CINEFORUM
ISSN: 0009-7039
Vol. 66. No. S5, 2026 (Special Issue S5)

Technological and Task-Shifting Interventions to Mitigate Health Worker Shortages in Assam: Feasibility and Acceptability

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ABSTRACT

A shortage of the health workforce is one of the most critical challenges to health systems around the world and particularly in low and middle-income countries (LMICs) like India. According to the World Health Organization, a global shortfall of nearly 10 million health..
workers is estimated by 2030. Many Indian states suffer from chronic staff shortages of both doctors, nurses and allied health professionals, especially in rural and hard-to-reach areas.
Assam, a northeastern state of India, faces this challenge, as people residing in remote locations with rugged terrain do not have proper access to health care. It is also observed that, due to geographical barriers and poor healthcare infrastructure, many professionals relocate to places with better options. This creates a shortage of health care workers that affects in delivering primary health care services to the people.
This work tries to address the shortage of health care workers in Assam by exploring the potential and acceptability of three complementary approaches:
i) Use of technology (telemedicine, mobile health apps, electronic Health Records and artificial intelligence)
ii) Task-shifting from doctors to nurses to community health workers
iii) Digital health communication using trained Social Media Health Influencers or SMHIs.
We used secondary data from Scopus, PubMed, ResearchGate, Elsevier and WHO reports, National Health Systems Resource Centre and Directorate of Economics & Statistics, 2023 in this article to collect information to support our study. Reviews of the available evidence show that digital technologies increase access to care, aid in clinical decision-making, task shifting maintains primary health care delivery where there is a dearth of doctors and trained SMHIs lead to better-informed public. However, infrastructural challenges, low digital literacy, poor training and information risks still stand in the way.
The findings stress the importance of a wide, holistic system of intervention in terms of the deployment of technology, the efficient use of human resources, as well as regulated digital health, to enhance health service provisions in Assam.
Keywords: LMICs, health workforce, task shifting, telemedicine, mHealth, CHWs, AI diagnostics, social media health influencers, and digital health communication.

1.INTRODUCTION

Human Resources for Health (HRH) constitute the backbone of any health system in a country. It depends on the fair distribution of health workers across regions. This distribution has two main aspects: where health workers are located (spatial distribution) and the balance between different types of professionals, such as doctors, nurses and allied health staff (professional distribution).Despite global commitments to strengthen health systems, many low- and middle-income countries (LMICs), including India, continue to face serious shortages of skilled health workers (World Health Organization (WHO, 2016) due to the imbalance between spatial and professional distribution of health workers.
The World Health Organization (WHO) has established the minimum threshold of 44.5 doctors, nurses and midwives per 10,000 population in a country in order to meet the Sustainable Development Goals (SDGs).The SDG 3 is about ensuring healthy lives and promoting well-being for all at all ages. Sufficient health workforce density is instrumental in moving towards the SDG key targets of preventing maternal and child mortality, controlling communicable diseases and providing preventive services against non-communicable diseases. The WHO benchmark therefore serves not only as a technical standard, but also as

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an indicator of strategic policy for governments committed to the principles of Universal Health Coverage (UHC) and Sustainable Development.

These SDG levels are still not attained in some Low and Middle Income Countries(Scheffler et al., 2018). India is one such country that has not reached the required SDG benchmark level. Assam, a north eastern state of India, suffers from the same problem. Even if conditions have improved slightly over the years, Assam still has many gaps, particularly in rural areas with difficult geographical locations. Many health care posts remain vacant because the majority of health workers prefer to work in urban areas; space for education and training is limited, and many young professionals leave for better job conditions. This is an expression of what is happening with HRH problems seen across India (Saikia & Barman, 2015; Cometto et al., 2020)

Moreover, in Assam, there are 4,659 Sub-Centres (SCs), 946 Public Health Centres(PHCs) and 190 Community Health Centres (CHCs) in place, against the required 6,436 SCs, 1,050 PHCs and 262 CHCs (National Health Systems Resource Centres Health Dossier, 2021).

