

Public Health Challenges in India: Seizing the Opportunities

India is presently in a state of transition – economically, demographically, and epidemiologically – in terms of health. While the last decade has seen remarkable economic development particularly in terms of gross domestic product (GDP) growth rate,⁽¹⁾ unfortunately this progress is accompanied by growing disparities between the rich and the poor. There is strong evidence to suggest that this income inequality or disparity between the different socioeconomic classes is associated with worse health outcomes.⁽²⁾ Widening the gap between the rich and the poor has damaging health and social consequences. While financial inclusion and social security measures are being implemented by the Government to bridge economic inequalities, health sector too must ensure that health disparities between and among social and economic classes are also addressed adequately.

The unprecedented demographic changes underway are likely to contribute to a substantially increased labor force. However, it will benefit the country only if the population is healthy. The country at present suffers from the triple burden of disease – the unfinished agenda of infectious diseases; the challenge of noncommunicable diseases (NCDs), linked with lifestyle changes; and emergence of new pathogens causing epidemics and pandemics. In addition, the health infrastructure is already over-stretched and needs to be strengthened to enable it confront these challenges in the twenty-first century.

The Health Challenges

In health sector, India has made enormous strides over the past decades. The life expectancy has crossed 67 years, infant and under-five mortality rates are declining as is the rate of disease incidence. Many diseases, such as polio, guinea worm disease, yaws, and tetanus, have been eradicated.

In spite of this progress, the communicable diseases is expected to continue to remain a major public health problem in the coming decades posing a threat to both national and international health security.⁽³⁾ Besides endemic diseases such as human immunodeficiency virus infection and acquired immune deficiency syndrome (HIV/AIDS), tuberculosis (TB), malaria, and neglected tropical diseases, the communicable disease outbreaks will continue to challenge public health, requiring high level of readiness in terms of early detection and rapid response. In this regard, vector-borne diseases, such as dengue and acute encephalitis syndrome, are of particular concern. Antimicrobial resistance is one of the biggest health challenges facing humanity that must be tackled with all seriousness.

In addition, non-communicable diseases or NCDs are now the leading cause of death in the country, contributing to 60% of deaths.^(4,5) Four diseases namely heart disease, cancer, diabetes, and chronic pulmonary diseases contribute nearly 80% of all deaths due to NCDs and they share four common risk factors namely tobacco use, harmful use of alcohol, unhealthy diet, and lack of physical activities.

Also of significant concern is the maternal mortality ratio and infant mortality rate (IMR) remain unacceptably high. The IMR, which was 81 in 1990, according to the World Health Organization (WHO), declined to 41.4 per 1,000 live births in 2013.⁽⁶⁾ However, it still is much higher than the global average for the same period of 33.6 per 1,000 live births (World Health Statistics 2015). According to the sample registration system (SRS) report of Oct 2015, the IMR is now 40 per 1,000 live births.⁽⁷⁾ As already stated, the mortality rates are declining but the rate of decline remains relatively slow, compared to that being achieved by other South Asian neighbors, with exception of Pakistan.

Access this article online	
Quick Response Code:	Website: www.ijcm.org.in
	DOI: 10.4103/0970-0218.177507

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

How to cite this article: Narain JP. Public health challenges in India: Seizing the opportunities. *Indian J Community Med* 2016;41:85-8.

The epidemiological transition is, in fact, being fueled by the social and economic determinants of health and by some old and some new risk factors such as globalization, unplanned and unregulated urbanization, changing life styles, environmental causes (e.g., climate change and air pollution), and increasing influence of media and advertising. Moreover, great disparities between the rich and poor (and between those living in urban and rural areas) in access to health services continue to exist in the society. For example, the poorest of the poor and the most marginalized sections of the society are not only at a greater risk for communicable and NCDs, but are also least able to cope with the diseases resulting from these risk factors. If someone in the family gets sick, the family often gets trapped in poverty, partly due to the high cost of health care. The health-care system is also overstretched.

Opportunities for a Health Reform in the Twenty-First Century

Given the centrality of health in economic development, a paradigm shift in our approach is needed. The following are some suggestions for consideration:

First, investing more in health and recognizing disease prevention and health promotion as the topmost priority. Consequently, government health expenditure on health should increase from 1.3% of GDP at present to at least 2.5% before the end of 13th Five-Year Plan (2013-19). Presently, India has one of the lowest allocations to health among all countries of the world as percentage of GDP. As a result of such a low investment in health and due to high out-of-pocket expenditure (85.6% which according to the World Bank is among the highest in the world),⁽⁸⁾ nearly 60 million people are pushed further into poverty and into the poverty trap from that they are unable to escape.

