Review Article

# Reduced burden on urban hospitals by strengthening rural health facilities: Perspective from India

**Mansi Arora**

*Department of Biotechnology, Government College for Girls, Gurugram, Haryana, India*

## Abstract

In India, rural-urban health disparities have been persisting over a period. Migration of patients from rural to urban is an integral part of population dynamics thereby creating an additional burden on urban hospitals. Over the decade, India has made significant advances in health in reducing the rural-urban gap. The article highlights how the strengthening of rural healthcare facilities has reduced the burden of urban hospitals. Secondary data on the usage of public and private healthcare facilities from two rounds of the National Family Health Survey (NFHS) conducted in 2016 and 2021 and the Rural Health Statistics 2021-2022 were analyzed. The proportion of beneficiaries seeking care from public health facilities has increased from 41.9% to 45.7% in rural areas and 31% to 35.3% in urban areas between 2014 to 2017. The institutional deliveries have increased from 56% to 69.2% in rural areas and from 42% to 48.3% in urban areas. The State and local level interventions such as the upgradation of existing physical infrastructure, human resources, regular supply of medicines and consumables, development of referral linkages, patient transportation, and enhancing community participation have strengthened the rural healthcare system. Adequate utilization of the resources is crucial to addressing the lag and alleviating the rural-urban divide.

**Keywords:** Ayushman Bharat, health and wellness centers, primary healthcare, rural healthcare, universal health coverage

## Introduction

Nearly 65% of India's population lives in rural areas.[1] Accessibility, availability, and affordability of healthcare services continue to be the most frequently identified rural health priority. With Public Health and Hospital, being a state subject, it is States'/UTs' responsibility to strengthen the public healthcare system, including quality healthcare and advanced treatment and diagnostic facilities. However, the migratory population leads to over-utilization or under-utilization of resources. Under the National Health Mission (NHM), financial and technical support is provided to States/UTs to strengthen their healthcare systems, including setting up/upgrading public health facilities and augmenting health human resources for the provision of equitable, affordable, and quality healthcare with modern treatment methods and diagnostic facilities. The National Health Policy, 2017 recommended an important change from a selective to a comprehensive primary health care package and the establishment of Health and Wellness Centers.[2] Translating the policy intent into budgetary realities, Ayushman Bharat was launched in 2018 with the goal to achieve Universal Health Coverage. It has two complementary components, the first one being establishment of Ayushman Bharat – Health and Wellness Centers (AB-HWCs), recently renamed Ayushman Arogya Mandirs. As on 02.12.2023, a total of 163,020 Ayushman Arogya Mandirs have been operationalized in India by transforming existing Sub-Health Centers (SHCs) and Primary Health Centers (PHCs) with a principle of time to care of not more than 30 minutes.[3] Comprehensive Primary Health Care spans preventive, promotive, curative rehabilitative, and palliative care, which is universal and free to

**Address for correspondence:** Dr. Mansi Arora, Government College for Girls, Sector-14, Gurugram - 122 001, Haryana, India.
E-mail: mansi2610@gmail.com

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users. It focuses on wellness and delivers an expanded range of services closer to the community. The expanded range of services at AB-HWC is a family-centric-based approach. These include Reproductive, Maternal, Newborn, Child and Adolescent Health Plus Nutrition (RMNCAH + N), communicable diseases, non-communicable diseases, ophthalmology, ear, nose, and throat (ENT) care, oral health, mental health, elderly care, palliative care, and emergency medical services, thus providing services in a life cycle approach from womb to tomb. This is complemented through outreach services, mobile medical units, health camps, home visits, and community-based interactions. The second component is the Pradhan Mantri Jan Arogya Yojana (PM-JAY), which is a health insurance scheme that provides a cover of Rs. 5 lakhs per year to over 10 crore economically disadvantaged families for seeking secondary and tertiary care.[3] The present article highlights the positive transformation being brought about by these initiatives in strengthening the rural healthcare system that can go a long way in reducing the burden on urban hospitals and tertiary health care centers.