Similarly, in urban settings, there are 56 PHCs in place against the required 106, which accounts for a shortfall of 47.17%. These requirements are driven by population size. Based on past population growth trends and provisional projections, rural population may well exceed 30 million by 2025 (Directorate of Economics & Statistics, 2023). This comparison shows that infrastructure growth has failed to keep pace with demographic change, which increases the challenge of delivering equitable rural health services. This kind of poor infrastructure directly affects the number of health workers that are available (World Health Organization, 2016; Karan et al., 2021). It is assumed that this projection of population growth would require significantly more facilities: approximately 7,400 SCs, 1,200 PHCs and 300 CHCs in order to maintain equitable levels of coverage (NHSRC)

In the meantime, Assam is experiencing a rise in noncommunicable diseases, maternal health complications, infectious diseases, and lifestyle-related risk factors. Meanwhile, the health care system is becoming increasingly stretched ((ICMR-NIMS, 2021)).Under these conditions, relying only on traditional recruitment and expansion of the health workforce is unlikely to meet current and future needs.

In order to tackle this shortage of Health Care Workforce the following complementary interventions can be adopted:

Firstly, we can use new technologies to improve the accessibility of digital health solutions, including telehealth, mobile health (mHealth) and artificial intelligence (AI), which offer new promise to expand coverage, support frontline providers and augment decision-making. The use of telehealth is known to have helped in breaking down geographical barriers for chronic disease care (Doraiswamy, S.,et al (2020).AI approaches are now often used to enhance diagnostic accuracy in relation to a variety of high-burden diseases and particularly so in resource-limited settings. Studies show that AI-based systems help augment diagnostic accuracy in diseases such as diabetic retinopathy (Li et al., 2022), and pulmonary tuberculosis (Kazemzadeh et al., 2023). Diabetic retinopathy is a serious complication that damages blood vessels in the retina due to diabetes. AI tools that analyze fundus (eye) images are very accurate in detecting problems in the retina, including diseases like diabetic retinopathy. They can be used in community health centers where there are few eye specialists. By taking fundus photographs and analyzing them with AI, these tools help in early and accurate screening of eye diseases (Li et al., 2022)

Similarly, AI-based systems that analyze chest X-rays and digital radiography can effectively identify patterns related to tuberculosis (TB). Their performance is comparable to human experts, making them useful for quickly finding and prioritizing TB cases. This helps in faster diagnosis and timely decision-making, especially in areas with a high number of TB cases (Kazemzadeh et al., 2023).

Overall, these AI technologies improve disease monitoring in places with limited healthcare staff. They reduce delays in diagnosis, lower the chances of human error, and support non-specialist health workers in providing better care.

Secondly, we can opt for task-shifting interventions from doctors to nurses to community health workers. These task-sharing approaches enable community health workers and mid-level providers to perform selected clinical and preventive tasks and have demonstrated effectiveness in sustaining primary healthcare delivery in resource-constrained settings (Perry et al., 2014).This approach can be adopted in Assam by training the Accredited Social Health Activists (ASHAs) and Auxiliary Nursing and Midwifery (ANMs) to perform selected clinical and preventive tasks usually performed by doctors and medical officers. This task-sharing approach will lessen the workload of doctors and medical officers in places with health workforce scarcity.

Thirdly, we can use digital health communication by engaging trained Social Media Health Influencers or SMHIs. The Social Media Health Influencers (SMHIs) are emerging as important sources of public health communication in an increasingly media-driven society. They are particularly important among young and digitally active populations who may have limited access to traditional forms of health messages. They offer both opportunities and risks for SDG 3 (Good Health and Well-being) goals, as they can quickly share health information, communicate complex medical knowledge in consumer-friendly language and interact with an audience through shareable user-generated content. But at the same time, the largely unregulated nature of influencer ecosystems poses significant risks to information quality (Abidin, 2016; Freberg et al., 2011).The content shared by social media health influencers may not be scientifically proven and influenced by commercial interests or sponsorships.

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During public health emergencies, such as the COVID-19 pandemic, SMHIs have played a helpful role in guiding people's behavior. They have also helped address misinformation by sharing evidence-based recommendations provided by health authorities. When correct information is shared multiple times by trusted influencers people are more likely to remember it (Van Bavel et al., 2020; Vraga & Bode, 2021).

We can hereby summarise that digital technology, community task-sharing and better ways to communicate with one another through Social Media Health Influencers add up to form a multi-level approach that can help Assam address human resource gaps in primary healthcare across its diverse geographic locations. .

