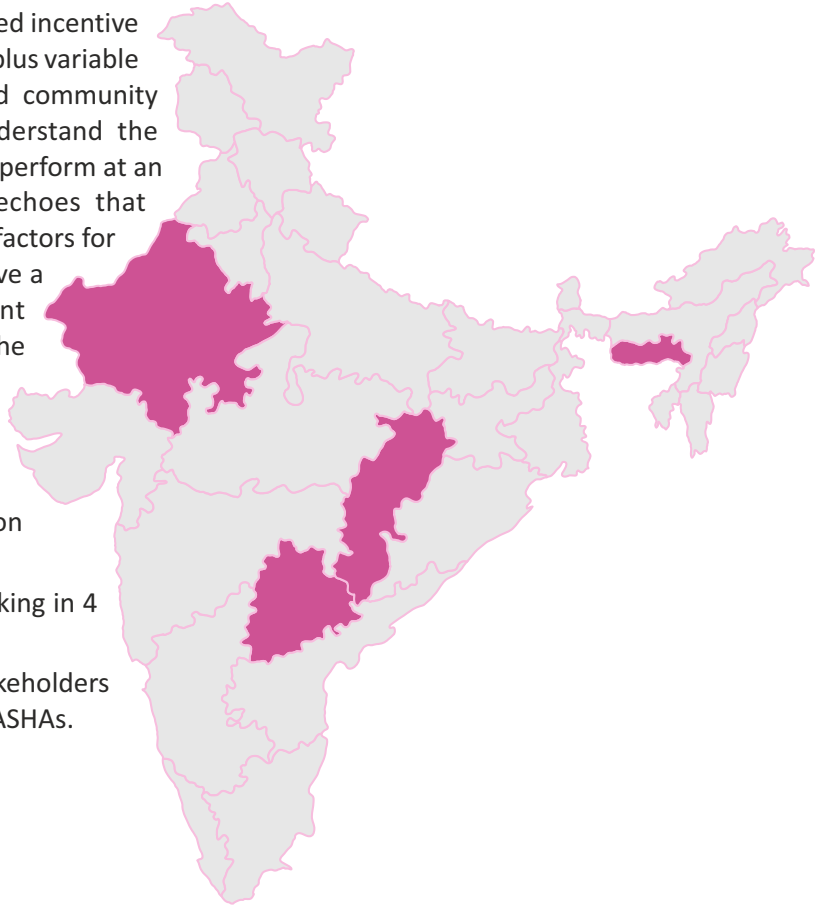
Policy implications

- CHOs being a new cadre of mid-level health provider and a key team member of AB-HWC team would need continuous understanding of their roles and also mechanisms to strengthen their capacities as a team leader of Primary health care team. Assessment of CHOs at AB-HWCs would not only give field level insights on their present role and functionality but would also develop an understanding of the perspectives of other AB-HWC team members at SHC and PHC level.
- The study also helps in determining the factors influencing the motivation of CHOs and also highlights key challenges being faced by them while administrating their duties as a team lead. These findings would help policy makers and implementers to further design the interventions and strengthen their role as mid-level health care providers.

MOTIVATION AND PERFORMANCE OF INDIA'S COMMUNITY HEALTH VOLUNTEERS – ASHA: A COMPARISON ACROSS DIFFERENT INCENTIVE SYSTEMS IN INDIA

Background

ASHA program is a major initiative of the National Health Mission (NHM) as part of 'communitization' of the health systems. To this date, ASHA (Accredited Social Health Activist) program is one of the largest community health workers (CHW) programs in the world. ASHAs perform threefold functions of facilitator, service provider, and activist. Currently, ASHAs are being compensated in both monetary and non-monetary ways for their time. Different states have different incentive mechanisms ranging from fixed incentive to performance-based incentive to performance-based incentive plus fixed top-up to performance-based incentive plus variable top-up. With this backdrop of volunteerism and community accountability of ASHA, it is interesting to understand the motivating factors for ASHAs that sustain them to perform at an optimum level. Also, the available literature echoes that financial incentives are one of the key motivating factors for ASHAs but are not sufficient. It is important to have a national-level understanding of these different incentive systems and the way they interact with the motivation and performance of ASHAs.



Objectives

- To explore the factors influencing the motivation and performance of ASHAs.
- To analyze the motivation levels of ASHAs working in 4 different incentive systems.
- To understand the perspectives of various stakeholders regarding motivation and performance level of ASHAs.

Methods

Study type

Cross-sectional study using mixed-method approach

Study setting

Chhattisgarh, Meghalaya, Telangana and Rajasthan

Sampling

National Health System Resource Centre (NHSRC) gathered preliminary data through a state consultation, that showed four different incentive systems implemented across different states. These four incentive systems included: only performance-based incentive; performance-based incentive plus fixed top-up; performance-based incentive plus variable top up and fixed incentive. All the states were segregated on this categorization and one state was included in the study from each group. Rajasthan (performance-based incentive plus fixed top-up), Chhattisgarh (performance-

based incentive plus variable top-up), Telangana (fixed incentive), and Meghalaya (performance-based incentive) were included in the study. 30*30 sampling technique was applied for sampling at the state level. The respondents included: ASHAs, health system personnel on ASHA's incentive system ASHA Facilitators (AF), Block Community Mobilisers (BCM), District Community Mobiliser (DCM) & District Health Officer (DHO) and beneficiaries.

Data collection

The study was conducted between March and November, 2022. Data on ASHA's motivation was collected quantitatively from 1200 ASHAs from all 4 states. Perspectives of ASHAs and health system personnel on ASHA's incentive system were collected through in-depth interviews.

Results

The findings of the study revealed that financial incentive is one of the factors that influences the satisfaction and performance of ASHAs. A number of non-monetary factors also play a major role in influencing the performance motivation of ASHAs. These non-monetary factors could be both intrinsic (self-motivation, autonomy, altruism, social responsibility, and growth and development) or extrinsic (support, career progression, and work environment).

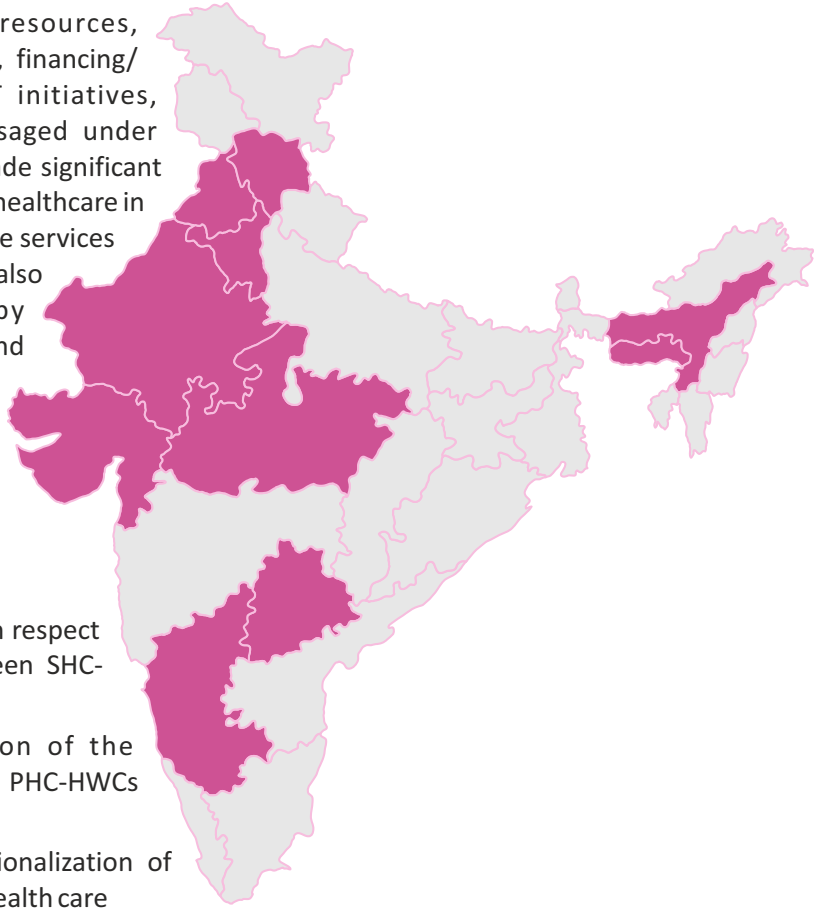
Policy implications

ASHA programme has been the cornerstone for NHM. ASHAs being volunteer by nature, are undertaking several activities which are linked to monetary and non-monetary incentives. Such study to understand different models of incentives provides a picture of factors that influence the motivation and performance of ASHAs, and also an analysis across different incentive-based models. Such evidence can support the health systems approach while linking incentives to newer roles being assigned to ASHAs under CPHC, or may also give a base for rethink on their incentive model.

ASSESSMENT OF AB-HWCS FOR COMPREHENSIVE PRIMARY HEALTH CARE: A NATIONAL LEVEL HEALTH SYSTEMS STUDY

Background

The Primary Health Care approach is fundamental for achieving India's shared global vision of Universal Health Coverage (UHC) and the health-related sustainable development goals (SDG). The government of India launched Ayushman Bharat- Health and Wellness Centres program (AB-HWC) in 2018. Under the AB-HWC program, each AB-HWC is envisioned to deliver Comprehensive Primary Health Care (CPHC) services for all segments of the society for all health problems closer to the community with time to care in less than 30 minutes. Infrastructure, expanded human resources, medicines, diagnostics, community participation, financing/ provider payment reforms, partnerships, IT initiatives, continuum of care, etc are key reforms envisaged under comprehensive primary health care. India has made significant progress in the delivery of comprehensive primary healthcare in terms of expanding the range of primary healthcare services beyond RMNCHA+ and communicable diseases to also include non-communicable disease care by operationalizing AB-HWCs. Further, to understand the difference between transformed and non-transformed AB-HWCs, an assessment study was undertaken to assess the functionality of AB-HWCs in ten states of the country.



Objectives

- To evaluate the difference in functionality, with respect to comprehensive primary healthcare, between SHC-HWC and non-HWC SHC
- To evaluate the status of implementation of the comprehensive primary health care services in PHC-HWCs and UPHC-HWCs
- To identify barriers and enablers for operationalization of expanded package of comprehensive primary health care

Methods

Study type

Cross-sectional study conducted using a mixed-method approach.

Study setting

Primary healthcare facilities (AB-HWCs, UPHC and non-HWC SHC) in Assam, Gujarat, Haryana, Himachal Pradesh, Madhya Pradesh, Meghalaya, Karnataka, Punjab, Rajasthan, Telangana.

Sampling

The required sample size was 150 in each group from which ten states were chosen. Aspirational/tribal and non-aspirational districts and further primary health care facilities such as SHC and PHCs were selected using simple random sampling. The respondents included were state and district nodal officers, healthcare providers at the facilities (MOs, CHOs, MPWs, ASHAs, beneficiaries, JAS members and VHSNC/MAS members).

Data collection

The assessment was conducted in association with the CPHC-Innovation and Learning Centers (CPHC-ILC) across ten states. SHC-HWCs were evaluated in comparison with the SHCs who have not yet become AB-HWCs. To measure the status of comprehensive primary healthcare, adapted Performance Linked Payment (PLP) Indicators were used that consisted of indicators related to RMNCH+A, communicable diseases, non-communicable diseases, and wellness. In-depth interviews were undertaken.

Results

Infrastructure

Overall health infrastructure, robust IT system, continuum of care use of e-Sanjeevani tele consultation, expanded packages of services, medicine, and diagnostics were found better in upgraded AB-HWCs as compared to other non-transformed Sub-Health Centres and primary health centers. Statistically significant differences were noted in transformed and non-transformed SHCs with respect to disabled-friendly amenities, dedicated space for patient examination with privacy, dedicated space for medicine dispensation, and dedicated space for diagnostic services. About half of the SHC-HWCs had dedicated space for wellness activities, including yoga.

Availability of medicines and diagnostics

The study revealed that the availability of medicine and diagnostics was good in transformed AB-HWCs as compared to non-transformed ones.

Service delivery

The utilization of primary healthcare services in terms of footfall in the previous three months at AB-HWCs was greater than non-HWC sub-centers. The range of services at AB-HWCs was also expanded beyond the existing RMNCH+A and infectious diseases to also include wellness services and screening and treatment for non-communicable diseases. Furthermore, the continuum of care was maintained better at AB-HWCs as evidenced by a higher percentage of people who underwent CBAC; higher screening coverage for diabetes and hypertension higher percentage of people who initiated treatment for diabetes and hypertension compared to non-operationalized sub-centers. An average of 12 teleconsultations were conducted in the previous month at AB-HWCs

Policy implications

- The evidence from such formative assessments would support early identification of strengths, opportunities and/or barriers impeding the envisaged rollout of services and thereby, early-course corrections to achieve the intended scale of rollout and service provisioning.
- Given the ongoing phase of implementation, such an assessment was effective in highlighting the areas that would need attention of implementers and policy makers to define the plan of action at states and level below. With CPHC targets now being achieved, the evaluation also provides a picture on roll out of expanded range of services, to ensure full functionality of AB-HWCs.
- Evidence in context to the implementation of CPHC through AB-HWCs is significant to reinforce coordination and convergence between the health sector and other relevant departments at the level of HWCs, state and the centre.