## National Rural Health Mission

National Rural Health Mission (NRHM) was launched in 2005 to provide accessible, affordable, and quality health care to the rural population, especially to vulnerable sections of the society. In 2013, the NRHM was subsumed under the National Health Mission (NHM) as its Sub-Mission, along with National Urban Health Mission (NUHM) as the other Sub-Mission. The thrust of the mission is on establishing a fully functional, community-owned, decentralized health delivery system with inter-sectoral convergence at all levels to ensure simultaneous action on a wide range of determinants of health. The objectives of the Mission are (i) reduction in child and maternal mortality; (ii) universal access to public services for food and nutrition, sanitation, and hygiene and universal access to public health care services with an emphasis on services addressing women's and children's health and universal immunization; (iii) prevention and control of communicable and non-communicable diseases, including locally endemic diseases; (iv) access to integrated comprehensive primary health care; (v) population stabilization, gender, and demographic balance; (vi) revitalizing local health traditions and mainstream AYUSH; and (vii) promotion of healthy lifestyle.[4]

## Access to Health Services

The public healthcare system in India is complex and challenging, with Health and Wellness Centers at the grassroots level and District Hospitals, with robust referral linkage, to offer comprehensive primary and secondary care services to citizens.[5] There has been a significant increase in public health facilities in rural India from 2005 to 2022 [Table 1] and usage of healthcare facilities [Table 2]. The health systems strengthening efforts of NHM have increased the proportion of beneficiaries seeking care from public health facilities from 41.9% to 45.7% in rural areas and from 31% to 35.3% in urban areas between 2014 and 2017. The institutional deliveries have increased from 56% to 69.2% in public hospitals in rural areas and from 42% to 48.3% in urban areas.[6,7]

**Table 1: Number of healthcare facilities in rural India[1]**

| Type of Facility | Status on 2005 | Status on 2022 |
|---|---|---|
| Sub-Health Centers | 146026 | 161829 |
| Primary Health Center | 23236 | 31053 |
| Community Health Center | 3346 | 6064 |
| District Hospital | 635 | 767 |

**Table 2: Usage of healthcare facility in India in 2014 vs 2017[6,7]**

| | 2013-2014 | | 2017-18 | |
|---|---|---|---|---|
| | Public facilities | Private facilities | Public facilities | Private facilities |
| Rural | 41.9% | 58.1% | 45.7% | 54.3% |
| Urban | 31% | 68% | 35.3% | 64.7% |

## Initiatives leading to health equity

Extensive efforts have been undertaken to strengthen facility-based (and community-based) primary and secondary healthcare services as a way of providing affordable basic curative and preventive services. Special emphasis has been laid on availability, accessibility, affordability, and quality healthcare, which are considered as the major barriers. Ayushman Bharat – PMJAY is a government-funded health insurance scheme to ensure quality health care services without causing financial burden to 10.74 crores poor, deprived rural families and identified occupational categories of urban workers' families.[8] It offers a benefit cover of Rs. 5 lakh per family per year (on a family floater basis) for a range of medical procedures and treatments at empaneled hospitals Some of the other important initiatives undertaken by the government to reduce Out-of-Pocket Expenditure (OOPE) through health system strengthening are (i) Ayushman Arogya Mandirs, (ii) Free Drugs Service Initiative, (iii) Free Diagnostics Service Initiative, (iv) Pradhan Mantri National Dialysis Program, (v) Ambulance Services under NHM, (vi) Pradhan Mantri Bhartiya Jan Aushadhi Kendras (generic medicine stores), (vii) Janani Shishu Suraksha Karyakram (JSSK), (viii) Janani Suraksha Yojana (JSY), (ix) Rashtriya Bal Swasthya Karyakram (RBSK), (x) Free Treatment for TB under RNTCP, (xi) Pradhan Mantri Surakshit Matritva Abhiyav, and so on.

India's economy is growing well, rural infrastructure is improving, and it has access to technology, all of which have the potential to transform the health status of citizens in the country. In the past 2 decades, the growth of smaller towns or peri-urban areas has contributed significantly to the réduction in the burden on urban hospitals in India by spurring local economic growth.[9] According to the National Health Accounts (NHA) Estimates for India 2019–20, the Government Health Expenditure (GHE) as a share of GDP has increased from 1.13% in 2014–15 to

1.35% in 2019–20 and as a share of General Government Expenditure (GGE) has increased from 3.94% to 5.02%.[10] Government health spending grew by 12% between 2018–19 and 2019–20, more than doubling the 5% growth rate between 2017–18 and 2018–19. While the share of GHE in total health expenditure (THE) increased from 29% (2014–15) to 41.4% (2019–20), the OOPE as a share of THE has decreased by 16% from 64.2% to 48.2% for the same time period. This continuous decrease in OOPE in overall health expenditure indicates the progress made in ensuring financial security and universal health coverage. The increased share of primary healthcare in Current Government Health Expenditure (CGHE) from 51.3% (2014–15) to 55.9% (2019–20) is also in line with the National Health Policy 2017 and aims at strengthening primary healthcare in the country as it is the fundamental base on which secondary and tertiary services can be supported efficiently.[10]