Research Questions

For a study on "Technological and Task-Shifting Interventions to Mitigate the Scarcity of Healthcare Workers in Assam,"some research questions were formulated to examine the extent of workforce shortages, the role of technology, the effectiveness of task-shifting strategies, and the challenges of implementation. However, the Main Research Question is, "How can technological and task-shifting interventions help mitigate the scarcity of healthcare workers in Assam?" The other Specific Research Questions related to it are

1. What is the current status of healthcare workforce scarcity in Assam, particularly in rural and underserved areas?
2. What technological interventions (e.g., telemedicine, mobile health applications, electronic health records, artificial intelligence, and digital health platforms) are currently being used to address healthcare workforce shortages in Assam?
3. To what extent have technological interventions improved access to healthcare services and reduced the burden on healthcare workers in Assam?
4. What task-shifting practices are being implemented in Assam, and which healthcare responsibilities are being delegated to community health workers, nurses, ASHAs, or other non-physician health personnel?
5. How effective are task-shifting interventions in improving healthcare delivery and addressing workforce shortages in Assam?
6. What challenges and barriers hinder the implementation of technological and task-shifting interventions in Assam's healthcare system?
7. How effective are Social Media Health Influencers in the promotion of health messages to the public?

2.REVIEW OF LITERATURE

There is abundant evidence worldwide that many low and middle-income countries (LMICs) suffer from severe and chronic shortages of health workers. These shortages are due to a complex interplay of social, economic and structural factors, which include inadequate training capacity, disparities in infrastructure and the absence of effective retention mechanisms. (Campbell et al., 2013; Scheffler et al., 2018). Findings from the World Health Organization (WHO, 2020) and evidence-based studies in Low and middle-income Sub-Saharan Africa, South Asian and Latin American countries suggest that these countries face problems like workforce maldistribution between urban and rural settings. Likewise, evidence from India and specifically Assam suggests that uneven distribution of doctors, nurses, and specialists worsens deficiencies in remote and disadvantaged populations (Saikia & Barman, 2015; Karan et al., 2021). Current reports show how new tools and technologies, task-shifting to community health workers, and digital communication through Social Media Health Influencers (SMHIs) are deployed to disseminate health information, support service delivery and partially tackle workforce gaps (WHO 2008; Abidin 2016; Vraga & Bode 2021)

2.1 Global Evidence on Health Workforce Shortages

Research from many countries consistently shows that low and middle income countries (LMICs) face long term shortages of trained health workers. These shortages are caused by long-standing institutional and financial problems (WHO 2016). Evidence from countries like Ethiopia, South Asia, Sub-Saharan Africa and Latin America highlights several factors contributing to health workforce shortages, such low investment in medical and nursing education, insufficient opportunities for Continuing Professional Development (CPD) and urban-biased deployment practices. In addition, many trained professionals leave these countries for high-income countries with higher salaries. These discrepancies give rise to
inequalities in service delivery, particularly in rural and underserved areas (Campbell et al. 2013; Scheffler et al., 2018; World Health Organization, 2016).

Campbell et al. (2013) highlight that a shortage of the health workforce is one of the main bottlenecks to achieving Universal Health Coverage (UHC). Their research suggests that, due to the scarcity of health workers, including doctors, nurses and midwives, the wait time for patients becomes longer. It increases higher clinical risks and deaths for patients and pregnant women alike.

According to the Global Health Workforce projections of the WHO 2030 it is estimated that, by 2030, there would be a shortfall of 18 million health workers, predominantly in low- and lower-middle-income countries.

Similarly, Scheffler et al. (2018) in their work, "Forecasting imbalances in the global health labor market and devising policy responses" projected that the global health workforce shortages could hit 15 million in 2030, due

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to population ageing, increasing numbers of Non-Communicable Diseases (NCDs), and inadequate training capacity in low and middle income countries (LMIC).

2.2 The Indian Context: Rural–Urban Imbalances and Regional Disparities

In India, there is still a regional imbalance in the deployment of health workers across the country. Karan et al. (2021) offer one of the most detailed country-wide evaluations, showing that the overall health worker density in this nation is still below the WHO standard. They find that almost two-thirds of all health workers are in urban areas and that 66 to 70 percent of the population of India also live in rural parts. As a result, some 0.7 million Bachelor of Medicine and Bachelor of Surgery (MBBS) doctors are available to serve only 33% of the population in rural regions, where unequal systems and poor infrastructure make it difficult to provide essential health care to these communities.

The pattern in Assam is broadly consistent with the national trend. The state still lags behind in several important indicators, such as the doctor population ratio and the presence of specialist services in Community Health Centres (CHCs) although there is incremental progress (Saikia & Barman 2015)in recent years.

Recent national surveys and statistics further illustrate the seriousness of these shortages. Based on the Rural Health Statistics (RHS) report of the Ministry of Health and Family Welfare (MoHFW2022–23), there is an acute shortage of specialist doctors in rural CHCs pan-India, with a shortfall of 79.9% compared to the existing specialists available at these centres. This requires 21,964 doctors, but only 4,413 doctors are available (Business Standard E-Paper 2023). This serious lack requires rural patients to travel great distances for both routine and urgent health care, which leads to delays in patient care and potential worsening of their overall health.