आयुष्मान भारत

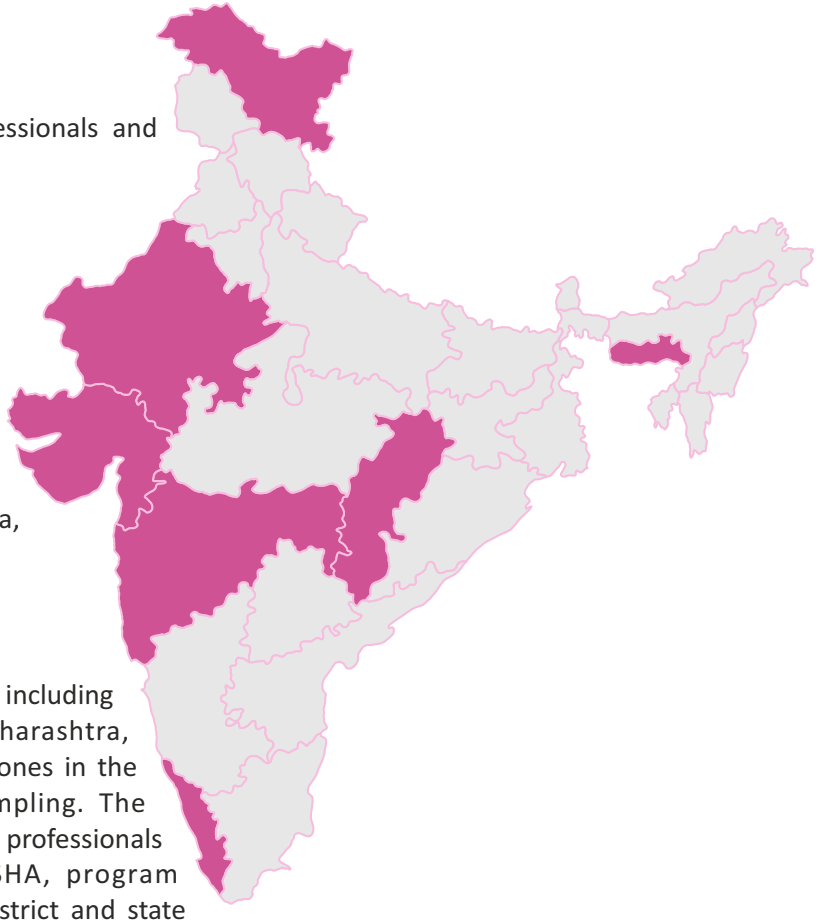
PERSPECTIVES ABOUT WELLNESS AMONG PEOPLE AND HEALTHCARE PROVIDERS

Background

Wellness is an integral part of comprehensive primary healthcare delivered through AB-HWCs. Wellness is a pursuit of multi-dimensional activities that leads to a state of holistic health. Wellness is not just limited to physical health but expands to mental, spiritual, emotional and environmental factors. Understanding the perspectives of people and healthcare providers on wellness is vital to promote health through contextually appropriate wellness services at the AB-HWCs.

Objective

To explore the perspectives of healthcare professionals and community about wellness



Methods

Study type

Cross-sectional qualitative study

Study setting

Chhattisgarh, Gujarat, Kerala, Ladakh, Maharashtra, Meghalaya and Rajasthan

Sampling

A qualitative study was conducted in seven states including Rajasthan, Kerala, Chhattisgarh, Gujarat, Maharashtra, Meghalaya and Ladakh across six geographical zones in the selected seven states through purposive sampling. The respondents include different cadres of healthcare professionals including PHC MO, SN, CHO, MPW and ASHA, program management officials of CP-CPHC program at district and state levels and the beneficiaries of AB-HWC.

Data collection

The study was conducted between March and December, 2022. Qualitative data was collected through 28 Focus group discussions (FGDs) and 63 in-depth interviews (IDIs). The data collected were analysed thematically.

Results

The study revealed that the concept of wellness is novel to the service providers at AB-HWCs. However, different communities in different states and UTs followed different practices that protect their health. Spiritual practices in the form of regular prayers across different religions were also widely recognized as part of wellness. People perceived yoga

as the most universally accepted and practised wellness activity across the country. However, wellness activities provided at the AB-HWC were limited to yoga.

The other notions regarding 'wellness' revolved around eating healthy (consuming millets, following a regular meal timing), staying happy, sleeping well and other forms of exercises. Adequate sleep was considered to serve a dual purpose of improving wellness and a coping mechanism to overcome unpleasant feelings. Physical activity in the form of walking, Zumba and physically intensive exercise or routine work were other important wellness practices. Religious practices, acts of kindness, self-introspection, family, family connectedness etc. were also seen as contributing to overall wellness in some populations. The findings also showed that the service providers at the AB-HWC faced multiple challenges in implementing wellness activities. These included lack of wellness-trained personnel, dedicated space, linguistic barriers and inadequacy of monetary incentive allocated for conducting wellness sessions by certified Yoga trainers.

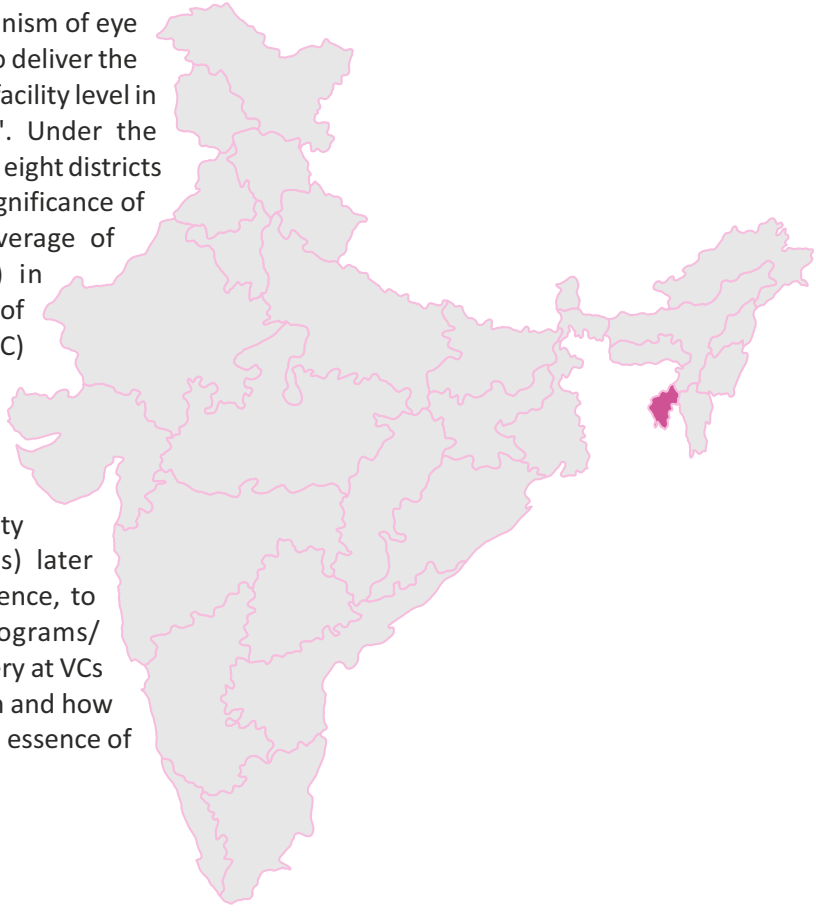
Policy implications

With the shift from illness to wellness led by India's AB-HWCs, it is important to widely promote a healthy lifestyle marked with adequate physical activity. The perspectives from healthcare providers and community would support strategies increasing the uptake of wellness activities and community's acceptance.

TELE-OPHTHALMOLOGY SERVICES – A BOON TO THE UNDERSERVED INACCESSIBLE POPULATION IN RURAL INDIA: TRIPURA CASE STUDY

Background

Tripura, one of the smallest and geographically isolated states in the northeast region, was facing an acute shortage of ophthalmologists with only one public sector civil hospital, two Medical Colleges and three Primary Eye Care Centres in the state that catered to the need for all the primary & secondary eye care services. Most of the ophthalmologists and ophthalmic assistants in the State were clustered in urban areas of Agartala. In 2007, the Government of Tripura tested the feasibility of using information communication and technology (ICT) as an enabler and delivery mechanism of eye care services and embarked on a maiden journey to deliver the first teleophthalmology services at primary health facility level in public sector under the 'Vision Centre Project'. Under the project, 44 VCs were deployed covering 44 blocks in eight districts of Tripura in a phase-wise manner. Realising the significance of equitable, quality, affordable and universal coverage of health services, Government of India (GoI) in September 2018, introduced an expanded range of comprehensive primary healthcare services (CPHC) which encompassed services for common ophthalmic problems at community level, Ayushman Bharat- Health & Wellness Centres (AB-HWCs) level and VC level. Currently, the plan is to establish Vision Centres at the level of Community Health Centres (secondary level health centres) later scaling up to the Primary Health Centre level. Hence, to ensure the effective integration of health programs/ policies, this study aims to assess the service delivery at VCs in Tripura in the backdrop of CPHC implementation and how these pre-existing VCs are able to contribute to the essence of CPHC for ophthalmic problems.



Objective

To assess the service delivery at vision centre.

Methods

Study type

Cross-sectional descriptive study undertaken using a mixed method approach.

Study setting

Tripura

Sampling

The selection of state was done purposively to study the rolled-out tele-ophthalmology services. The selection of blocks and facilities were done purposively. 16 vision centres and 2 nodes were sampled for the study. The targeted respondents included healthcare service providers, state program officers and end-users. Beneficiaries at the facilities were approached based on their availability.

Data collection

The study was conducted during March 2021. Quantitative data was obtained from: facility based records of all 44 VCs; field assessment of 16 VCs and the 2 nodes at Indira Gandhi Memorial (IGM) Hospital; and from 45 beneficiaries using a previously tested questionnaire. Qualitative data was obtained through in-depth interviews with service providers and state program nodal officers.

Results

The project is implemented in a hub and spoke model. It currently encompasses 44 VCs (spokes), which are linked with 2 (two) Nodes at Indira IGM Hospital (hub). The VCs are set up in Public Private Partnership (PPP). Out of the list of 44 VCs, 2 are in District Hospital (DH), 6 are in Sub Divisional Hospitals (SDH), 13 are in Community Health Centres (CHC), 17 are in Primary Health Centres (PHCs) and 6 are located in Block Office (BO). The minimum 14 service package is provided in the VCs across the state of Tripura is covering the whole gamut of Primary care for Eye aliments.

VCs are manned by one Optometrist and one Vision Technician Assistant (VTA). All optometrists have either Diploma or Degree in Optometry. The VTA's role is to assist the Optometrist/Ophthalmic assistant and they also do door-to-door visits for creating awareness about different eye problems, basic screening for cataract and follow-up of Cataract Operated patient for the next visit.

VCs are open from 9.00 AM to 4.30 PM, the same hours as the state's medical institutions. It was revealed by the Optometrist that approximately 3 to 5 minutes is required to enter all relevant information for each patient and within 15 minutes they get the prescription from the IGM Hospital. The VCs do not charge user fees for any of the services they offer, including medications.

However, during the assessment, no ophthalmic medicine was available in any of the VCs despite being listed in State EDL. The VCs operating from Block Offices (BOs) reported a low footfall and unavailability of medicines as compared to the VCs functioning in a health care facility setting. Previously, eyeglasses were also offered in the VCs, however this service was stopped later in 2018. It was observed that most of the equipment needs to be repaired/replaced to improve the quality of services. The community had unanimously agreed that the quality and scope of services offered at the VCs were able to meet most of their needs for eye care or illness.

Policy implications

Learnings from the field highlight strategies which can enable integration of ophthalmic services into the service package delivered through CPHC. This includes

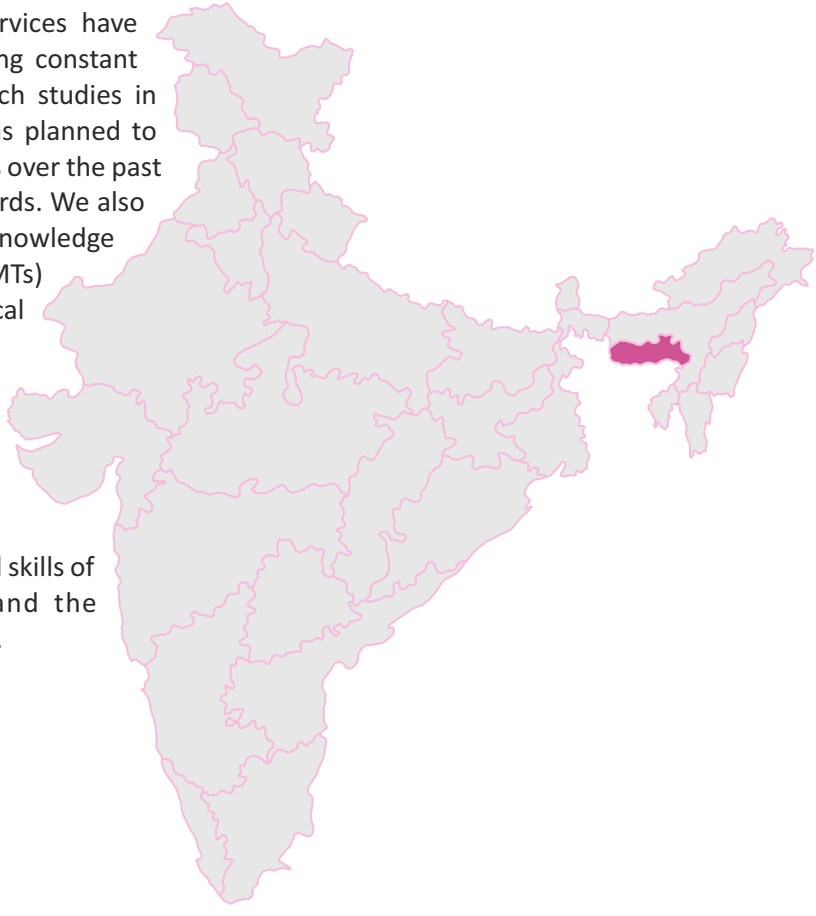
- Package of ophthalmologic services rolled out under the service provider were in line with the operational guidelines for eye care at HWCs by GoI.
- Awareness generation among community for eye-services was facilitated through Vision Technician Assistants who worked closely with the ASHA/ASHA facilitators.
- VCs played a pivotal role in the screening, treatment and follow-up of diabetes and hypertension patients under NCD program.

