

Healthcare in India

India's constitution guarantees free healthcare for all its citizens,^[1] but in practice the private healthcare sector is responsible for the majority of **healthcare in India**, and most healthcare expenses are paid out of pocket by patients and their families, rather than through insurance.^[2] All government hospitals are required to provide healthcare free of cost,^[1] and such hospitals exist in each district headquarters in most states.

World health statistics from the 2000s have indicated that India has the highest out of pocket private healthcare costs for families, among many other comparable developing nations including Pakistan, Sri Lanka, and Mexico.^[2] Penetration of health insurance in India is low by international standards. Private health insurance schemes, which constitute the bulk of insurance schemes availed by the population, do not cover costs of consultation or medication. Only hospitalisation and associated expenses are typically covered.

Contents

Healthcare system

- Public healthcare
- Private healthcare

Rural health

- Access to healthcare in rural South India
- Access to healthcare in rural North India

Urban health

- Rapid urbanisation and disparities in urban India
- Child health and survival disparities in urban India
- Maternal healthcare disparities in urban India
- High levels of undernutrition among the urban poor

Quality of healthcare

- South India
- North India

See also

References

Healthcare system

Public healthcare

Public healthcare is free for those below the poverty line.^[3] The public health care system was originally developed in order to provide a means to healthcare access regardless of socioeconomic status.^[4] However, reliance on public and private healthcare sectors varies significantly between states. Several reasons are cited for relying on the private rather than public sector; the main reason at the national level is poor quality of care in the public sector, with more than 57% of households pointing to this as the reason for a preference for private health care.^[5] Most of the public healthcare caters to the rural areas; and the poor quality arises from the reluctance of experienced healthcare providers to visit the rural areas. Consequently, the majority of the public healthcare system catering to the rural and remote areas relies on inexperienced and unmotivated interns who are mandated to spend time in public healthcare clinics as part of their curricular requirement. Other major reasons are distance of the public sector facility, long wait times, and inconvenient hours of operation.^[5]

Different factors related to public healthcare are divided between the state and national government systems in terms of making decisions, as the national government addresses broadly applicable healthcare issues such as overall family welfare and prevention of major diseases, while the state governments handle aspects such as local hospitals, public health, promotion and sanitation, which differ from state to state based on the particular communities involved.^[4] Interaction between the state and national governments does occur for healthcare issues that require larger scale resources or present a concern to the country as a whole.^[4]

Following the 2014 election which brought Prime Minister Narendra Modi to office, Modi's government unveiled plans for a nationwide universal health care system known as the National Health Assurance Mission, which would provide all citizens with free drugs, diagnostic treatments, and insurance for serious ailments.^[6] In 2015, implementation of a universal health care system was delayed due to budgetary concerns.^[7]

Private healthcare

With the help of numerous government subsidies in the 1980s, private health providers entered the market. In the 1990s, the expansion of the market gave further impetus to the development of the private health sector in India.^[8] After 2005, most of the healthcare capacity added has been in the private sector or in partnership with the private sector.

According to National Family Health Survey-3, the private medical sector remains the primary source of health care for 70% of households in urban areas and 63% of households in rural areas.^[5] The study conducted by IMS Institute for Healthcare Informatics in 2013, across 12 states in over 14,000 households indicated a steady increase in the usage of private healthcare facilities over the last 25 years for both Out Patient and In Patient services, across rural and urban areas.^[9] In terms of healthcare quality in the private sector, a 2012 study by Sanjay Basu et al., published in *PLOS Medicine*, indicated that health care providers in the private sector were more likely to spend a longer duration with their patients and conduct physical exams as a part of the visit compared to those working in public healthcare.^[10]



Narayana Health hospital facility in Bangalore, India

However, the high out of pocket cost from the private healthcare sector has led many households to incur Catastrophic Health Expenditure (CHE), which can be defined as health expenditure that threatens a household's capacity to maintain a basic standard of living.^[11] One study found that over 35% of poor Indian households incur CHE and this reflects the detrimental state in which Indian health care system is at the moment.^[11] With government expenditure on health as a percentage of GDP falling over the years and the rise of private health care sector, the poor are left with fewer options than before to access health care services.^[11] Private insurance is available in India, as are various through government-sponsored health insurance schemes. According to the World Bank, about 25% of India's population had some form of health insurance in 2010.^[12] A 2014 Indian government study found this to be an over-estimate, and claimed that only about 17% of India's population was insured.^[13] Private healthcare providers in India typically offer high quality treatment at unreasonable costs as there is no regulatory authority or statutory neutral body to check for medical malpractices. On 27 May 2012, the popular actor Aamir Khan's program *Satya Mev Jayate* did an episode on "Does Healthcare Need Healing?" which highlighted the high costs and other malpractices adopted by private clinics and hospitals. In response to this, Narayana Health plans to conduct heart operations at a cost of \$800 per patient.^[14]