## Ayushman Arogya Mandirs

Ayushman Arogya Mandirs (AAMs) play a crucial role in providing comprehensive primary healthcare services, especially in screening, prevention, control, and management of communicable and non-communicable diseases. The following are the key components of AAMs that have significantly contributed to improved health outcomes in the primary healthcare setting in the country, especially in rural areas:

(i) **Expanded service delivery:** At the AAMs, the package of comprehensive primary health care services is being expanded to go beyond reproductive and child health to include care for non-communicable diseases, palliative and rehabilitative care, oral care, eye care, and ear, nose, and throat (ENT) care, elderly care, mental health, and first-level care for emergencies and trauma.[3] Several training modules on expanded packages of services have been developed for different caders of the AAM team. This includes medical officers, staff nurses, community health officers, multi-purpose health workers, and ASHAs. All states/UTs have started training of the primary healthcare team on expanded packages of services.

(ii) **Expanding Human Resources – Mid-Level Healthcare Providers (MLHPs) and Multi-skilling:** To improve the delivery mechanism, a new cader of healthcare providers is introduced with the educational background of BSc in Community Health or Nursing (GNM or B.Sc.) or an Ayurveda graduation with due certification in public health. These mid-level health care providers are designated as Community Health Officers (CHOs). The CHO at SHC carries out clinical, public health, and managerial and leadership roles.[11]

(iii) **Medicines and expanding diagnostics:** The number of essential medicines at PHC-HWCs has been increased to 172 and the number of essential diagnostic services to 63, while at the SHCs, the essential medicine list has been expanded to 105 and the essential diagnostic list to 14.[12] The CHOs at the SHCs dispense medicines based on treatment plans initiated by the medical officer at the PHC.

(iv) **Telehealth:** The AAMs provide teleconsultation services through 'eSanjeevani', where the CHO and medical officers shall link to a specialist at the secondary and tertiary care centers for enabling specialist services for patients closer to home and ensuring continuum of care. As on 02.12.2023, a total of 183,661,445 teleconsultations have been conducted at the 112,093 spokes (AAMs) operationalized HWCs.[13]

v) **Screening at AAMs:** To enable screening and early detection of non-communicable diseases amongst frontline-health workers, Fit Health Worker Campaign was initiated at these centers. Frontline health workers not only are involved in ensuring essential services at these centers but also play a crucial role in community-based surveillance and management of pandemic prevention and control activities. As on June 30, 2021, about 11.13 crore screenings for hypertension, 9.36 crore screenings for diabetes, and 21.91 crore screenings for three common cancers (oral, breast, and cervical cancer) have been conducted.[14]

(vi) **Community mobilization and health promotion:** The AAM team works closely with communities enabling the empowerment of individuals, families, and communities with knowledge and skills to take responsibility for their own health. There is a focus on improving health literacy through inter-personal communication and media (including social media) usage for the promotion of healthy lifestyles – healthy diet, yoga, exercise, tobacco cessation, and self-care. Over 80 lakh wellness sessions have been conducted at AAMs as on September 14, 2021.[12]
The Food Safety and Standards Authority of India (FSSAI) initiated the Eat Right India movement for creating a culture of safe, healthy, and sustainable food for all. The movement is aligned to the National Health Policy 2017 with its focus on preventive and promotive healthcare for all citizens of the country. The Eat Right toolkit is provided in all PHCs to promote a healthy diet.[15] A total of 42 health calendar days are celebrated by each AAM apart from wellness-related activities like Yoga, Zumba, and meditation, which enable not only improved physical health but also the mental well-being of the community.

(vii) **Community ownership:** Jan Arogya Samiti (JAS), a facility-based multi-stakeholder committee, led by the Panchayati Raj Institution (PRI) member of the area, is being established to enhance ownership of the community on AAMs. To ensure the capacity of Jan Arogya Samiti for optimum functioning, training is organized in the cascade model.

(viii) **Infrastructure augmentation:** All AAMs are provided space for out-patient care for dispensing medicines, diagnostic services, adequate space for display of IEC, including audio-visual aids, and wellness activities, including the practice of Yoga and physical exercises.

(ix) **IT-enabled reporting and data management:** The AAM portal was developed to capture progress and is being used in all the states. An App version of the portal has also been developed to enable geo-tagging of the AAMs and entering the daily, service delivery parameters by the

frontline healthcare workers. The AAM teams are equipped with IT equipment, tablets at SHCs and laptop/desktop, at the PHC/UPHC level to create an electronic health record of the population covered.