- Referral of patients from the Sub Centres and nearby PHCs with no ophthalmology services to the VCs for consultation was done systematically.

SERVICE EVALUATION OF 108 AMBULANCE SERVICES IN A NORTH-EASTERN STATE IN INDIA

Background

The '108' Ambulance services' – Wheels of Hope in Meghalaya commenced on 2nd February 2009 on mutual understanding with NHM, Meghalaya and ran for 8 years on nomination mode. The state now has 45 ambulances with 5 backup ambulance vehicles of BLS category in the fleet. Taking into account the difficult terrain in Meghalaya, response time was fixed at 30 minutes and 60 minutes in urban and rural areas respectively. With the aging of emergency ambulance services, the quality and awareness for such services especially with respect to pregnancy-related services have been analysed in a few Indian States for ensuring constant improvement. However, there is a dearth of such studies in north-eastern States of India. Hence, a study was planned to assess the performance of 108 ambulance services over the past three years in Meghalaya through analysis of records. We also aimed to conduct a pilot study to determine the knowledge and skills of Emergency Medical Technicians (EMTs) and to assess the availability and condition of medical equipment.



Objectives

- To assess the performance of 108 ambulance services over the past three years in Meghalaya.
- To pilot a study determining the knowledge and skills of Emergency Medical Technicians (EMTs) and the availability and condition of medical equipment.

Methods

Study type

Cross-sectional evaluation

Study setting

Meghalaya

Sampling

The ten functional units of ambulances with 11 EMTs were selected for the pilot study purposively for the pilot study.

Data collection

The evaluation study was conducted in two parts from October 2021 to January 2022. Initially, a cross-sectional analysis of "108" ambulance records from Meghalaya was conducted to assess the performance of ambulance services. The data from 2018 to 2021 on all the ambulances operational in the State was obtained from GVK-EMRI. Variables of interest

were recorded from the dataset to assess the performance of services. Indicators were developed from the variables of interest to assess the performance of 108 ambulance services. Subsequently, a pilot study was conducted among 20% of the total fleet of ambulances in the State using a convenient sampling strategy taking into consideration the terranes, accessibility of data collectors and maximum representation. The pilot study determined the knowledge and skills of Emergency Medical Technicians (EMTs) and assessed the availability and condition of medical equipment. The cut-off scores for assessing knowledge and skill were decided after discussion with an expert committee. Availability of equipment was assessed by the data collector based on the essential list of equipment provided by GVK EMRI required in BLS/ALS ambulances

Results

The State population and ambulance ratio for Meghalaya is one ambulance per 60,000 population (population of Meghalaya is 0.3 crores as per Census 2011) which is within the required indication of one per 1,00,000 population.

Currently, all the 50 ambulances are of the BLS category. For a fleet of 50 ambulances human resource for 1 ambulance is at the ratio of 2.1 EMT/driver per ambulance which comprises 95 EMT-Basic, 12 EMT-APGDEC and 106 drivers. Presently, there is a vacancy of 18 EMTs and 19 drivers in the state. Ambulances travelled longer distances in FY 2020-21.

In FY 2020-22, ambulances were dispatched for 31.62% of effective calls while 0.53% of effective calls were abandoned as vehicle was busy and 1.12% of effective calls were dropped. The average call response time has increased over the years. (68 seconds in FY2018-29, 77 seconds in FY 2019-20 and 98 seconds in FY 2020-21). The average response time in rural areas for ambulances in rural areas did not present much variation over the years. Over the years, effective calls received have dropped from 40,642 in FY 2018-19 to 35,487 in FY 2019-20 and then again increased to 48,762 in FY 2020-21. Majority of cases handled by 108 ambulances were pregnancy-related cases.

The breakdown period of ambulances was found to have reduced considerably from 2018-19 to 2020-21. A huge variation in breakdown time was observed between the districts. In urban areas, the average response time of ambulances were found to have reduced over time.

Ten (90.91%) among the 11 EMTs included in the pilot study had adequate basic knowledge on management of emergencies. However, the EMTs did not obtain cut-off score (80%) for individual component or for overall skill assessment.

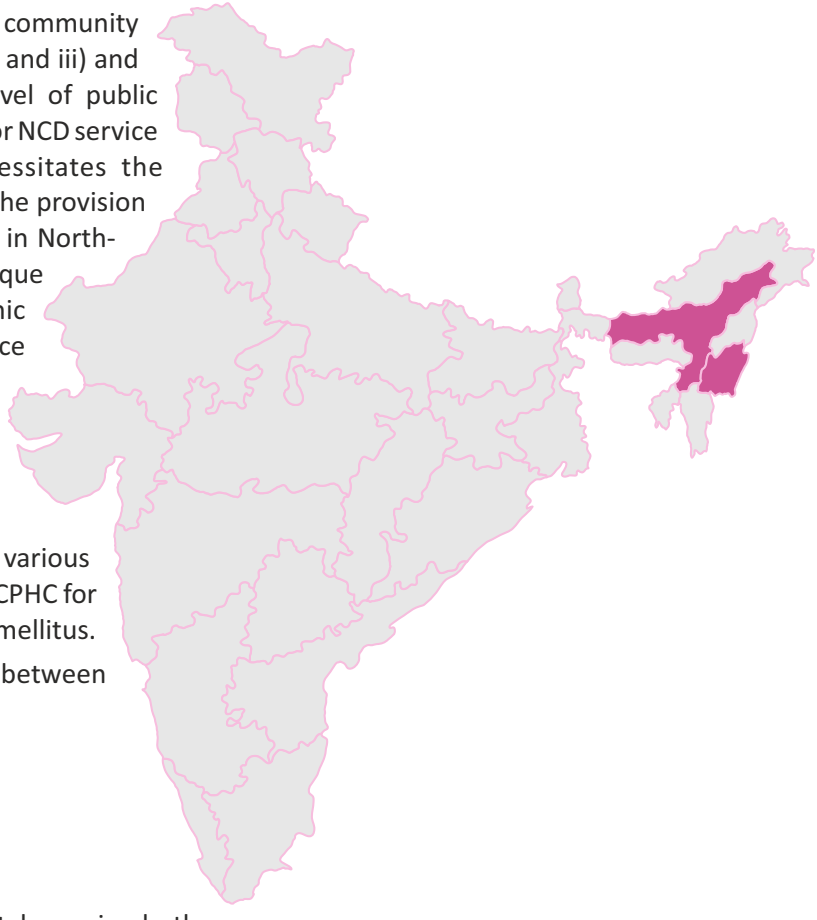
Policy implications

The evidence would enable prioritization of processes for reinforcing the 108 ambulance services in Meghalaya and NE states. Actions in the direction of strengthening skilled human resources management, continual capacity building, and equipment maintenance and management would improve the efficiency of emergency mobilization and pre-hospital care and management of emergencies.

ENSURING CONTINUUM OF CARE AMONG HYPERTENSIVES AND DIABETICS UNDER AYUSHMAN BHARAT- COMPREHENSIVE PRIMARY HEALTH CARE : A MIXED METHOD STUDY

Background

The Ayushman Bharat-Comprehensive Primary Health Care strengthens the integrated NCD management under National Programme for Prevention and Control of Non-Communicable Diseases (NP-NCD) by ensuring community awareness and bringing services like health promotion, risk assessment, screening and early detection, treatment, and follow-up mechanism closer to the community through established referral linkages across the levels of care. NCD services are provided under AB-CPHC at three levels of service delivery framework i.e., i) Family/Household and community levels, ii) Health and Wellness Centres (SHC-HWC) and iii) and Referral Facilities/Sites (PHC-HWC and above level of public health facilities). Establishing a resilient structure for NCD service delivery under the public health system necessitates the identification of key health system constraints to the provision and uptake of affordable NCD services, especially in North-eastern India which comprises difficult terrain, unique geographic location, and large number of ethnic groups. However, there is a scarcity of such evidence in this region. Hence, this study aims to identify bottlenecks in providing care at various levels.



Objectives

- To identify bottlenecks in providing care at various levels of the service delivery framework under CPHC for the management of hypertension and diabetes mellitus.
- To compare the effective coverage of care between different levels of service delivery.

Methods

Study type

A cross-sectional mixed-method study was undertaken using both quantitative and qualitative methods of data collection.

Study setting

The study was conducted in two North Eastern States, Assam and Manipur in India.

Sampling

The study opted for a convenient sampling method for selecting 174 beneficiaries for the interviews among 12 SHC-HWCs and 6 PHCs selected by purposive sampling method.

The modified Tanahashi model identified the bottlenecks in delivering care at two levels - 'HWC level' and Referral Site' using several supply and demand indicators. The 'effective coverage' indicator demonstrated in the model, being a

measure of CoC, was compared between the two levels of service delivery framework under CPHC. This comparison of effective coverage among beneficiaries at PHC-HWC and SHC-HWC was done using McNemar test (beneficiaries took services from both PHCs and SHC-HWCs, hence related groups).

Data collection

The data collection for the study was conducted between 2020 and 2021. Qualitative data was obtained from the beneficiaries of the program to complement the quantitative findings.

Results

At the HWC level, the availability of drugs (29.17%) and provision of referral services to a referral site (32%) were the major bottlenecks among supply-side indicators. Among demand-side indicators utilization of medicine refill services was 43.67%. At the referral site level, accessibility to healthcare facilities (20.83%), followed by availability of drugs (25%) and availability of trained human resources (29.12%) were the major bottlenecks among the supply-side indicators. Among demand-side indicators at the referral site level, utilization of 30-day medicine prescription services was the lowest (9%). The utilization of follow-up services at either of the levels was 77.59%. Overall, the effective coverage- a measure of CoC, was significantly higher at SHC-HWCs as compared to PHCs (OR=6.8; 95% CI: 3.73-13.46; P value=<0.0001). Among the 86 beneficiaries interviewed in Assam, 22.09% (19) were assessed for risk by using CBAC and 77.91% were captured through opportunistic screening. Among the 88 beneficiaries assessed in Manipur, 3.41% (3) were captured through CBAC and remaining 96.59% were through opportunistic screening. The poor accessibility of PHCs was reportedly due to long distances, limited transportation and poor road conditions.

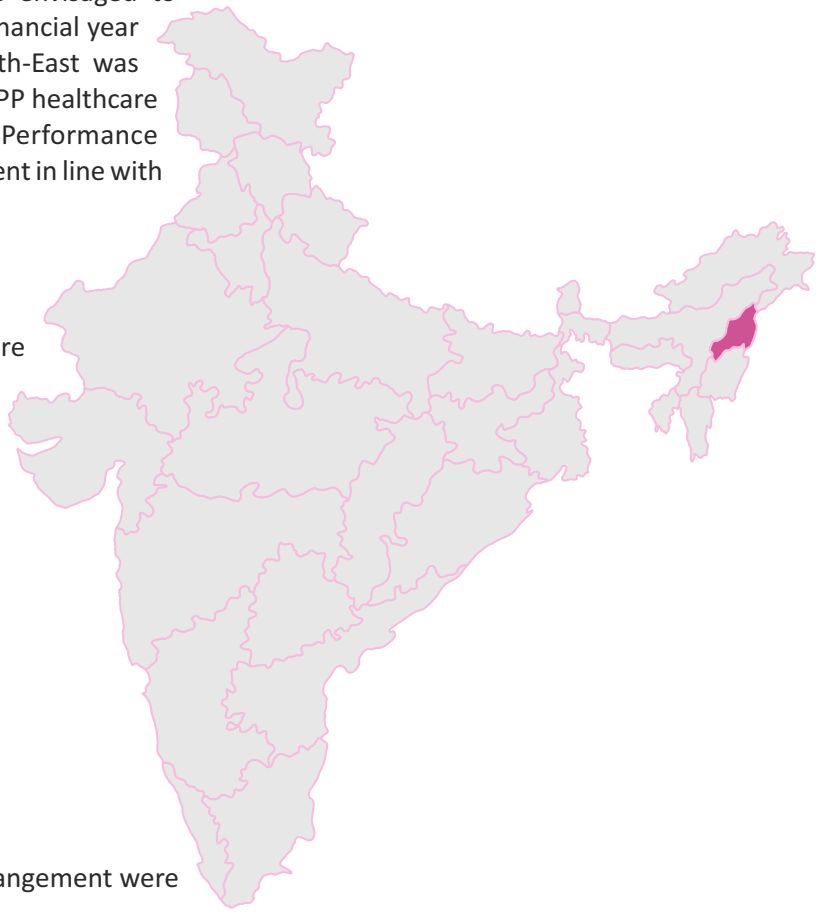
Policy implications

The organization of health services in India's public health system has been designed to facilitate the principle of Continuum of Care for the clients/ users across the healthcare pathways. Hence, evidence in this regard would help identify health system strengths and bottlenecks for achieving CoC. Such evidence is timely in the initial years of the roll out of NCD services as part of CPHC through HWCs, especially in context of North-eastern states.

ASSESSMENT OF HOSPITALS UNDER PRIVATE PUBLIC PARTNERSHIP WITH NATIONAL HEALTH MISSION, NAGALAND

Background

Nagaland has formed a public-private partnership since the financial year 2009-10 for enhancing the delivery of accessible, affordable and quality healthcare services to the community. The initiative has involved four healthcare facilities to provide comprehensive healthcare at the primary and secondary levels. The interventions and activities were aimed at revitalizing the Police Referral Hospital as a fully functional First Referral Unit (Community Health Centre), while the three other healthcare facilities were envisaged to function as 24X7 Primary Health Centres. In the financial year 2022-23, the Regional Resource Centre for North-East was mandated to undertake an evaluation of the the PPP healthcare facilities and subsequently develop Minimum Performance Benchmarks which would aid in follow-up assessment in line with the conditionalities of the MoUs.