Rural health

The National Rural Health Mission (NRHM), was launched in April 2005 by the Government of India. The goal of the NRHM was to provide effective healthcare to rural people with a focus on 18 states which have poor public health indicators and/or weak infrastructure.^[15] It has 18,000 ambulances and a workforce of 900,000 community health volunteers and 178,000 paid staff.^[16] Other regional programs such as the Rajiv Aarogyasri Community Health Insurance Scheme in Andhra Pradesh, India have also been

implemented by state governments to assist rural populations in healthcare accessibility, but the success of these programs (without other supplemental interventions at the health system level) has been limited.^[17]

In addition, only 2% of doctors are in rural areas - where 68% of the population live.^[1] Studies have indicated that the mortality risks before the age of five are greater for children living in certain rural areas compared to urban communities.^[18] Full immunization coverage also varies between rural and urban India, with 39% completely immunized in rural communities and 58% in urban areas across India.^[18] Inequalities in healthcare can result from factors such as socioeconomic status and caste, with caste serving as a social determinant of healthcare in India.^[18]



A community health centre in Kerala.

Access to healthcare in rural South India

A 2007 study by Vilas Kovai et al., published in the *Indian Journal of Ophthalmology* analyzed barriers that prevent people from seeking eye care in rural Andhra Pradesh, India.^[19] The results displayed that in cases where people had awareness of eyesight issues over the past five years but did not seek treatment, 52% of the respondents had personal reasons (some due to own beliefs about the minimal extent of issues with their vision), 37% economic hardship, and 21% social factors (such as other familial commitments or lacking an accompaniment to the healthcare facility).^[19]

Recent research studies have also examined the willingness of people in rural South India to pay for health care services, and how this affects the potential access to healthcare.^[20] A study by K.Ramu, published in the *International Journal of Health* (2017) specifically compared the willingness of people to pay for various health care services in rural versus urban districts of Tamil Nadu.^[20] The findings indicated that willingness to pay for healthcare services of all types were greater in the urban areas of Tamil Nadu compared to the rural areas, attributing this statistic to the greater awareness of healthcare importance in urban areas.^[20] In addition, as educational level increased in the rural districts of Tamil Nadu, the willingness to pay for healthcare services also increased, indicating the link between education and access to healthcare.^[20]

The role of technology, specifically mobile phones in health care has also been explored in recent research as India has the second largest wireless communication base in the world, thus providing a potential window for mobile phones to serve in delivering health care.^[21] Specifically, in one 2014 study conducted by Sherwin DeSouza et al. in a rural village near Karnataka, India, it was found that participants in community who owned a mobile phone (87%) displayed a high interest rate (99%) in receiving healthcare information through this mode, with a greater preference for voice calls versus SMS (text) messages for the healthcare communication medium.^[21] Some specific examples of healthcare information that could be provided includes reminders about vaccinations and medications and general health awareness information.^[21]

Access to healthcare in rural North India

The distribution of healthcare providers varies for rural versus urban areas in North India.^[22] A 2007 study by Ayesha De Costa and Vinod Diwan, published in *Health Policy*, conducted in Madhya Pradesh, India examined the distribution of different types of healthcare providers across urban and rural Madhya Pradesh in terms of the differences in access to healthcare through number of providers present.^[22] The results indicated that in rural Madhya Pradesh, there was one physician per 7870 people, while there was one physician per 834 people in the urban areas of the region.^[22] In terms of other healthcare providers, the study found that of the qualified paramedical staff present in Madhya Pradesh, 71% performed work in the rural areas of the region.^[22] In addition, 90% of traditional birth attendants and unqualified healthcare providers in Madhya Pradesh worked in the rural communities.^[22]

Studies have also investigated determinants of healthcare-seeking behavior (including socioeconomic status, education level, and gender), and how these contribute to overall access to healthcare accordingly.^[23] A 2016 study by Wameq Raza et al., published in *BMC Health Services Research*, specifically surveyed healthcare-seeking behaviors among people in rural Bihar and Uttar Pradesh, India.^[23] The findings of the study displayed some variation according to acute illnesses versus chronic illnesses.^[23] In general, it was found that as socioeconomic status increased, the probability of seeking healthcare increased.^[23] Educational level did not correlate to probability of healthcare-seeking behavior for acute illnesses, however, there was a positive correlation between educational level and chronic illnesses.^[23] This 2016 study also considered the social aspect of gender as a determinant for health-seeking behavior, finding that male children and adult men were more likely to receive treatment for acute ailments compared to their female counterparts in the areas of rural Bihar and Uttar Pradesh represented in the study.^[23] These inequalities in healthcare based on gender access contribute towards the differing mortality rates for boys versus girls, with the mortality rates greater for girls compared to boys, even before the age of five.^[24]