2.3. Technological Interventions and Digital Health Innovations

The technology and digital health interventions are becoming well-established tools in addressing staff shortfalls. Telemedicine networks provided throughout LMICs have shown

promising results by linking rural patients to specialist medical services, with reductions in travel time and financial outlay (Omboni, S. 2022). Moreover, the digital health care platform known as Electronic Health Records (EHR) has helped in the health care sector a lot. It has enhanced continuity of care by minimizing duplication and enabling better information availability and long-term follow-up (Kruse et al., 2018).

Mobile health (mHealth) apps are also beneficial for managing chronic condition management like diabetes, in pregnant women (Wei et al. 2023).

The national telemedicine platform eSanjeevani grew rapidly in India during the COVID-19 pandemic as a result of robust government and media promotion. By 2023, the service was already said to have benefited over 100 million patients (Ministry of Health and Family Welfare, 2023), thus demonstrating the power of digital health tools in low-resource settings.

AI-based diagnostic tools help decision-makers in low-resource settings diagnose more effectively and accurately, assisting clinical management with AI-powered algorithms. AI algorithms for diseases, such as tuberculosis (TB), diabetic retinopathy, and radiological anomalies, exhibit high diagnostic accuracy and help decrease the delays associated with shortages of specialists (Rajpurkar et al., 2022).

2.4. Task-Shifting and Strengthening of Community Health Workers

Task-shifting remains an important approach for mitigating health worker shortages. Some tasks that were previously restricted to doctors can now be shifted to nurses, midwives and community health workers (CHWs).

The introduction of new therapies like antiretroviral therapy (ART) as per WHO's (2008) guidelines needs well-trained health workers, a functional laboratory and supply system and robust information and referral systems. Providers need to be trained for initiating ART with continuous supervision. Strong laboratory services, reliable availability of drugs, and well-functioning data management systems are required in this setting to safely deliver high-quality ART and maintain patient retention.

Research from Ethiopia, Mozambique, Bangladesh, and India has shown that Community Health Workers (CHWs) can provide Maternal, Newborn and Child Health (MNCH) services in ways that are both acceptable to communities and effective for saving the lives of mothers, newborns and children when provided with sufficient training, supervision, and resources (Perry et al., 2014). In India, the work of Accredited Social Health Activists (ASHAs) has facilitated enhanced institutional deliveries, increased immunization rates and strengthened community-based health promotion activities (Oswal et al., 2020)

2.5 Digital Communication and the Role of Social Media Health Influencers (SMHIs)

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Recent research points to the increasing relevance of Social Media Health Influencers (SMHIs) as an approach to bridge communication gaps in strained health systems. In the context of COVID-19, some influencers have been at the forefront to fight misinformation and to popularize research about vaccinations and science (Van Bavel et al., 2020).

Vraga and Bode (2021) reach similar conclusions in highlighting the need to establish processes, systems or infrastructure to address misinformation and advance scientifically proven digital health promotion

The health influencers become very close and trustworthy because they share intimate stories regularly with the audiences who are digitally inclined. But academics warn that all the content shared by the influencers may not be reliable. Unverified or false health content poses inordinate risks. Green et al. (2025) opines that ethical standards, appropriate measures with public health departments and stronger regulatory rules should be demanded to ensure the safety and integrity of all online health content.

Simlarly Vraga and Bode (2021) argue that misinformation cannot be stopped randomly. It will require proper systems such as rules, tools and organized methods to identify, fact-check and correct false information. It is very important that scientifically proven content is disseminated over the net to promote trustworthy information online for the benefit of the followers.

Conclusion Of Review Of Literature

Studies have demonstrated that technology-based and task-shifting interventions can be useful in addressing health worker shortages. Telemedicine, digital tools and communication systems may help extend specialist care to distant locations, and delegating certain tasks to community health workers or mid-level providers may keep primary services afloat where doctors are scarce. But reports from Assam say that such methods work only if there is good internet connectivity and equipment, user-friendly technology, adequate training, effective supervision and community trust in non-doctor providers. (Saikia, D., & Barman, H.