Objective

To evaluate the performance of the PPP healthcare facilities in delivering services as per the MoU

Methods

Study type

Cross-sectional evaluation

Study setting

Nagaland

Sampling

All the four healthcare facilities under the PPP arrangement were selected for the assessment.

Data collection

The data was collected during September 2022. Semi-structured tools were administered for performance assessment as per the guidelines and parameters of CPHC, IPHS and Patient safety standards.

Results

The major observation in terms of the healthcare facilities namely Police Referral Hospital, Impur Mission Hospital and Aizuto Mission Hospital was that the conditionalities as per the MoUs were not adhered to by both the parties involved. This included the non-compliance of the State National Health Mission of Nagaland in providing the requisite manpower, i.e., General Duty Medical Officers and Staff Nurses and timely release of the funds. The healthcare facilities

have not defined their catchment population, nor provided the requisite services as envisaged. This attributed to low outpatient and inpatient services, low institutional deliveries, low immunization coverage, lack of community based services including community based screening and health promotion activities; and irregular data entry at HMIS.

Though the Police Referral Hospital had adequate infrastructure to function as a fully functional FRU, it functioned as a day care primary health centre due to the non-availability of required specialists (only an anaesthesiologist, chest specialist and a cosmetologist were posted), GDMOs and Staff Nurses. As per the MoU, the State National Health Mission had agreed to provide 04 GDMOs and 04 GMNs to manage the Peripheral Health Units (PHU) linked to the Police Referral Hospital. It was envisaged that the specialists posted in the PHUs (surgeon, obstetrician & gynaecologist, pathologist, ophthalmologist, and forensic medicine) would be brought to the referral hospital to operationalize it as an FRU. However, only 01 GDMO and 04 GNMs were provided by the State National Health Mission which prevented the referral hospital from utilizing specialist services.

The Impur Mission Hospital had the infrastructure for OPD, IPD, Major & Minor OT, Laboratory, Pharmacy and Palliative Care Services, yet functioned as a day care PHC as it had only 01 GDMO posted along with 04 Staff Nurses.

The Aizuto Mission Hospital had been functioning as a Sub-Centre since 2021, since it had only 01 ANM.

The Longpang PHC was a fully functional 24X7 PHC with OPD services, 23 beds with dedicated male, female, paediatrics and maternity wards, labour room, laboratory & diagnostics (x-ray and USG), pharmacy, wellness areas and dietary services. The healthcare facility was also involved in community activities including counselling & motivation for baby care through mother groups and health promotion activities.

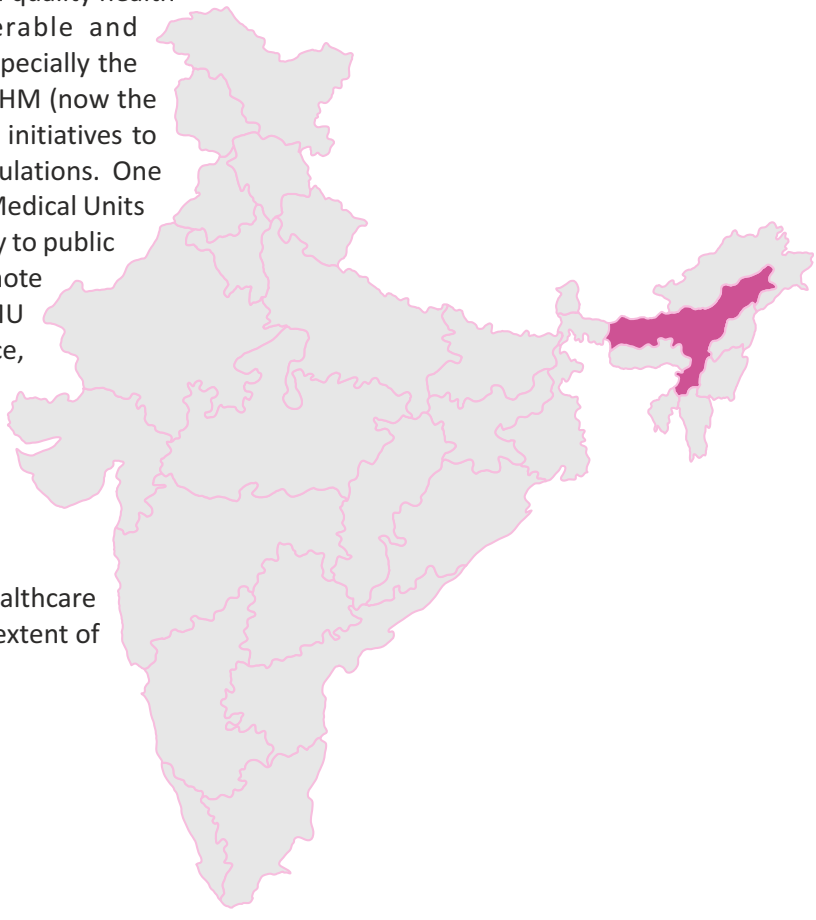
Policy implications

The assessment of healthcare facilities under Private Public Partnership with State National Health Missions is imperative to monitor the quality and affordability of the services they provide to the target community. Such evaluations act as measures for mid-course correction to streamline services as envisaged, and are recommended to be undertaken by the State/district at regular interval.

EVALUATION OF MOBILE MEDICAL UNIT (MMU) SERVICES IN TINSUKIA, ASSAM

Background

In India, numerous regions are characterized by a significant tribal population and rugged terrain, resulting in inadequate access to healthcare facilities. Consequently, individuals living in remote and underserved areas face considerable challenges in accessing healthcare, as they encounter difficulties travelling long distances to reach the nearest health centre in search of medical assistance. The National Rural Health Mission (NRHM) was launched in 2005 with the goal to provide accessible, affordable and quality health care to rural populations, especially vulnerable and underserved population groups in the Country, especially the poor, women and children. Over the years the NRHM (now the National Health Mission – NHM) has taken many initiatives to provide healthcare services to underserved populations. One such initiative is the operationalisation of Mobile Medical Units (MMUs) in each district to increase the accessibility to public healthcare services by the populace inhabiting remote or difficult-to-reach areas. In Assam, the MMU services are being run for more than a decade. Hence, a third-party evaluation was undertaken to understand the services quality, outreach, functionality and feasibility of the MMUs



Objective

To determine the functioning of MMUs in terms healthcare services provided, beneficiaries covered, and the extent of outreach to remote and underserved areas.

Methods

Study type

Cross-sectional evaluation

Study setting

Tinsukia district, Assam

Sampling

The tea plantation populace from the district of Tinsukia was selected purposively to understand the impact of healthcare services provided by MMUs in the most underserved. The district has 11 functional MMUs out of which 09 are operating in the tea plantation areas and 02 are operating in the non-tea plantation areas were selected purposively. The respondents included the beneficiaries and providers of the MMUs.

Data collection

The assessment took place from October to November 2021. Ten beneficiaries from each of the catchment areas of the 03 MMUs were approached as per their availability for in-depth interviews. The interviews were conducted using semi-structured interview schedules.

Results

The MMUs are operationalized on Public Private Partnership (PPP) mode with HLFPPT (Hindustan Latex Family Planning Promotion trust). Services for RMNCH+A, NCD services, counselling as well as point-of care testing were available for the community through MMUs. Focus was primarily given for Mother & Child Health services in the camps in terms of ante-natal and post-natal check-ups and treatment of sick children. Immunization services were not provided and the supply of condoms or oral contraceptive pills was limited.

The MMUs are expected to serve far-flung areas with limited health services availability. However, three (3) MMUs were stationed near accessible sites such as - adjacent to the Sub Centre, near the national highway and the near the district hospital.

Each MMU had 1 Medical officer, 2 ANMs, 1 Laboratory technician, 1 Pharmacist, 1 Ophthalmic Assistant, 1 helper and 2 drivers. Though the staff had received induction and refresher training, their knowledge on various health programs was limited.

As per the RoP 2021-22 for the state, State has been given conditionality that for MMUs, the average OPD should be 60 per day and 40 – 50 investigations per day. However, the average OPD was around 38 per day in the year 2018-19 and 52 per day in the year 2021-22. Average laboratory investigation was around 6 per day in the last 3 years. As per the list of equipment in the MoU, 80% of the equipment was available and functioning. About 92% of the beneficiaries interviewed were fully satisfied with the services.

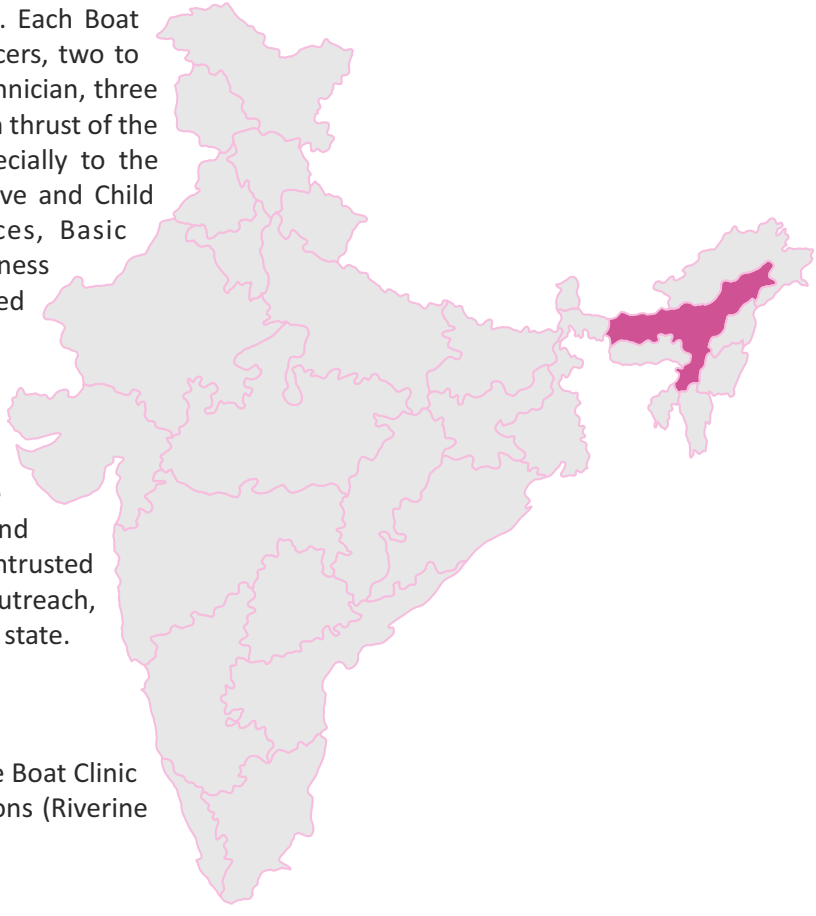
Policy implications

- Mobile Medical Units play a crucial role in bridging health disparities faced by communities inhabiting in remote and far-flung areas. They play an essential role in addressing accessibility constraints and bringing care closer to the community, thereby ensuring government's commitment in leaving no one behind.
- The evidence would strengthen capacities of MMUs encompassing infrastructure, medicines, diagnostic services, human resources, quality of care, extent of outreach and referral linkages to produce the expected outcomes.

EVALUATION OF BOAT CLINIC SERVICES IN DHUBRI DISTRICT OF ASSAM, 2022

Background

Assam, one among the eight states of the Northeast region of the country has a diverse topography consisting of hilly terrain, riverine and flood prone areas and huge forest and tea plantation tracts. To improve the health of these marginalised Riverine populations in Assam, the Boat Clinics were launched in November 2007. Currently state has 15 Boat Clinics in 13 districts of Assam and the services are being managed by Centre for North-eastern Studies and Policy Research (C-NES), Assam since 1st February 2008 under a MoU with the National Health Mission (NHM), Assam. Each Boat Clinic unit comprises of one to two Medical Officers, two to three ANMs, one Pharmacist, one Laboratory Technician, three Community Workers and four Boat Crew. The main thrust of the program is to provide health care services especially to the mother and the child which includes Reproductive and Child Care, Curative Care, Family Planning Services, Basic Laboratory Services, Health Education & Awareness etc. and free distribution of medicines as prescribed by the medical officer of the unit.



Since the Boat Clinic services are being run in the state for more than a decade, it has been desired by the NHM, Assam as per RoP 2021-22 conditionality that the Regional Resource Centre for North-Eastern States, Ministry of Health and Family Welfare, Govt of India, Guwahati may be entrusted to conduct an assessment of the services quality, outreach, functionality and feasibility of the Boat Clinics in the state.

Objective

To assess the quality and extent of coverage of the Boat Clinic services in the context to the char or sapori regions (Riverine areas).

Methods

Study type

A descriptive mixed methodology approach was used for the evaluation process

Study setting

The study was conducted in Dhubri district of the Assam

Sampling

Purposive sampling technique was used to select the Study District Dhubri because of presence of abundance riverine areas while random sampling method was used to select the beneficiaries.

Data collection

The district has two (02) functional Boat Clinics & for the assessment, both the Boat Clinics operating in the char areas of Dhubri were covered. The field-level data collection was done in the month of April 2022. 10 beneficiaries from each of the char areas of the 02 Boat Clinics (total of 20 beneficiaries) were selected randomly for personal interview based on the OPD attendance on the day of visit. The Boat Clinic staff and DPMU officials were also interviewed for the assessment through a semi-structured questionnaire. Secondary data have also been collected from HMIS, State Head Quarter, NHM officials and C-NES Head Quarter.