Other previous studies have also delved into the influence of gender in terms of access to healthcare in rural areas, finding gender inequalities in access to healthcare.^[24] A 2002 study conducted by Aparna Pandey et al., published in the *Journal of Health, Population and Nutrition*, analyzed care-seeking behaviors by families for girls versus boys, given similar sociodemographic characteristics in West Bengal, India.^[24] In general, the results exhibited clear gender differences such that boys received treatment from a healthcare facility if needed in 33% of the cases, while girls received treatment in 22% of the instances requiring care.^[24] Furthermore, surveys indicated that the greatest gender inequality in access to healthcare in India occurred in the provinces of Haryana, and Punjab.^[24]

Urban health

The National Urban Health Mission as a sub-mission of National Health Mission was approved by the Cabinet on 1 May 2013. It aims to meet health care needs of the urban population with the focus on urban poor, by making essential primary health care services available to them and reducing their out of pocket expenses for treatment.^[25]

Rapid urbanisation and disparities in urban India

India's urban population has increased from 285 million in 2001 to 377 million (31%) in 2011. It is expected to increase to 535 million (38%) by 2026 (4). The United Nations estimates that 875 million people will live in Indian cities and towns by 2050. If urban India were a separate country, it would be the world's fourth largest country after China, India and the United States of America. According to data from Census 2011, close to 50% of urban dwellers in India live in towns and cities with a population of less than 0.5 million. The four largest urban agglomerations Greater Mumbai, Kolkata, Delhi and Chennai are home to 15% of India's urban population.^[26]

Child health and survival disparities in urban India

Analysis of National Family Health Survey Data for 2005-06 (the most recent available dataset for analysis) shows that within India's urban population – the under-five mortality rate for the poorest quartile eight states, the highest under-five mortality rate in the poorest quartile occurred in Uttar Pradesh (110 per 1,000 live births), India's most populous state, which had 44.4 million urban dwellers in the 2011 census^[27] followed by Rajasthan (102), Madhya Pradesh (98), Jharkhand (90) and Bihar (85), Delhi (74), and Maharashtra (50). The sample for West Bengal was too small for analysis of under-five mortality rate. In Uttar Pradesh was four times that of the



A woman and her baby boy are healthy and safe post delivery, after receiving access to healthcare services through an assistance program in Orissa, India.

rest of the urban populations in Maharashtra and Madhya Pradesh. In Madhya Pradesh, the under-five mortality rate among its poorest quartile was more than three times that of the rest of its urban population.^[28]

Maternal healthcare disparities in urban India

Among India's urban population there is a much lower proportion of mothers receiving maternity care among the poorest quartile; only 54 per cent of pregnant women had at least three ante-natal care visits compared to 83 per cent for the rest of the urban population. Less than a quarter of mothers within the poorest quartile received adequate maternity care in Bihar (12 percent), and Uttar Pradesh (20 percent), and less than half in Madhya Pradesh (38 percent), Delhi (41 percent), Rajasthan (42 percent), and Jharkhand (48 percent). Availing three or more ante-natal check-ups during pregnancy among the poorest quartile was better in West Bengal (71 percent), Maharashtra (73 percent).^[28]

High levels of undernutrition among the urban poor

For India's urban population in 2005–06, 54 percent of children were stunted, and 47 percent underweight in the poorest urban quartile, compared to 33 percent and 26 percent, respectively, for the rest of the urban population. Stunted growth in children under five years of age was particularly high among the poorest quartile of the urban populations in Uttar Pradesh (64 percent), Maharashtra (63 percent), Bihar (58 percent), Delhi (58 percent), Madhya Pradesh (55 percent), Rajasthan (53 percent), and slightly better in Jharkhand (49 percent). Even in the better-performing states close to half of the children under-five were stunted among the poorest quartile, being 48 percent in West Bengal respectively.^[28]

High levels of stunted growth and underweight issues among the urban poor in India points to repeated infections, depleting the child's nutritional reserves, owing to sub-optimal physical environment. It is also indicative of high levels of food insecurity among this segment of the population. A study carried out in the slums of Delhi showed that 51% of slum families were food insecure.^[29]

Quality of healthcare

Non-availability of diagnostic tools and increasing reluctance of qualified and experienced healthcare professionals to practice in rural, under-equipped and financially less lucrative rural areas are becoming big challenges. Rural medical practitioners are highly sought after by residents of rural areas as they are more financially affordable and geographically accessible than practitioners working in the formal public health care sector.^[30] But there are incidents where doctors were attacked and even killed in rural India.^[31] In 2015 the British Medical Journal published a report by Dr Gadre, from Kolkata, exposed the extent of malpractice in the Indian healthcare system. He interviewed 78 doctors and found that kickbacks for referrals, irrational drug prescribing and unnecessary interventions were commonplace.^[32]