Of the total health budget allocation for health, at least 80% of the fund should be earmarked for disease prevention, health promotion, and improving the quality of health services at the primary care level. The new health policy should lay stress on the concept of health as the people's right and make it mandatory to protect health budget at all times including the time of financial crisis. Based on the national health policy, each states should develop a state health policy and drive innovation in program implementation and finding solutions to its health problems.

Second, health system should be strengthened to improve the process of service delivery. In order to make the health services responsive to the need of the community, it is necessary to improve the functioning of the existing government health infrastructure. This can be done in three

steps as follows: First, the assessment of existing public health system and facilities, bringing improvements based on the findings of the assessment including augmented human and material resources, and monitoring their performance and fixing accountability in a systematic manner, by setting targets and trying to achieve them through a comprehensive and integrated approach, with full involvement of the community. Improved access to government health services, which are used primarily by the poor and the disadvantaged sections of the society, will go a long way in achieving better health outcomes.

For efficient and effective delivery of services, an efficient public-health workforce is key. India has one of the lowest density of health workforce; with density of physicians (7 per 10 000 population) and nurses (17.1 per 10 000 population) as against the global average of 13.9 and 28.6 respectively (World Health Statistics, 2015). The nurses-to-physicians ratio in India is about 0.6:1, as against the nurses-to-physicians ratio of 3:1 in some of the developed countries. The issue is very serious, particularly in the rural areas,⁽⁹⁾ as most doctors and hospital beds are concentrated in urban areas catering to only 20% of the India's population. Public health planners should make all efforts to fill vacant posts through efficient recruitments, and build skill of the existing staff through training activities and by creating enabling environment including adequate facilities for health workers to stay in rural areas. To enhance skill training activities, health can leverage with and benefit from the national skill development mission launched by the Prime Minister in August 2015.

Third, focusing on evidence, excellence, and equity. An evidence-based policy-making requires data on disease burden and the associated determinants. Focus should be on strengthening a widespread research and innovation culture through out the country and generating homegrown data, obtained through surveillance, research, and monitoring and evaluation (M&E), so that these data can be used for policy and strategy development, priority setting, and evaluating the impact.

Emphasizing on excellence is crucial to ensure quality in service provision and in program planning and implementation, especially to ensure that health services are responsive to the needs of the community and are provided efficiently and effectively.

Addressing equity is fundamental because the purpose of public health should be the welfare of the weakest and most vulnerable section of the society. In this regard, the priority should be given to understanding the barriers to equitable access, integrating equity goals in policy and programs, and targeting resources and efforts to reach

the poor and vulnerable sections of the society with the needed services. By improving program efficiency, performance and reach, these three “Es” can indeed shape the future of public health in India.

Fourth, leveraging technology to transform public health. Modern technology has great potential in bringing efficiency in service delivery and enhancing the reach of the health services. It can, for example, connect remote areas with national centers of excellence or patients in villages with doctors in hospitals in urban areas through audio or video conferencing. The government is already establishing a network of telemedicine services, mother and child tracking system of weekly voice messages to pregnant women and new mothers, web-based TB registration scheme called Nikshay, and planning mobile app for the training of Accredited Social Health Activist (ASHA) workers. Space research is another area to explore.

Mobile technology holds great promise especially due to its ubiquitous nature. With more than one billion mobile users in the country, the mobile phones offer tremendous opportunities in efficient health service delivery which include: 1) ensuring treatment adherence by sending sms text messages to patients with diabetes or HIV/AIDS reminding them to take their treatment, 2) quick reporting of cases during outbreaks or epidemics, 3) alerting next level of health services regarding emergency situation such as difficult or complicated labor in a remote rural area, or 4) informing populations and creating awareness about emerging health issues or health programs. The internet connectivity is presently being used to enhance e-governance and making patient consultations with experts such a teleophthalmology in Tripura and teleradiology in Assam.^(10,11) In addition, low-smoke stoves can help reduce indoor pollution and respiratory infections, and the use of point-of-care diagnostic methods, such as a lab in a suitcase for diagnosis in areas where such facilities do not exist, can be of great help. These examples show that technology already available can enhance the quality and efficiency of the services, and this should be expanded and scaled up rapidly, in order to make health services available and accessible for the people living in geographically remote areas.