2015,National Health Mission, Assam2021,WHO. 2020).Finally, we can conclude that the interventions mentioned in the literature are helpful and have much to contribute to healthcare improvement. However, much more local-level research is needed both in Assam and elsewhere. This research needs to focus on key areas including the cost of these interventions, care quality measures and impact on patients' health outcomes. With better local evidence, Assam can ensure that its healthcare system is based on what is practical and effective within the context of the State.

3.METHODOLOGY

This study follows a narrative overview approach, which means it collects and explains information from already available secondary sources such as academic articles, books and policy documents. To find relevant materials, we searched well-known academic databases like Scopus, PubMed, Elsevier and ResearchGate.

The government publications of the National Health Mission Assam, the Ministry of Health & Family Welfare and the World Health Organization were also reviewed. A set of keywords

like "health workforce Assam,""task shifting India," "telemedicine Assam,""mHealth CHWs," "AI diagnostics LMICs,""social media health influencers India " and " digital health

communication"were used to guide the search.

Studies were included if they were published in English and focused on workforce shortages or digital task shifting interventions within India or LMIC settings. Studies were excluded if there were no empirical evidence and were conducted only among high-income countries. All eligible data was reviewed and thematically synthesized across five domains: workforce deficits, technological interventions, task-shifting strategies, SMHI communication, feasibility and acceptability

Methodology Table

The table below shows the steps followed to conduct the review.

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Step	Description	Sources / Tools Used
1. Research Design	Narrative review to collect and summarize secondary data.	–
2. Database Search	Searched academic literature using selected keywords.	Scopus, PubMed, Elsevier, ResearchGate
3. Policy Document Review	Reviewed reports and guidelines from government and international bodies.	NHM Assam, NHSRC, MoHFW India, WHO
4. Keywords Used	Keywords helped identify relevant studies.	"health workforce Assam," "task-shifting India," "telemedicine Assam," "mHealth CHWs," "AI diagnostics LMICs," "SMHIs India," "digital health communication"
5. Inclusion Criteria	Studies in English; related to workforce shortages or digital/task-shifting interventions; focused on India or LMICs.	–
6. Exclusion Criteria	Studies from high-income countries only; studies without empirical evidence.	–
7. Screening & Selection	Selected evidence-rich studies; removed duplicates; cross-checked findings.	Manual review
8. Thematic Categorization	Findings grouped into major themes.	Workforce shortages, technology interventions, task-shifting, SMHIs, feasibility, acceptability
9. Synthesis	Compared, summarized, and interpreted the findings to identify trends and gaps.	Narrative synthesis

4.FINDINGS

The reviewed studies reveal that Assam, like many other states in India, is still grappling with an acute shortage of health workers, especially in rural and difficult-to-reach areas. Most of these shortages are for doctors; some are for nurses, pharmacists, and laboratory technicians. Many sanctioned posts for medics such as anesthetists and therapists have not been filled.Alongwith it many clerical posts are also lying vacant. Such scarcities are compounded by geographical and infrastructural difficulties, as well as the difficulty in recruiting and retaining qualified staff. At such a juncture, digital supports are showing promise in combating the challenges. The table below shows the benefits and challenges of technological interventions.

Table 1: Technological Interventions in Assam

Intervention	Benefits	Challenges
Telemedicine	Remote specialist access	Connectivity gaps
mHealth Tools	Reduces paperwork, improves follow-up	Need for smartphone training
AI Diagnostics	Useful for TB & retinopathy screening	Requires strong digital systems

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Telemedicine services have been added in many districts under the National Health Mission (NHM) Assam and are highly feasible; however, poor internet connectivity and limited digital literacy remain significant barriers to complete implementation. As indicated in the table above, mHealth devices, particularly those used by ASHAs and ANMs have been rated highly for their effectiveness, simplicity, and ease of use, reduction of paper work and enabling easier follow-up.

The delegation of tasks has a central place in the health service delivery system of Assam. .The table below shows how tasks are shifted to mitigate the scarcity of health workers.

Table 2. Task-Shifted Roles in Assam

Task	Doctor Role	Shifted To
Antenatal counselling	Doctor/Nurse	ANM/ASHA
Immunization mobilization	Medical Officer	ASHA/AWW
TB adherence follow-up	Doctor	ASHA
NCD screening	Medical Officer	CHW/ANM

ASHAs and ANMs continue to conduct maternal health promotion, immunization mobilisation and TB treatment support. With more training, mid-level health providers (MLHPs) may extend clinical care to provide similar models as the successful ones in

Ethiopia, Bangladesh and other LMICs. The table below shows the task-shifted roles in Assam