Results

Dhubri district has a total of 02 Boat Clinics and covers 44 revenue villages per month having target population of about 14,170 and 16,217 for Boat Clinic Unit I and Unit II respectively. The two (02) Boat Clinics of Dhubri district have all the required human resources. The Boat Clinics function in camp mode for an average of 18-20 days in a month and route plan is prepared accordingly which is shared beforehand with the Joint Director of Health Services. The gamut of services includes OPD for RMNCH+A services, Immunization, NCD services, nutritional counselling and spot diagnostic services. The Boat Clinics in the district are providing service to the pre-identified 44 char/Sapori areas in the district and the average OPD attendance is around 70 patients/day. During COVID-19, Boat Clinics staff were also involved in door-to door screening, sample collection, awareness activities and vaccination. The Boat Clinics upload the services data in the HMIS portal. There is acceptance of the Boat Clinic service in the community and people keep eagerly waiting for the services. Also, the Boat Clinic staff, and local community health workers believe that Boat Clinics are useful to the community as they provide services in remotest areas i.e., char/saporis. However, Biomedical Waste Management need to be strengthened in the Boat Clinics with segregation of waste in proper colour coded bags and following the laid down protocols for disposal. Drugs availability is another issue observed during evaluation. Essential equipment is available in both the units visited. However, few essential equipment like nebuliser, sterilizer and microscope though available were non-functional. Also, Life jackets available in the boats are not on 1:1 ratio for all crew and staff of the units of the boat.

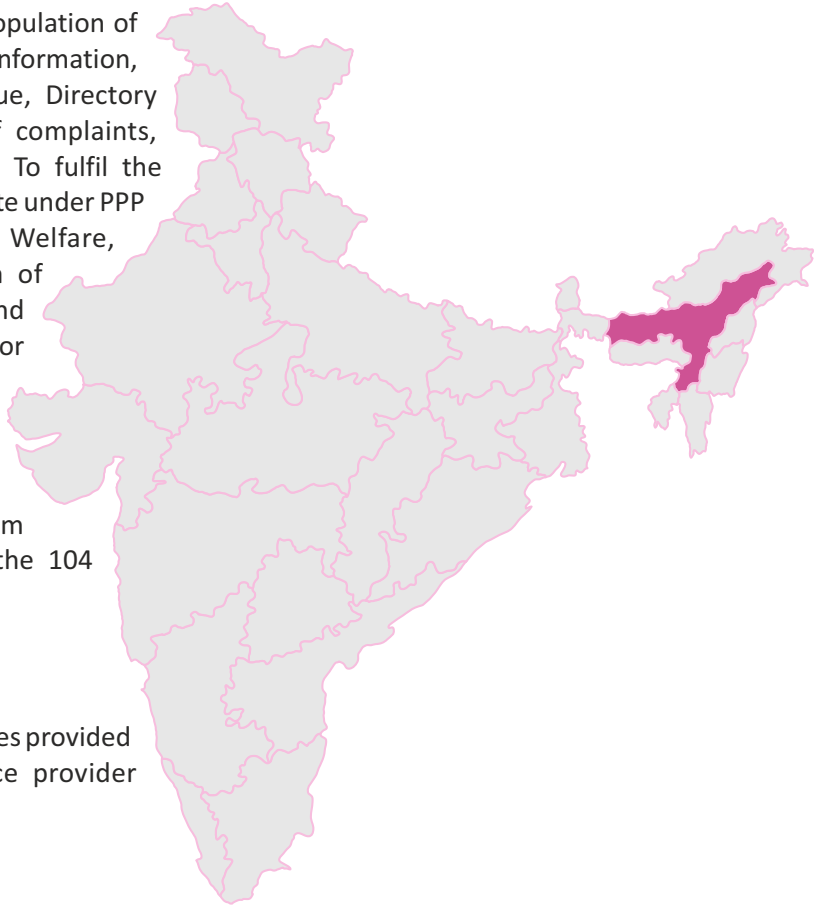
Policy implications

- Mobile Medical Units, including the boat clinics, play a crucial role in bridging health disparities faced by communities inhabiting in remote, far-flung and inaccessible areas like the riverine areas. They play an essential role in addressing accessibility constraints and bringing care closer to the community, thereby ensuring government's commitment in leaving no one behind.
- The evidence would strengthen capacities of state-specific models across all components encompassing infrastructure, medicines, diagnostic services, human resources, quality of care, extent of outreach and referral linkages to produce the expected outcomes.

ASSESSMENT OF 104 SARATHI HEALTH INFORMATION HELPLINE ASSAM

Background

The diverse topography of India coupled with a large rural population, with a scarcity of healthcare providers, limits the reach of healthcare services and this summons forth the need for a health helpline in the form of a call centre where the people at large can call and access the basic information pertaining to health ailments. Considering the need of the hour, the Government of Assam under the aegis of the National Health Mission (NHM) had envisaged establishing a 'Health Information Help Line (HIHL)' via a telephone-based 24X7 call centre platform to provide the rural and urban population of the State with the services like Non-emergency information, advice and guidance related to any health issue, Directory information on health facilities, registration of complaints, information on ASHAs/ANMS and many others. To fulfil the implementation of the HIHL services across the State under PPP mode, the Department of Health and Family Welfare, Government of Assam signed a Memorandum of Understanding (MoU) with Health Management and Research Institute (HMRI/PSMRI), Hyderabad. For obtaining clarity on the coverage, quality and effectiveness of the 104 Sarathi HIHL Services keeping in consideration the intended objectives, goals and expected outcomes, as per the MoUs signed, the then Mission Director, NHM, Assam requested to provide an evaluation report of the 104 Sarathi HIHL services of PSMRI of the NHM, Assam.



Objective

To evaluate the performance of the 104 HIHL Services provided by PSMRI (Service Provider) and assess service provider compliance.

Methods

Study type

Prospective cross-sectional study was undertaken with desk review of the documents and records and interviews with call center staff and programme managers.

Study setting

Assam

Data collection

The assessment was carried out from October and November 2021 in Assam by reviewing the records shared by 104 Sarathi HIHL of PSMRI and interviewing Senior Manager of Operations, Senior Executives of technical, human resource,

administration, operations, information technology and quality control divisions and call center staff.

Results

As per the MoU between PSMRI and NHM, Assam the HIHL services are to be provided through a 50-seater call centre operating on 24X7 mode. But the PSMRI employs only 55 call centre operators (known as Health Advisory Officers, HAOs) for the 104 Sarathi HIHL against the minimum required 150 HAOs for operating a 50 seated call centre for HIHL on a 24X7 mode, i.e., 3 HAOs per call centre seat working on 8 hours shifts. Taking the FY 2019-20 into consideration (when Covid-19 services were not included), PMRI has shown an OPEX for the 104 Sarathi HIHL at Rs 6,54,73,295.00 for the 50-seater call centre which translates to an annual expenditure of Rs 11,90,423.00 per seat, i.e., Rs 99,202.00 per seat per month. This is more than double the rate of around Rs 40,000.00 per seat per month recommended as full OPEX for call centers as per RoP approvals of SPIPs of FY 2021-22 by MoHFW, GoI. The HIHL services were also as per conditionalities of the MoU required to publicize and promote the new schemes and initiatives launched by the DoH&FW/NHM, Government of Assam. During the assessment it was noted that efforts were not undertaken to initiate this service. The 104 services were meant for integration of multiple activities concerned with health and nutrition and for covering both urban and rural population. However, during the assessment it was noted that the services were majorly utilized by the urban populace and that too mostly for seeking remedies for minor ailments such as hair fall, itchy skin, acne etc.

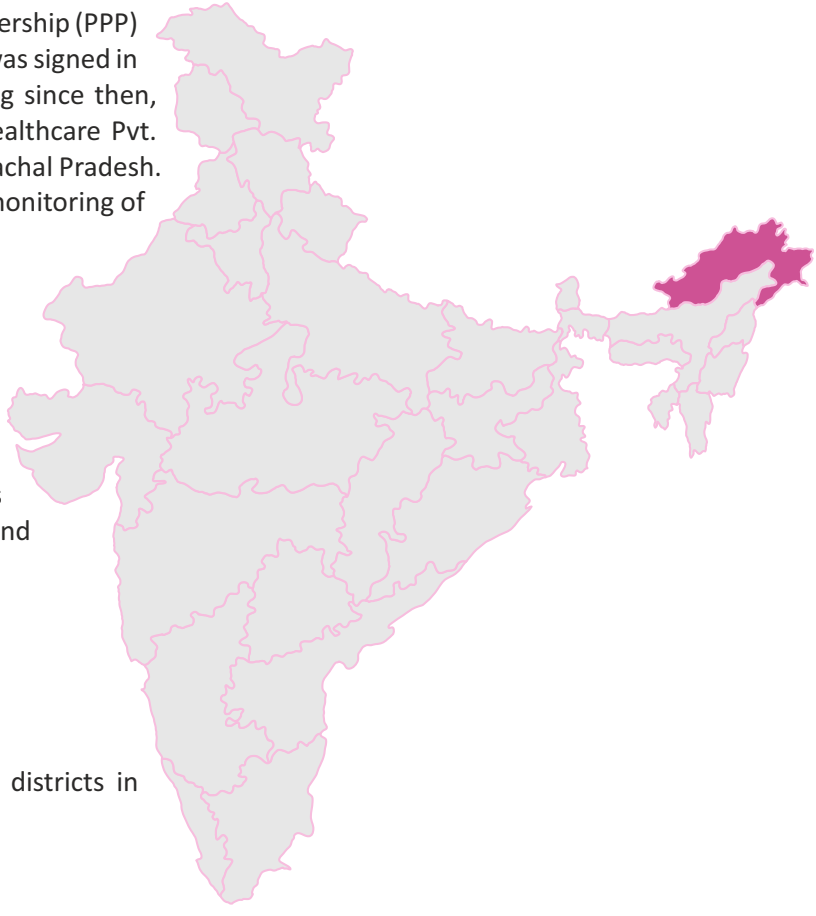
Policy implications

- Government of Assam has been supporting a telephone-based call centre to provide rural and urban population with services on general awareness, advice and guidance. This intervention is being supported by an external agency.
- The study would not only provide the details on the performance of the helpline but also suggest key enablers and challenges defined across key performance indicators to support strengthening of the interventions.

MID-TERM EVALUATION OF BIOMEDICAL EQUIPMENT MAINTENANCE AND MANAGEMENT PROGRAM ARUNACHAL PRADESH

Background

Comprehensive guidelines were developed on Biomedical Equipment Management and Maintenance Program (BEMMP), linked with uptime of equipment (95% in District Hospitals, 90% in Community Health Centres, and 80% in Primary Health Centres) by the Ministry of Health and Family Welfare (MoHFW), Government of India for the provision of maintenance of health care equipment in the states. The guidelines along with the model tender document were developed in 2014. The BEMMP program in Arunachal Pradesh was initiated in 2017 through a Public-Private Partnership (PPP) model. A Memorandum of Understanding (MoU) was signed in January 2017, and the program has been ongoing since then, operating under a contract between Medicity Healthcare Pvt. Ltd. and the National Health Mission (NHM), Arunachal Pradesh. The evaluation was done as a part of continuous monitoring of BEMMP programme.



Objectives

- To assess the implementation status of BEMMP at different level of health facilities in Arunachal Pradesh.
- To evaluate the compliance of service providers to the clauses as per the MoU and to understand the issues in implementation of the program.

Methods

Study type

A cross sectional study was conducted across 4 districts in Arunachal Pradesh, India.

Study setting

3 District Hospital (DH), 4 CHC and 5 PHCs among the 4 selected districts of Changlang, Lohit, Shi-Yomi and West Siang in Arunachal Pradesh.

Sampling

Four districts viz. Changlang, Lohit, Shi-Yomi and West Siang (Along) from three different regions considering the geographical location of Arunachal Pradesh and based on the number of equipment with downtime (2021-22), were selected for the evaluation of the BEMMP.

Data collection

Exploratory field visits, review of records, key informant interviews, and observation was used as tools to collect data in August 2022.

Results

There are 7985 pieces of medical equipment under the BEMMP as per the available dashboard. 741 equipment has been declared as Beyond Economic Repair (BER) and 50 non-functional equipment in August 2022. Medical Officers, and other staff of the health facilities were aware of the programme in general and a sense of reliability in the programme was observed as far as the equipment maintenance was concerned. At the facility level, almost in all the visited facilities, one staff has been designated by the facility in charge as the nodal person to look after the BMMP. The service provider had divided the State in 6 zones for better management. District wise WhatsApp group including service engineers of Medicity, MO i/c and other concerned of health facilities also have been created in addition to the Toll-free number to lodge complaints during the breakdown of any equipment.