(x) **Performance-linked payments for community health officers and team-based incentives:** CHO salary is blended with part fixed and part linked to performance as the team leader of SHC-HWC. To foster better co-operation and team spirit, monthly team-based incentives have been introduced at HWCs.

(xi) **Partnerships for knowledge and implementation:** Medical colleges are adopting and providing mentorship to at least 10 AAMs in rural and urban areas. They are engaged for the capacity development of the teams, quality enrichment in CPHC delivery, ensuring a continuum of care, and contributing to CPHC policy by generating evidence with high-quality research.

## Strengthening the infrastructure and human resources

There has been significant improvement in the infrastructure facilities with an increase in number of beds in the government hospitals as well in the community health centers (CHCs) from 0.44 in 2005 to 0.7 in 2019 per 1000 population. The focus on infrastructure improvement resulted in the construction of more than 46,000 health facilities, with a significant increase in the total number of first referral units (FRUs) (940 in 2005 to 3057 in 2019).[16] The availability of manpower is one of the important prerequisites for the efficient functioning of Rural Health Services. The number of allopathic doctors at PHCs has increased from 20,308 in 2005 to 30,640 in 2022, which is about 50.9% increase.[1] An additional 200,000 healthcare providers [from auxiliary nurse midwives (ANMs) to specialists' doctors] and 850,000 village-level ASHA in rural areas were recruited during the NHM period.[1,16] There is strong evidence to show that increased infrastructure and increased human resources have had a positive effect on improving the availability, affordability, and accessibility of healthcare services in the rural areas.[17]

# Conclusion

There is overwhelming evidence that family-centered care that takes a population health approach and that delivers comprehensive and continuing care helps improve the healthcare of rural populations. Such care integrates preventive and promotive care and is delivered by health providers (doctors, nurses, and other health professionals) who are trained to manage a range of conditions: from safe childbirths to cardiovascular conditions and respiratory conditions. Countries with similar contexts and settings as India are learning from the country's approach toward strengthening primary healthcare; establishing linkages with secondary and tertiary care services. A sporadic approach to uplifting rural healthcare infrastructure is an exercise in futility. A robust healthcare system can be built in rural areas only with ongoing commitment and consistent efforts. Implementing the steps discussed here will bear fruitful results in the long run and help build a strong, comprehensive healthcare system.

Evidence suggests that improved living and working conditions, better salaries, use of disruptive technology, cooperative arrangements with other rural health facilities, and continued training help doctors and nurses to provide high-quality care in rural areas. Building and empowering primary healthcare teams is a key factor in ensuring the strengthening of the rural healthcare ecosystem and reducing burden on the urban healthcare system. The primary care team should be adequately supported through regular skilling, incentives, and supervision. Appropriate technological solutions should be provided to help them deliver quality healthcare.[18] These teams should have functional linkages with higher levels of healthcare.

**Higher investments in rural healthcare:** Within India, there is clear evidence that states that spend higher proportions of their budgets on healthcare have better health outcomes than those who spend less.[19] The State Funded Health Insurance model providing insurance cover to all eligible populations in the state should be encouraged for achieving universal health coverage, including financial risk protection, access to quality essential healthcare services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all meeting the SDG Target 3.8.

**Public–Private Partnerships (PPPs)**- can transform the Indian rural healthcare system in more ways than one, with a long-term sustainable model. With the burgeoning population in our country, government efforts alone will not suffice in strengthening the healthcare system. PPPs can also help in overcoming the limitations of technological, educational, human resource, and financial aspects. While the government can frame policies around rural healthcare infrastructure, private players can ensure these are properly implemented. Such long-term partnerships increase access to healthcare, particularly in difficult-to-reach rural areas, as the private players' expansive skills, experience, and finance can help create innovative solutions.

## Collaboration between health and education sectors

Schools can play a vital role in inculcating healthy habits in students that will last a lifetime. Recognizing this, Ayushman Bharat's School Health and Wellness Programme was launched in February 2020 and is being implemented in districts (including aspirational districts) at government and government-aided schools. Every school will have two teachers, ideally a male and a female, who will be trained as "Health and Wellness Ambassadors." These teachers will share health promotion and disease prevention information with students on 11 different themes through engaging and interactive activities for an hour each week. School children in turn are selected to serve as Ayushman messengers for spreading important health messages such as immunization and hand washing to the families.[11,20] The

successful implementation of this Programme will go a long way in improving the health and well-being of students and the community as a whole. Also, the schools and higher education institutes can play an important role in other Government initiatives such as Anaemia Mukt Bharat (Anaemia-free India).

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## Conflicts of interest

There are no conflicts of interest.

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