A medical provider from INHS Nivarini examining a patient in rural India, with other patients waiting in line behind

According to a study conducted by Martin Patrick, CPPR chief economist released in 2017 has projected people depend more on private sector for healthcare and the amount spent by a household to avail of private services is almost 24 times more than what is spent for public healthcare services.^[33]

South India

In many rural communities throughout India, healthcare is provided by what is known as informal providers, who may or may not have proper medical accreditation to diagnose and treat patients, generally offering consults for common ailments.^[34] Specifically, in Guntur, Andhra Pradesh, India, these informal healthcare providers generally practice in the form of services in the homes of patients and prescribing allopathic drugs.^[34] A 2014 study by Meenakshi Gautham et al., published in the journal *Health Policy and Planning*, found that in Guntur, about 71% of patients received injections from informal healthcare providers as a part of illness management strategies.^[34] The study also examined the educational background of the informal healthcare providers and found that of those surveyed, 43% had completed 1 or more years of schooling, while 10% had graduated from college.^[34]

In general, the perceived quality of healthcare also has implications on patient adherence to treatment.^{[35][36]} A 2015 study conducted by Nandakumar Mekoth and Vidya Dalvi, published in *Hospital Topics* examined different aspects that contribute to a patient's perception of quality of healthcare in Karnataka, India, and how these factors influenced adherence to treatment.^[35] The study incorporated aspects related to quality of healthcare including interactive quality of physicians, base-level expectation about primary health care facilities in the area, and non-medical physical facilities (including drinking water and restroom facilities).^[35] In terms of adherence to treatment, two sub-factors were investigated, persistence of treatment and treatment-supporting adherence (changes in health behaviors that supplement the overall treatment plan).^[35] The findings indicated that the different quality of healthcare factors surveyed all had a direct influence on both sub-factors of adherence to treatment.^[35] Furthermore, the base-level expectation component in quality of healthcare perception, presented the most significant influence on overall adherence to treatment with the interactive quality of physicians having the least influence on adherence to treatment, of three aspects investigated in this study.^[35]

North India

In a particular district of Uttarakhand, India known as Tehri, the educational background of informal healthcare providers indicated that 94% had completed 11 or more years of schooling, while 43% had graduated from college.^[34] In terms of the mode of care delivered, 99% of the health services provided in Tehri were through the clinic, whereas in Guntur, Andhra Pradesh, 25% of the health care services are delivered through the clinic, while 40% of the care provided is mobile (meaning that healthcare providers move from location to location to see patients), and 35% is a combination of clinic and mobile service.^[34]

In general throughout India, the private healthcare sector does not have a standard of care that is present across all facilities, leading to many variations in the quality of care provided.^[36] In particular, a 2011 study by Padma Bhate-Deosthali et al., published in *Reproductive Health Matters*, examined the quality of healthcare particularly in the area of maternal services through different regions in Maharashtra, India.^[37] The findings indicated that out of 146 maternity hospitals surveyed, 137 of these did not have a qualified midwife, which is crucial for maternity homes as proper care cannot be delivered without midwives in some cases.^[37] In addition, the 2007 study by Ayesha De Costa and Vinod Diwan analyzed the distribution of healthcare providers and systems in Madhya Pradesh, India.^[22] The results indicated that among solo practitioners in the private sector for that region, 62% practiced allopathic (Western) medicine, while 38% practiced Indian systems of medicine and traditional systems (including, but not limited to ayurveda, sidhi, unani, and homeopathy).^[22]



A group of healthcare workers prepare for their day of immunization work in India

In certain areas, there are also gaps in the knowledge of healthcare providers about certain ailments that further contribute towards quality of healthcare delivered when treatments are not fully supported with thorough knowledge about the ailment.^[38] A 2015 study by Manoj Mohanan et al., published in *JAMA Pediatrics*, investigate the knowledge base of a sample of practitioners (80% without formal medical degrees) in Bihar, India, specifically in the context of childhood diarrhea and pneumonia treatment.^[38] The findings indicated that in general, a significant number of practitioners missed asking key diagnostic questions regarding symptoms associated

with diarrhea and pneumonia, leading to misjudgments and lack of complete information when prescribing treatments.^[38] Among the sample of practitioners studied in rural Bihar, 4% prescribed the correct treatment for the hypothetical diarrhea cases in the study, and 9% gave the correct treatment plan for the hypothetical pneumonia cases presented.^[38] Recent studies have examined the role of educational or training programs for healthcare providers in rural areas of North India as a method to promote higher quality of healthcare, though conclusive results have not yet been attained.^[39]

See also

- [Health in India](#)
- [Timeline of healthcare in India](#)
- [List of government schemes in India](#)
- [Medical tourism in India](#)
- [Swachh Bharat Abhiyan](#)
- [Women's health in India](#)
- [Health insurance in India](#)

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