Table 2(i) Task-Shifted Roles in Assam

Role	Current Functions	Potential Expanded Roles
ASHA	Maternal–child health, immunization mobilization	Digital health promotion
ANM	Antenatal care, record-keeping	Tele-consultation support
Mid-level Provider	Basic clinical care	Advanced primary-level clinical duties

Social Media Health Influencers (SMHIs) are increasingly becoming significant public health communicators, particularly among young people. In the context of COVID-19, influencers considerably contributed to vaccination awareness-raising campaigns, despite misinformation being a major challenge and underscoring the importance of regulation. Table 3 shows the potential role of Social Media Health Influencers as Health Workers

Table 3: SMHI Potential Roles

SMHI Role	Opportunities	Risks
Awareness Campaigns	High reach among youth	Misinformation
Myth Busting	Fast, interactive communication	Lack of oversight
Youth Engagement	Builds trust through reliability	Commercial influence

5.DISCUSSION

The interpretation of the research question, as per the relevant studies, is that technology, task-shifting and SMHI-centred health messages synthesize to form an interconnected system to mitigate the implications of human resource scarcity. Telemedicine can mitigate the need for specialist presence in remote localities; mHealth tools

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strengthen the effectiveness of frontline workers; AI aids screening and training processes and Electronic Health Records (EHRs) decrease administrative overheads. Task-shifting enables the provision of needed services in the absence of physicians. The SMHIs reinforce correct health messages and promote digital approaches. But obstacles like poor internet access, insufficient training, low levels of digital literacy and misinformation must be overcome for the implementation of these technological interventions. The feasibility of these interventions will depend on both infrastructural and financial/technical support. In both study areas, feasibility depends on strengthening infrastructure and ensuring long-term maintenance of financial and technical support. These short-term solutions now need to be integrated into long-term planning by
policymakers. This will require not only clear action plans at the government level, but also effective implementation across different departments, including health, telecommunications, and community-based services. SMHIs should adopt codes of practice in their relationships with partners to guarantee that content is correct and reliable.

Another thing to keep in mind is that services are well understood when they are provided in local languages so that people trust them and know how to use them. Some communities, particularly in rural areas, might be hesitant to adopt online consultations or respond to digital health advice. Health workers, local leaders and SMHIs need to make these tools easy to understand and demonstrate how they can be of use in daily life. Regular awareness campaigns, community exhibitions, and local organisation engagement can help nudge people of all ages to be more comfortable in accessing digital health services. If local people experience practical gains, like faster health advice, less time walking across town or better tracking of chronic illness monitoring, they are more likely to become habitual users. This greater integration may lead to the overall improvement in health access. In both the study areas, feasibility relies on infrastructure development and the sustainability of technical and financial support in the long term. Policymakers now need to bring these short-term solutions into long-term planning. This will need not only clear government action plans, but also effective implementation across departments, including health, telecommunications and community-support services. SMHIs must implement a code of practice in their relationships with partners to ensure the accuracy and reliability of any content.

Furthermore, certain communities, especially in rural areas, may be resistant to seeking online consultation or heeding digital health advice. In such cases, if services are provided in local languages, then people will trust them and learn how to use them easily. Health workers, community leaders and SMHIs have to make these tools intelligible and show how they can be useful in everyday life. Regular awareness campaigns, community exhibitions and local organisation engagement can help raise awareness among people of all ages to be more comfortable accessing digital health services. If ordinary people gain tangible benefits from using it, such as faster health advice, less time spent walking across town or better tracking of chronic illness monitoring, by spending less money, they will become habitual users of online health services. Such a well-knit structure will be beneficial in enhancing health services for all in the future.

6.CONCLUSION

Assam, a northeastern state of India, suffers from severe health workforce shortages, especially in rural areas, but it is likely that new approaches are emerging that may lead the way to address these gaps. Technological interventions like telemedicine, mHealth, EHRs, AI tools could reach where specialists are in short supply. To lessen the workload of the burdened doctors and medical officers of regional hospitals, they should be entrusted to handle only essential services, while ASHAs, ANMs and CHWs should be given more authority and training to handle basic frontline tasks. Trained and licensed Social Media Health Influencers can also be utilised to reinforce communication, knowledge and community involvement. When supported by infrastructure, training and regulation, the combination of these strategies is feasible and acceptable. With continued investment and more robust planning from government departments, hospitals, communities and even licensed online health influencers, Assam can begin moving toward a health system that is more resilient, equitable and able to meet the challenges of today and tomorrow. With collaboration and a long-term commitment, the state can create a health system that better serves people, especially those living in rural and hard-to-reach areas.

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