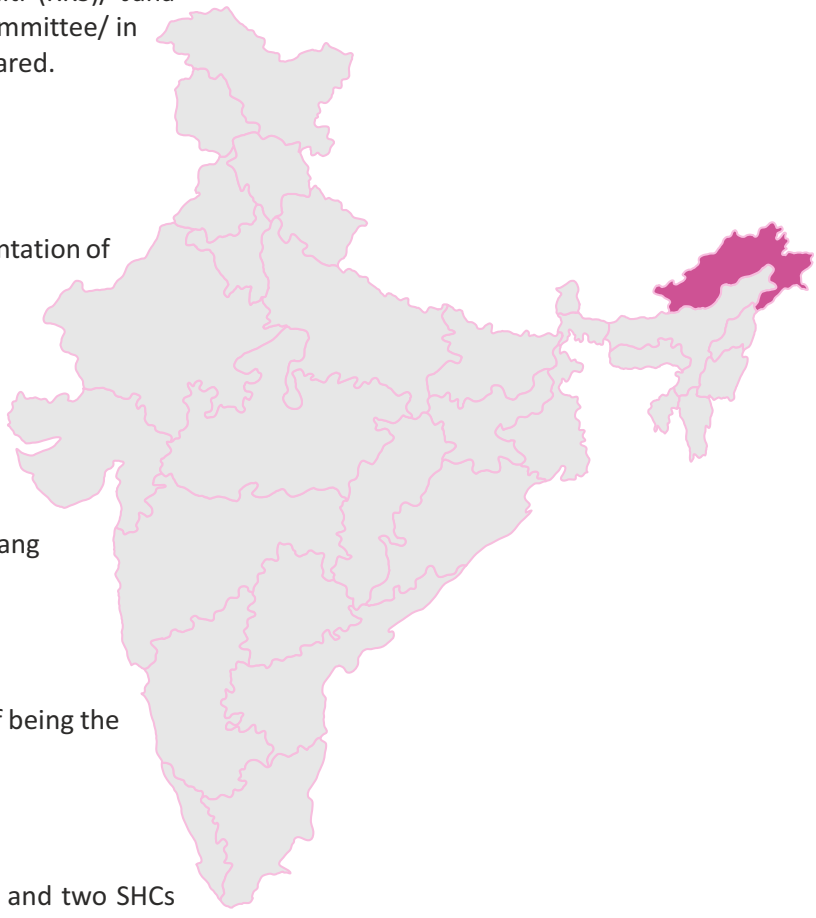
Policy implications

The evidence would help in understanding the implementation status and compliance of service providers in PPP arrangements; and thus, strengthening the program implementation.

IMPLEMENTATION OF COMMUNITY ACTION FOR HEALTH (CAH) IN ARUNACHAL PRADESH

Background

The State of Arunachal Pradesh had been receiving RoP approval for various activities under Community Action for Health (CAH) since FY 2012-13 till FY 2021-22 however, in FY 2022-24, the RoP approval was pended with a comment that state needs to submit a status report on CAH. Therefore, to understand the implementation process of different components of CAH and to know the role played by the State & District Health Societies, Village Health Sanitation & Nutrition Committee (VHSNCs), Rogi Kalyan Samiti (RKS)/ Jana Arogya Samiti (JAS) and Planning & Monitoring Committee/ in the implementation of CAH, a report has been prepared.



Objectives

- To understand the status and progress of CAH.
- To evaluate the factors influencing the implementation of CAH.
- To assess the fund utilization under CAH.

Methods

Study type

A mixed method study was conducted in the East Siang district of Arunachal Pradesh.

Study setting

The East Siang district was selected by the virtue of being the pilot district for CAH.

Sampling

Purposive sampling was used to choose one PHC and two SHCs from each of the three blocks namely Mebo, Pasighat, and Ruksin. Two VHSNCs from each block were selected using purposive sampling as well.

Data collection

A semi-structured interview schedule was used to collect data from State, district, and Block level officials and service providers. Qualitative data was obtained by in depth-interviews with VHSNC, RKS members and the nodal NGO for CAH. State policies, government orders, program documents, reports, and budget pertinent to Community Action for Health (CAH) were being reviewed. The assessment was conducted from August to September 2022.

Results

The three-tier committee was formed in the state “State Advisory Group of Community Action” (SAGCA), District

Mentoring and Monitoring Committee" and "Block Mentoring and Monitoring Committee". The program was introduced in East Siang district in the year 2012-13; later orientation and training was conducted for 2 more districts i.e., West Kameng and Changlang. Due to challenges like lack of proper understanding of the program by the stakeholders, fund constraint, change in the district ASHA Resource Centre (ARC) staff and various other issues in the concerned districts, the program could not take the desired shape. District ASHA Nodal Officer (DANO) and District Community Mobiliser (DCM) were not aware about the program. A brief orientation for the VHSNC members of 49 VHSNCs were conducted by the implementing NGO 'Daying Ering Foundation', in East Siang district. A two-day training was also conducted by the state in the year 2013 to train 647 RKS members. Meetings of the State Mentoring Group on Community Action were irregular. Only two meetings were conducted throughout the period (2012 -2016). Block Planning and Monitoring Committees (PMC) was non-functional, and the MOs are not aware about its existence. Approximately 66% of Medical Officers interviewed were not involved with the functioning of VHSNCs. Block Community Mobilisers interviewed were totally unaware about the program. Around (75%) of ASHA supervisor interviewed were not aware of any kind of initiative under CAH. Among all the ASHAs interviewed 100% of the ASHAs responded that they were not involved in the CAH program implementation. The utilization of RKS fund was nearly 100% (97.33% in FY 2018-19, 97.36% in 2019-20 & 94.74% in 2020-21). VHSNCs are not receiving the stipulated untied fund of Rs. 10,000/annum. Only one public hearing was conducted at Mebo CHC on 15th December 2013, and the collated information from facilities, was presented in the hearing. Additional public hearing could not be organized due to non-release of funds.

Policy implications

Concerns regarding awareness, funding, monitoring, and evaluation as well as documentation and record keeping should be effectively mapped out while formulating and implementing activities related to CAH.

SECONDARY RESEARCH STUDIES

I: Systematic Reviews and Synthesis
II: Data Analyses
III: Viewpoints and Correspondence

SECTION I:
SECONDARY REVIEWS AND SYNTHESIS

Methodology

The secondary reviews conducted at NHSRC have high value towards strengthening the Indian health system. It provides essential information on disease trends and risk factors, outcomes of treatment or public health interventions, functional abilities, patterns of care, and health care costs and use which is imperative towards achieving the NHM goals, UHC and SDGs. To proceed with the review, reliable information sources such as the Common Review Mission Reports, archival sources from government websites, and relevant literature from health information databases such as PubMed, MEDLINE, MedRxiv, BioRxiv and Google Scholar are selected prior to the stage of data analysis. Only peer-reviewed literature from health information databases is included to maintain scientific rigor. Both these primary and secondary sources of information are used not only to summarize but also to compute, describe, and objectively conduct an evaluation and clarification of the previous investigations on the topics of exploration which broadly concern health system strengthening. The scientific rigor is maintained at all stages of the review process along with documentation and conforming to internationally approved protocols/formats of systematic reviews. Much of this research is then translated into strategies, technologies, policies, and interventions that if effectively and appropriately delivered, have the potential to improve health outcomes nationally.

1. Is the Indian health system resilient? Lessons from COVID-19

The importance of health system resilience has been brought to the forefront by the COVID-19 pandemic. The dramatic loss of human life, massive economic and social disruption, and collapse of health care services worldwide demonstrate the consequences of an unprecedented disaster on health systems that are not sufficiently built to withstand health shocks. The Indian health system faced multiple challenges concerning, but not limited to, governance, infrastructure, and manpower. It witnessed significant losses in the form of a raging death toll because of an increasing patient load. However, it also administered pre-emptive and proactive steps to provide a coherent response to the pandemic. This viewpoint puts forth the Indian health system's resilience by analyzing its “whole-of-government” and “whole-of-society” approach from lessons learnt from COVID-19. It does so by utilizing a proposed framework of resilient health system and the proposed Harvard resilience index based on it. The five elements derived from the proposed framework i.e., aware, integrated, diverse, self-regulating, and adaptive, are used to characterize the Indian health system's resilience. First, it was established that the Indian health systems is resilient because its aware. It has an up-to-date record of human, physical, and information sources that shed light on the health system assets and weaknesses. It is diverse because of having the capacity to effectively respond to a range of health care challenges, adequately finance them, and circumvent financial adversities. It is self-regulating as it can isolate threats, maintain core function, and minimize disruption to the provision of essential health services during crises. It also demonstrates the quality of integration as it assembles diverse ideas, actors, and groups to formulate solutions and commence action. And lastly, it shows adaptability as it can transform and improve both short-term and long-term functionality in the face of adversity. The paper concludes that the Indian health system has imbibed all the essential elements that make a health system resilient. Despite the COVID-19 pandemic reverberating through communities and economies and posing formidable challenges, the Indian health system constructively responded to it through evidence and databased scientific planning, strategic infusion of funds and effective implementation. Like many other health systems worldwide, it witnessed significant setbacks in the face of the pandemic but showed resilience. The MoHFW made continuous and concerted efforts and to make those efforts even more worthwhile, it made long-term changes to the public health system. The recent initiatives are testimony to the GoI's resilience and proactive response to the pandemic and commitment to improved health care provision even in the time of adversity. This viewpoint not only helps inform India's resilience to COVID-19 and but also demonstrates how resilience can be built in LMICs and the entire world even during a crisis.

2. Recent initiatives for transforming healthcare in India: A political economy of health framework analysis

In India, the transformative changes in health policy display the government's dedication to its citizens' health and welfare and demonstrate its understanding of the political economy. In the past seven years, substantial progress has been made by timely recognition and acknowledgement of the issues. An analytic and problem-solving approach is used to identify feasible policy solutions and policies, which, once developed, are complemented by an enabling environment to ensure sustainability. Thereafter, a political opportunity is identified to introduce the policy, providing a platform with defined trajectories for political attention. Achievements of recent interventions such as the Free Drugs and Diagnostics Service Initiative (FDDSI), Swachh Bharat Mission (SBM), Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP), the four pillars of Ayushman Bharat- i.e., Ayushman Bharat- Health and Wellness Centre (AB-HWC), Ayushman Bharat- Jan Arogya Yojana (AB PM-JAY), Ayushman Bharat- Digital Mission (ABDM) and Pradhan Mantri Ayushman Bharat- Health Infrastructure Mission (PM-ABHIM) and tied grants under the Fifteenth Finance Commission (FC-XV) depict India's progress towards achieving the National Health Policy (NHP) 2017 targets, Sustainable Development Goals (SDGs) and Universal Health Coverage (UHC). This narrative review critically analyses the progressive efforts made by the Government of India (GoI) in the backdrop of addressing political and economic challenges for providing efficient, equitable, accessible, affordable, and quality healthcare. Through an analysis of the implications of economic forces on strengthening health systems, reforms in healthcare, infrastructure, service delivery, policy prescriptions and interventions, provision of financial risk protection, and economic implications in the backdrop of addressing political and economic challenges for providing efficient, equitable, accessible, affordable, and quality healthcare, this review demonstrates that the Indian health system is continuously evolving to address the needs of the citizens in response to the changing demographics, disease patterns, and policy reforms. The GoI is cognizant of the complexities involved in a growing range of contexts and is strengthening the Indian health system. Targeted actions have been made to address health equity, affordability, and accessibility challenges and a plethora of initiatives were planned and implemented by the GoI to achieve the goals of NHP 2017, UHC and target SDGs. It also establishes that in the last seven years, major policy decisions have been driven by political support to drive substantial changes in the health sector. Fulfilling commitments through intense policy interventions has reflected the link between policy promises and implementation, building a strong relationship between the citizens and leadership.

3. A rapid review of evidence on the determinants of and strategies for COVID-19 vaccine acceptance in low-and middle-income countries

Vaccine acceptance and hesitancy among the general population and health care workers play an important role in successfully controlling the Coronavirus Disease (COVID)-19 pandemic. While there is evidence for vaccine hesitancy across the globe, wide variation in factors influencing vaccine acceptance has been reported, mainly from High-Income Countries (HIC). However, the evidence from Low- and Middle-Income Countries (LMICs) remains unclear. The objective of this review was to describe the determinants of vaccine acceptance and strategies to address those in an LMIC context. The World Health Organization's (WHO) Measuring Behavioural and Social Drivers of Vaccination (BeSD) Increasing Vaccination Model was employed to identify factors that influenced vaccine acceptance. All evidence related to supply-side and demand-side determinants and social and health system processes were examined. A comprehensive search for published literature was conducted in three databases and grey literature in relevant websites of government, multinational agencies, and COVID-19 resource aggregators, followed by a narrative synthesis. Overall, the results showed that the vaccine acceptance rates differed across LMICs, with a wide variety of reasons cited for vaccine hesitancy. Vaccine acceptance was reportedly greater among males, those with higher education, elevated socio-economic status, the unmarried, those employed as health care workers. Evidence suggested that exposure to misinformation about COVID-19 vaccines and public concerns over the safety of vaccines may contribute to lower acceptance rates. Strategies to increase vaccine acceptance rates included direct engagement with communities through influencers, including community leaders and health experts; clear and transparent communication about COVID-19 vaccines, financial and non-financial incentives; and strong endorsement from health care workers. Trust in government was identified as a significant enabler of vaccine acceptance. The review concludes by highlighting the need for measures to address public acceptability, trust and concern over the safety and benefit of approved vaccines. It also puts forth that importance of local context while developing programs to promote vaccine uptake and plans to address the anxiety and vaccine related concerns of community regarding vaccine hesitancy. Lastly, it emphasizes the need for further research to evaluate strategies to address vaccine hesitancy in LMIC.