Finally, empowering health leadership and governance. It is now clear that most of the risk factors for ill health lie outside of health sector. Therefore, action to combat these risk factors requires an intersectoral and interdisciplinary approach. For a country that has a vibrant civil society and private health sector and an advanced pharmaceutical and biotechnological research capacity, these attributes should be leveraged for the benefit of public health. Besides policy, the programs also

should have inbuilt mechanism to ensure transparency and fix accountability.

Uniquely, the role of the government is to formulate policies, plan services, and coordinate activities. It also has a mobilizing and facilitating roles. It should reach out to the sectors other than health sector to develop a consensus on national policies and to build partnership between different sectors for better service delivery based on the comparative advantages of each relevant sector, namely private medical sector (to follow national policies and treatment protocols), including corporate hospitals (to provide subsidized care to the poor), nongovernmental organization particularly based in the community (for advocacy and service provision), academia and medical colleges, and research organizations (in research and innovation). The self-help groups and cooperative societies, such as Amul, are also contributing to healthcare through innovative approaches.

Private sector can also support the health promotion and disease prevention activities under public-private partnership and through the corporate social responsibility initiatives. Engaging them in a creative and positive manner as partners for health action coordinated by the government can go a long way in addressing health challenges in the next decade and beyond.

Jai Prakash Narain

Global Health International Advisers and former Director, Communicable Diseases/SDE, WHO/SEARO, New Delhi, India

Address for correspondence:

Dr. Jai Prakash Narain,
Global Health International Advisers, F-20A,
Hauz Khas Enclave, New Delhi - 110016, India.
E-mail: narainjp88@gmail.com

References

1. International Monetary Fund (IMF). World Economic Outlook Report. 2015. Available from: <http://www.imf.org/external/pubs/ft/weo/2015/02/>. [Last accessed on 2015 Oct 25].
2. Pickett and Wilkinson. The Spirit Level. 2011. p. 306-9. Available from: https://en.wikipedia.org/wiki/The_Spirit_Level:_Why_More_Equal_Societies_Almost_Always_Do_Better. And en.wikipedia.org/wiki/Economic_inequality. [Last accessed on 2015 Dec 16].
3. Dikid T, Jain SK, Sharma A, Kumar A, Narain JP. Emerging and re-emerging infections in India: An overview. *Indian J Med Res* 2013;138:19-31.
4. Narain JP, Dikid T, Kumar R. Noncommunicable diseases: Health burden, economic impact and strategic priorities. In: Narain JP, Kumar R, editors. *Text Book of Chronic Noncommunicable Diseases: The Health Challenge of 21st Century*. Delhi: Jaypee Brothers Medical Publishers; 2015. p. 1-18.
5. Jain DC, Rana R, Prasad J. Noncommunicable diseases in India: The burden, priorities and future plans. In: Narain JP, Kumar R, editors. *Text Book of Chronic Noncommunicable Diseases: The Health Challenge of 21st Century*. Delhi: Jaypee Brothers Medical Publishers; 2015. p. 31-51.

6. World Health Organization. World Health Statistics 2015. Geneva: World Health Organization; Available from: http://apps.who.int/iris/bitstream/10665/170250/1/9789240694439_eng.pdf?ua=1&ua=1. [Last accessed on 2015 Dec 20].
7. Census India. SRS Bulletin. Vol. 49. 2014. Available from: http://censusindia.gov.in/vital_statistics/SRS_Bulletins/SRS%20Bulletin%20-September%202014.pdf. [Last accessed on 2015 Dec 20].
8. World Bank. Out-of-pocket Health Expenditure by Country. 2014. Available from: <http://data.worldbank.org/indicator/SH.XPD.OOPC.ZS>. [Last accessed on 2015 Dec 20].
9. Hazarika I. Health workforce in India: Assessment of availability, production and distribution. WHO South East Asia J Public Health 2013;2:106-12.
10. Government of Tripura. Tripura Vision Centre Project. Ministry of Health and Family Welfare. Available from: <http://health.tripura.gov.in/teleophthalmology>. [Last accessed on 2015 Dec 30].
11. Inauguration of Assam Tele Radiology Project of NRHM, Assam in PPP model with HealthFore Technologies Limited. Available from: <http://www.healthfore.com/news-media-releases/media-release-detail/inauguration-of-assam-tele-radiology-project-with-healthfore-technologies-limited>. [Last accessed on 2015 Dec 30].