4. A systematic review of excess all-cause mortality estimation studies in India during COVID-19 pandemic

Mortality statistics are fundamental to understand the magnitude of the COVID-19 pandemic. Due to limitation of real-time data availability, researchers had used mathematical models to estimate excess mortality globally during COVID-19 pandemic. As they demonstrated variations in scope, assumptions, estimations, and magnitude of the pandemic, and hence raised a controversy all over the world. This paper aims to review the mathematical models and their estimates of mortality due to COVID-19 in the Indian context. The PRISMA and SWiM guidelines were followed to the best possible extent. A two-step search strategy was used to identify studies that estimated excess deaths from January 2020 to December 2021 on Medline, Google Scholar, MedRxiv and BioRxiv available until 0100 h, 16 May 2022 (IST). We selected 13 studies based on a predefined criteria and extracted data on a standardized, pre-piloted form by two investigators, independently. Any discordance was resolved through consensus with a senior investigator. Estimated excess mortality was analyzed using statistical software and depicted using appropriate graphs. The findings suggested that majority of studies estimated excess deaths only at national level except three studies, which did it for Chennai, Gujarat and Bihar, respectively. Majority of the studies used data from CRS for expected deaths. However, few studies used United Nations Population Development and findings from surveys like million death study and consumer pyramid household survey. The civil registration data had been used at subnational level of different states and cities. Data from different time periods were utilized for calculation of expected mortality. The most historic data used were of five years. Whereas few have used only latest data for the year 2019 for estimating expected mortality for year 2021 and 2022.23. The population denominator for India varied amongst the studies for calculation of mortality as different sources like John Hopkins data, United Nations Development Program, and Office of Registrar General of India (ORGI) data were used. The data have been disaggregated to monthly level in majority of studies but have also been used as weekly mortality figures. Many studies have investigated more than one data sources, for example, one study utilized dataset of deaths by age and sex in Kerala, deaths of elected representatives, deaths of Indian railways personnel and deaths of teachers in Karnataka schools. Besides CRS, other sources of data for calculation of excess mortality were hospital management information system, cVoter survey and data of deaths obtained by right to Information (RTI) activists. The mathematical models used in studies showed a high variability ranging from ensemble and regression models to author's evolved models; however, the commonest model used was based on Poisson distribution. The Economist used a machine learning model. Ten studies had predicted excess mortality, which varied from 1.1 to 9.5 million. Three studies predicted excess deaths in states of Bihar, Gujarat, and Chennai city. Six studies predicted mortality between 3 and 4 million. Four studies scored less than 50% on quality of studies score. Most of the studies faulted on all-cause mortality data, validation and assumptions while modelling the estimates. The review concludes by emphasizing on the need to invest in robust systems for reporting of mortality in real time so that we know the real impact of pandemic at the community level.

5. Adding health to years: A review of the National Programme for Health Care of the Elderly (NPHCE) in India

The global share of elderly persons (60 years and above) is expected to rise from 13.4% in 2020 to 21.3% by 2050. In India, the elderly population accounts for 8.6% of the total population. A large share of responsibility on ensuring the health and well-being befalls on the government. Driven by the vision of healthy ageing, the National Programme for the Health Care of Elderly (NPHCE) was launched in 2011 by the Ministry of Health and Family Welfare. Yet, its effective implementation is challenged by the changing landscapes and epidemiological transitions. This review article explores the progress of elderly care with NPHCE, with a special focus on its implementation status, service delivery, and human resources to provide future directions for the program. It primarily uses the Common Review Mission Reports (2007–2019), archival sources from government websites, and relevant literature from PubMed, MEDLINE, and Google Scholar to provide an informed perspective of elderly care in India. For the documentation of the findings, all the 13 national and state CRM reports from 2007 to 2019 available in the public domain were included. Resources were also scanned on World Health Organization's Ageing and Ageism repository, websites of MoHFW, and Ministry of Social Justice and Empowerment (MoSJE) to obtain relevant documents and guidelines. It was observed that NPHCE has been implemented in several states, albeit restricted to district hospitals and medical colleges for secondary and tertiary level of health care. Before the roll out of HWCs, very few states reported implementation of NPHCE-related services below the district hospital (DH) level. In terms of service delivery, community health workers play an important role in expanding the outreach of elderly health care services to all levels of health care. However, a persistent gap is reported by states is the community's limited knowledge and awareness of the services offered through the program. This knowledge gap of available services was leading patients to seek care from private institutions thereby increasing their out-of-pocket expenditure on treatment, travel, and lodging, etc. The knowledge and awareness among the health care workers and the administrative officials at health facilities were also reported to be inadequate in several states. Additionally, common challenges reported across all CRMs remain the shortage of an adequate number of key human resources in all facilities and a lack of formal training in elderly/geriatric care. The focus has remained on providing physiotherapy and rehabilitative services, with lesser emphasis on specialized elderly care services. A felt need for deploying epidemiologists and state/district program coordinator for NCDs and elderly care services was also expressed by the states. The review paper concludes by stating that NPHCE requires strengthening through collaborative action between the relevant stakeholders. Additionally, it suggests strong implementation of appropriate policies and programs to address healthcare challenges of the ageing population to achieve the health care needs of its elderly. As the elderly population is set to grow dramatically in the next few decades, this review article reveals areas needing urgent attention in the domains of implementation, service delivery and human resources to strengthen elderly care through NPHCE in India.

6. Home-Based Newborn Care (HBNC) under the National Health Mission in urban India – A cross country secondary analysis

There is a paucity of evidence in the coverage of the home-based newborn care (HBNC) program delivered through the National Urban Health Mission (NUHM). Hence, an analysis was undertaken to identify gaps and progress in its implementation and inform policy and strategies to achieve universal access to newborn services. The study aimed to evaluate and understand the status of the HBNC program in urban areas of India through a health systems approach. Cross-sectional intra-country study was undertaken based on facility records and supporting literature available in the public domain. After categorizing the states into four groups, the programme's status in urban areas was analyzed and presented in median and interquartile ranges. Statistical significance in the difference between the medians across the groups was checked using the Kruskal Wallis test. The study's findings show that the HBNC visits undertaken in urban areas across the states are differential. Overall, the median full HBNC coverage was less than one-fifth (< 20%) of the total reported live births (P = 0.17). Excepting the union territories (UTs), the median coverage was found to be less than one-fifth (< 20%) of the reported institutional deliveries (P = 0.16) and more than half (> 50%) of the reported home deliveries (P = 0.83) in urban areas. While the overall percentage of reported home deliveries in urban areas is low, state-level records of 2019–20 revealed that a few states/UT (Meghalaya, Arunachal Pradesh, Bihar, Himachal Pradesh, Punjab, and Andaman and Nicobar Islands) reported high home deliveries in urban areas within their respective groups. Even among them, very few had assistance from skilled birth attendants. The study also showed that most of the women with home deliveries were given the 1st PNC within 48 hours after birth. Yet, full HBNC visits for home and institutional deliveries in urban areas were suboptimal across the groups with intra-group variations. A high percentage share of newborn deaths to total infant where HBNC coverage was poor, especially for home-delivered newborns was also demonstrated thereby calling for focused and time-bound visits to the urban population. Additionally, the findings on the infrastructural density indicate the structures in place for the programme. To conclude, study clearly shows that HBNC coverage in urban areas is highly differential within the states and across the country. The intricacies of the urban population nested in an environment characterized by multiple options, vulnerabilities, and social practices challenge assessing its coverage/uptake when measured with the yardstick meant for rural health systems. To overcome this, primary studies to understand HBNC service coverage among population subsets in urban areas and referral linkages are needed, followed by an evidence-informed increase in programmatic coverage in urban areas. This also calls for simultaneous strengthening of referral linkages to specialized newborn care facilities, ensuring skilled personnel at varying levels of facilities, and improving community engagement of frontline workers in urban areas under the NUHM.

7. Understanding India's response to mental health care: a systematic review of the literature and overview of the National Mental Health Programme

India, the second most populous country in the world comprises around 18% of the global population and significantly contributes to the global burden of mental disorders. It was one of the first few LMICs to develop a National Mental Health Programme (NMHP) to address the mental health needs of the population. This paper discusses the history of India's mental health response and reviews the NMHP to suggest the way forward. Review of literature was conducted on PubMed and Medline using the search terms “National Mental Health Programme AND India” and “District Mental Health Programme AND India”. Relevant documents on NMHP and District Mental Health Programme (DMHP) from the Ministry of Health and Family Welfare (MoHFW), Directorate General of Health Services (DGHS), Common Review Mission (CRM) (2012 to 2019), NITI Aayog and National Institute of Mental Health & Neurosciences (NIMHANS) were also analyzed. The duration was restricted to the past nine years from 2012 to 2021 to obtain the recent developments on NMHP since the 12th Five Year Plan. The findings suggest that the implementation at the sub-district level and below is sub-optimal. Some administrative issues due to lack in leadership and enthusiasm across levels further impacted program implementation. Fragmented responsibilities across levels and departments and poor coordination also contributed towards the poor performance of the programme. With regards to financing, the funding for NMHP is split between the Centre and states in the proportion of 60:40, and 90:10 for special category states. Although states take financial responsibility of the program, implementation is incoherent due to pre-existing financial constraints within states. Additionally, the shortage of HR has been an issue since the inception of the NMHP. Lack of leadership at different stages of the hierarchy in addition to poorly skilled and remunerated health professionals have further attributed to the underperformance of the programme. The CRM reports have frequently highlighted the need for overstretched system to accommodate the additional burden of mental health diseases. Monitoring and evaluation of the activities under NMHP is also yet to be conducted periodically. The GOI has also introduced the Public–Private Partnership (PPP) Model component under NMHP. Under this, provisions have been made for the state governments to execute activities related with mental health in partnership with Non-Government Organizations (NGOs)/agencies as per the NHM guidelines. However, IEC/BCC monitoring was observed as an area of concern across states. Furthermore, important issues such as homelessness, participation of PWMI and caregivers in programme designing, implementation, and monitoring as well as patchy coverage of disability certification continue to require integration in the NMHP. Therefore, although NMHP has witnessed significant progress in terms of policy and programme development since its inception, addressing the challenges related to governance, human resources, regular flow of funds, utilization and accessibility and a robust monitoring system is pertinent for effective implementation that will potentially improve health outcomes nationally and internationally.

8. Understanding what really helps to ensure access to diagnostic services in the Indian Public Health System: a realist synthesis of the Common Review Mission reports (2007-2021)

In India, the National Health Mission (NHM) has been supporting the states in building an integrated public healthcare network across the levels of care. This effort has improved access to, and utilization of, diagnostic services at public healthcare facilities. To continually enhance citizens' ability to seek and avail quality and affordable services, it is imperative to take stock of various components of the diagnostic ecosystem that may be common or unique to states and understand their influence on equipping the health system. The objective of the study was to understand key health system factors augmenting or limiting access to diagnostic services and outcomes. Common Review Mission (CRM) reports between 2007 and 2021 were selected for the study. Data relevant to diagnostic services were retrieved using defined search terms. The data were segregated for each Indian state and categorized under the pre-determined themes: state-specific practices, key findings, and challenges. Analysis of the data was done iteratively to identify the themes emerging from the reports over the years. Each theme was analysed further to deduce context-specific enablers and barriers influencing access to diagnostic service delivery. The major themes that emerged include (i) the approach to health systems strengthening, (ii) efficiency of procurement and distribution systems, (iii) infrastructure, (iv) modes of service delivery, (v) implementation of Free Diagnostic Service Initiative, Comprehensive Primary Health Care and Biomedical Equipment Management and Maintenance Program, and (vi) quality of care , and (vii) diagnostic service outcomes. The paper demonstrates that access to diagnostic services depends on the concurrent strengthening of health systems components such as procurement and distribution systems, infrastructure, service delivery and human resources across the levels of care. Each health system component has an overarching and complementing effect on enabling access to services. Additionally, the state's management mechanisms should be strengthened to ensure both provider and community sensitization of the services and entitlements to foster increased accountability and demand for free diagnostic services by the users. The nation has strategized accessible, affordable and acceptable diagnostic services to achieve UHC and care-continuum pathways and currently, states need to leverage the existing mechanisms, assess the implementation status and arrive at feasible and sustainable solutions to strengthen access to diagnostic services.

9. Access to medicines in the Indian Public Health System – What works and what does not? A review of the National Health Mission Common Review Mission reports (2007-2021)

Given the objective to understand the determinants of access to medicines in Indian public health system, the CRM reports between 2007 and 2021 were reviewed. All findings relevant to medicines were identified, retrieved, and analysed. Core themes pertaining to medicines were identified and each theme was analysed to deduce the context-specific determinants influencing their availability and accessibility in the public health system. Over the years, it was observed that states with autonomous bodies for procurement demonstrate relatively improved governance, decreased wastage, improved availability of quality medicines, and less burden on end-users in terms of out-of-pocket expenditure. In Indian public health system's context, it has become evident that the organization and functioning of existing SCM systems are more robust when backed with state-specific medicine (drug) policy, essential medicine list across levels of care, procurement policy with flexible financial and purchasing empowerment for the districts and healthcare facilities; policy on free medicines and strategies on distribution, and apportionment of stocks across facilities to minimize wastage. Adequate infrastructure is one of the prerequisites for efficient storage and distribution of medicines. Whereas, availability of skilled personnel is crucial for utilizing the existing infrastructure, for service delivery, and demand generation. Systematic reporting across the programmes is pivotal in aligning the state's disease burden with its demand for medicines. The state experiences underscore a need towards establishing robust tracking mechanisms for efficient utilization of resources. This would not only contribute to increased demand generation but also mitigate the burden of accessing quality medicines, and consequent financial hardship. Given the interlinkages within various systemic processes, a move towards improving access to essential medicines must be subsumed under overall health systems strengthening across the states.

10. Mid-level health providers (MLHPs) in delivering and improving access to primary health care services–a narrative review

For primary healthcare systems to bring care closer to the communities, the availability of appropriate human resources is crucial. The primary care workforce in the world is expanding to include non-physician health workers (NPHWs) to increase its capacity. Also, NPHWs as mid-level health providers (MLHPs) are currently being employed in high- and low-income countries to assist doctors and specialists to make up for the scarcity of health professionals. Given the wide prevalence in the deployment of NPHWs as mid-level health providers, this article collates recent evidence on the role of MLHPs in improving access to primary healthcare services, and their enablers and barriers in integrating them in primary care teams. The article also presents gaps in evidence and recommendations for the way forward. A systematic search of contemporary literature published from January 2012 to September 2022 was undertaken using two bibliographic databases (PubMed and Cochrane) and hand searching the reference list of retrieved papers. Duplicates, papers older than ten years, and whose focus was not on primary healthcare were excluded. The papers finalised for appraisal were scrutinised for key themes and their summaries were collated for analysis. The papers comprised of twenty-four quantitative, twenty-three qualitative, and nine mixed approach study designs (n = 56) due to which a narrative approach was conducted as per guidelines. The review identified and presents the following themes - task shifting and its effectiveness in service delivery, quality of care, enablers and barriers of NPHWs in primary health care in both HIC and LMIC settings. It was established in LMICs, where access to and availability of physicians continue to be an issue, utilising the available NPHWs is a logical step for the management of common diseases that are increasingly contributing to the global disease burden. In terms of quality of care, it was shown that patient satisfaction with the provision of primary care have found that patients who received care from NPHWs were equally or more satisfied than those who received care from physicians. Some common enablers for task-shifting in primary health care include health system factors such as training of NPHWs, provision of algorithms, protocols and guidelines for screening, treatment, and drug titration, and availability of medicines. However, current regulations and reimbursement schemes create challenges in role expansion of NPHWs in many countries. The paper suggests that in order to gain insight into the influences related to the NPHWs, policymakers and researchers need to focus on understanding the perspectives of relevant stakeholders in designing and developing sustainable national level policies and implementation. It concludes by recommending effective engagement and constant coordination with relevant stakeholders for task-shifting interventions. Additionally, it advises policymakers, public health researchers, healthcare professionals of all cadres and community members to be involved across all stages of introduction and absorption of the cadre into the primary healthcare delivery system for effective service delivery.

11. Health technology assessment of breast cancer screening techniques in India

Breast cancer accounts for approximately 2.3 million new cancer cases globally and 6,85,000 deaths annually from the disease. Breast cancer is the leading cause of morbidity and mortality worldwide. In India, the incidence increased significantly, almost by 50%, between 1965 and 1985. Early detection is key in the treatment of breast cancer. Effective screening techniques serve as the basis for the prevention of breast cancer among females. This study aimed to evaluate the cost-effective strategy for screening breast cancer in the population of India. A Health Technology Assessment using Systematic Review and Meta-Analysis was conducted. A hybrid economic model involving a Markov model was used to analyse the cost-effectiveness of various screening techniques for breast cancer as compared to no screening. The economic evaluation model was conducted from the provider perspective that includes cost incurred by the health system at various levels of health facilities. PICOT included (i) Population: All females between 35 to 65 years of age of India (ii) Intervention: CBE, Mammography, MRI, USG and Piezoelectric finger (iii) Comparator: No Screening (iv) Outcome: Diagnostic accuracy of breast cancer screening techniques in the form of sensitivity and specificity, NPV, PPV, QALYs gained, incremental cost effectiveness ratio (ICER) as compared to baseline (no screening). The treatment costs were estimated from a provider's perspective from the National Cancer registry program report 2012-2016. The costs of treatment were combined with updated costs from CGHS rates, 2021. After evaluating the model parameters, Markov Model was run on TreeAge pro healthcare software incorporating the input parameters to obtain ICER and QALYs. The database search yielded 508 citations published between 1st March'2018 to 30th June'2022. Articles were excluded based on the information available in the title and abstract. The full texts of potentially relevant articles were obtained for further assessment. Twelve studies were included in the study for clinical effectiveness. The initial results of meta-analysis of literature review for clinical effectiveness depicted that CBE paralleled with USG had high sensitivity, specificity, PPV and NPV while Piezoelectric Finger had acceptable sensitivity, specificity, NPV and PPV. The results of CEA reflect that Piezoelectric finger strategy leads to a gain of 1.2 QALYs and ICER being INR 2286.4 per QALY when compared to no screening. This is lower than willingness to pay threshold that is India per capita. The second best strategy as per CEA results is CBE paralleled with USG with a gain of 1.1 QALY and ICER of INR 3348.72 per QALY when compared to no screening. The least effective strategy is no screening as it leads to a gain of only 0.02 QALYs. The availability of portable piezoelectric finger in the primary healthcare setting coupled with CBE may be considered as a cost-effective intervention strategy for mass screening but only after a pilot study. The CEA results shows that Piezoelectric Finger strategy is more cost-effective since the cost per test is low (INR 207) as compared to USG (INR 349-410) and all the women visiting primary healthcare facilities can be screened with it. However, it's budgetary implications and feasibility at primary level needs to be evaluated. Further, use of USG for community screening may not be feasible due to the limitations of trained manpower and placement at the PCPNDT licenced facilities.

12. AERB compliance in India: a desk review

This is the first study to evaluate the level of AERB Compliance in the public healthcare facilities (up to District Hospital level) throughout the country. We aimed to understand the gap and challenges faced by the States/UTs in implementing the AERB Compliance program. Throughout the globe, growing economies have seen a rise in the use of Radioactive sources in the Industrial, Medical or Research applications accruing huge societal benefits. The radioactive sources are either radioactive isotopes (Such as Cobalt60, Iridium-192, and Caesium-137) or radiation generating equipment such as X-ray or linear accelerators. While availing the benefits, it is essential to minimize the concomitant health risks in their application, to the workers using the sources, to the patient receiving the radiation dose or to the people in its proximity. Atomic Energy Regulatory Board strives to achieve this objective by an all- encompassing approach. To ensure that the use of ionizing radiation does not cause undue harm to health of people and environment, the Atomic Energy (Radiation Protection) Rules, 2004 [AE(RP)R-2004], promulgated under the Atomic Energy Act, 1962, provided the legal framework for the safe handling of radiation generating equipment (in this context - X-ray equipment). As per Rule 3 of AE(RP)R-2004 it is mandatory for all the manufacturers/Suppliers/Users of x-ray equipment, to obtain requisite Licence from AERB for carrying out any of the above activities. To strengthen the diagnostic equipment operational safety in public health facilities, National Health Mission launched the AERB safety guideline in 2017. The guideline reinforces and support states in complying with AERB safety and obtaining “License for Operation' from AERB. A secondary review was conducted with data available at the Biomedical Equipment Management Dashboard and the details available on the e-LORA portal of AERB were retrieved, reviewed and analysed during August – November, 2023. The desk review concluded that currently AERB Compliance program has been implemented in 31 States/UTs but the percentage of compliance is considerably low. The outcome of the study will provide status of AERB Compliance status among the State/UTs. The outcome of the study provided following details regarding the current implementation mode and the compliance percentage. Figure below shows the compliance percentage. There are 03 different modes of implementation:18 states/UTs have implemented the program through In House mode (Chandigarh, Ladakh, Chhattisgarh, DD &DNH, Goa, HP, J&K, Lakshadweep, MP, Jharkhand, Meghalaya, Mizoram, Nagaland, Puducherry, Punjab, Sikkim, Tamil Nadu, Telangana). A total of 10 States/UTs (Uttar Pradesh, Tripura, Rajasthan, Odisha, Maharashtra, Kerala, Bihar, Assam, Arunachal Pradesh, Andhra Pradesh) have implemented the program in PPP Mode and 03 States are using a hybrid model to run the AERB Compliance program (West Bengal, Gujarat, Karnataka In house and Tender on turn key project). 05 States/ UTs (Uttarakhand, A&N Islands, Delhi, Haryana, Manipur) are in process of implementing the program. The study concluded that there is a lack of awareness about the AERB Compliance program among the healthcare professionals. Due to this the percentage of compliance is low in many States/ UTs.

SECTION II:
SECONDARY ANALYSES

1. Factors influencing life satisfaction and discrimination among the elderly in India

India is moving toward a demographic transition which is leading growing elderly population. Maximum life satisfaction and minimum discrimination are necessary to have healthy aging. This secondary data analysis was conducted to assess the perceived life satisfaction and discrimination among the elderly based on the Longitudinal Aging Study in India (LASI). Data from the LASI-Wave I were used to assess the life satisfaction and discrimination and factors associated with them. The study observed that the majority of the elderly were satisfied with their life and never faced discrimination in India. However, there are multiple factors associated with life satisfaction that leads to more or less satisfaction. It was observed that sociodemographic factors such as age, gender, residence, income, education, and income influence life satisfaction and linearly correlated with them. Social support was an important factor for life satisfaction and the current study confirmed the positive association between having social support with life satisfaction. The proportion of elderly significantly satisfied with life was more if they were living with family (66%) rather than living alone (43%) or with others (54%). Life satisfaction was also an important factor for seeking healthcare because those who were less satisfied with their life avoided seeking healthcare. The lifestyle of an individual further influenced satisfaction in life, the study observed less satisfaction among alcohol and tobacco users and more satisfaction if they are physically active. A positive association between life satisfaction and physical and mental health was also observed. Those who were not depressed and never had a stroke was more satisfied with their life. The paper concludes that life satisfaction amongst the elderly was reported less in those living in rural, males, living alone, divorced/separated, illiterate, and poorest in comparison to their respective counterparts. Perceived discrimination was more in the elderly those who were residing in urban, among males, living alone, and richer. Major factors responsible for more LS were education, money, social support, and a good healthy lifestyle. To ensure healthy aging with maximum life satisfaction and no discrimination, it is suggested to establish a strong foundation with a holistic approach that includes all factors such as the economic and social determinants of health.

2. Health facility utilization and healthcare-seeking behaviour of the elderly population in India

The increasing elderly population in India has generated an unmet need for healthcare services concerning them. To address some of those needs, the study aims to provide the current status of health facility utilization, health-seeking behaviour (HSB), and factors influencing them. Data from the Longitudinal Ageing Study in India (LASI)-Wave I was used to conduct multivariate analysis to assess the association between health facility utilization (inpatient and outpatient) and HSB across all age groups of the elderly. The proportion utilizing public health facilities increased with the age of elderly with the highest among 80 years and above and the lowest at 60–69 years. In rural and urban regions, approximately 60% utilization of private health facilities was observed in all ages, except 80 years and above of an urban region. Both male and female preference for utilizing public health care facilities was less, across all age groups. At the national level, more than 60% of private and 20% of public healthcare facilities were utilized across all ages. In both genders, utilization of private in comparison to public healthcare facilities was more across all age groups. Private healthcare utilization ranged from 55% for the illiterate to 90% for the highest level of education. A significant decrease in HSB with age at the national level was also observed. It was the maximum at age 60–69 years, and almost 50% reduction was observed for 70 to 79 years and 80 years and above. After adjusting for various covariates, the likelihood of utilizing public health facilities for OPD increased with age; however, for IPD services, it decreased with age. The likelihood of utilizing public health facilities by females was 60% more for IPD and 8% less for OPD when compared to males. After adjusting for various covariates, the likelihood of seeking health care was 23% less in 80 years and above elderly when compared to other age groups. Additionally, a positive association was found between the elderly living in an urban area and seeking 38% more health care when compared to rural. Healthcare service uptake was higher in the elderly with health insurance in a public health facility. Therefore, the study suggests improving health insurance coverage among the Indian elderly to potentially improve healthcare service uptake in public health facilities.

SECTION III:
VIEWPOINTS AND CORRESPONDENCE

1. India's First 24X7 Tele Mental Health Helpline brings new hope for millions

India comprises around 18% of the world's population and contributes a major proportion to the global burden of mental disorders. In recognition, the Hon'ble Union Finance Minister of India in the Union Budget 2022 announced India's first National Tele Mental Health Programme, i.e., Tele Mental Health Assistance and Networking Across States (Tele MANAS). Tele MANAS envisions to work as a comprehensive, integrated, and inclusive 24X7 tele-mental health facility in each State and Union Territory (UT) in India with the aim to provide universal access to equitable, accessible, affordable, and quality mental health care through 24X7 tele-mental health counselling services as a digital component of the National Mental Health Programme (NMHP) with assured linkages. Launched on October 10, 2022, on World Mental Health Day, the Government of India (GoI) is unquestionably making a remarkable contribution towards raising awareness of mental health disorders worldwide and mobilizing efforts in support of mental health to advance global mental health. This commentary briefly discusses the status of mental health in India, recent mental health initiatives, the importance of Tele MANAS and provides an overview of its framework and functions to generate awareness and advocacy.

2. Correspondence article on the research protocol titled 'Towards Health Equity and Transformative Action on tribal health (THETA) study to describe, explain and act on tribal health inequities in India: A health systems research study protocol'

Research on indigenous (Tribal) populations is a step towards understanding the various tribal health issues and challenges and paves the way for addressing these issues. However, such populations are categorized as vulnerable and marginalized according to National ethical guidelines by Indian council of medical research. Hence, adequate measures are needed to be ensured by researchers while undertaking any research involving tribal populations to safeguard the rights of research participants. The purpose of this correspondence was to initiate a discussion among the researchers to give due consideration to research ethics especially when the research is being conducted on vulnerable populations and take adequate safeguard measures as suggested by National ethical guidelines to protect the rights of study participants.

3. National Public Health Act-a long-awaited legislation

Every country works to enhance the wellbeing of its people and minimize the risks associated with their health, and this science is called 'Public Health'. Public health professionals try to prevent problems from happening or recurring through various measures. To firm up their perpetual efforts, several attempts have been made in India to formulate a legislative framework, but none corresponded to the remerging concerns. This paper attempts to analyze various existing legislations pertaining to the subject of 'public health', to understand the need of the hour. It concludes by stating that in a country like India, though there have been consistent interventions to address public health concerns in the past, there exists a need for a contemporary framework to appropriately use modern legal tools for complex health challenges. The laws that are put forward today need to be rewritten and rationalized aligned with the present scenario. Effective implementation of public health legislations will potentially improve the public health landscape in India.

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