Transforming Ailing Primary Care in India: A Healing Touch

Running Title: Transforming ailing primary care in India

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Abstract:

Despite having an extensive public health system and a variety of national health programs in the past seventy years, rural population in India still struggle to access quality primary care services. Acute staff shortage, poor health infrastructure at peripheral health facilities, lack of awareness among general public and weak accountability and governance structures are some of the contributing factors. Implementing technology-driven solutions and alternate strategies could be a viable solution to bridge the gap between patients and doctor by provisioning of the primary care. In this regard, to improve primary care, both government and private sectors, alone and in public-private partnerships, have tried a few innovative solutions but with limited success.

In this article, authors narrate the technological and strategical innovations both in public and in private sectors and suggest ways to implement them in the Indian primary care context. Use of information technology, involving allied healthcare providers for task shifting, creating social entrepreneurship, and tapping the potential of mobile telephony seems promising to complement the Government’s efforts in solving primary healthcare challenges in India.

Keywords: Primary care, Information technology, Task-shifting, Telemedicine, mHealth

1. Introduction

Primary care is the first point of contact within the health system where people or communities access preventive, promotive and curative health care services. It encompass eight essential elements of care (i) education and counseling (ii) health promotion (iii) water and basic sanitation (iv) maternal and child health care including family planning (v) immunization against common childhood diseases (vi) prevention and control of endemic diseases (vii) treatment of common diseases and injuries and (viii) provision of essential drugs. Common illnesses diagnosed and treated early can prevent catastrophic expenditures of
the household by dodging the visit to secondary or tertiary care providers. [1] A well-functioning primary care system, therefore, can reduce annual hospitalization by 5%, infant mortality by 40% with overall improvement in the health system performance.[2,3] Despite clear benefits, primary care in India is neglected. This is evident from the national government’s allocations for healthcare budgets. For example, there is no separate primary care budget; and national health mission (NHM) budget as a percentage of center’s total health budget shows an overall decreasing trend (from 52.6% in 2015-16 to actual share of 43.4% in 2017-18, budget estimate).[4] In contrast to the public sector, the private sector in India is the largest and fastest growing industry, a 17 billion USD industry expanding at 15% compound annual growth rate. Private sector mainly delivers the curative (secondary) and super specialized (tertiary) health care services to fulfill the needs of both rural and urban population. As per an estimate, private sector health expenditures in India are nearly three-fourths of the total health expenditure; roughly around 4% of the gross domestic product.[5] Clearly, with the rising disease burden, there is a shift in focus from primary to secondary and tertiary care services at the behest of investments in public health care, particularly for the secondary and tertiary care services.[6,7] Though the private sector may have a potential to revamp the primary care services; it is reluctant to do so. This is probably due to large capital & recurrent expenditures; low consumer demand and users paying capacity hence making any of such investments less lucrative and profit driven. Weak public health infrastructure and weak private sector’s interest in primary health care has led to opportunistic innovations in the delivery of primary care services. These innovations are in the form of information and communication tools (ICT) enabled solutions, strategical reforms, and the upsurge of social enterprises. In this paper, authors summarize the challenges and describe few existing and emerging solutions in Indian primary care context. Lastly, we suggest how efforts can be synergized to achieve affordable and quality primary care services in rural India.

**Challenge in Primary Healthcare Service Delivery**

The majority of the Indian population resides in rural areas. They differ in terms of geography, sociocultural aspects including religion, ethnicity, castes, tribes and socio-economic status. Public health facilities located at villages (sub-centers-SCs, primary health centres-PHCs), blocks (community health centers-CHCs) and districts (district hospitals) are the means of seeking healthcare services. [7] Despite a comprehensive and vast public health system, a staggering 70% of the rural population has no or limited access to hospitals and clinics. Moreover, those availing public healthcare face inequity in services utilization. For example, only 16.7% of mothers in rural areas and 31.1% in urban areas have full antenatal health check-ups.[8,9] Besides low budget allocation, lack of accountability and governance mechanisms, other reasons for poor access to primary care and resultant inequity include staff absenteeism, long waiting hours, inadequate health infrastructure, substandard health care services, and acute shortage of qualified health workforce.[10-12] Many studies have pointed a link between the availability of skilled workforce at the point of
care with better health outcomes. But as of 2014, India had only 0.7 physicians and 1.4 nurses per 1,000 people which is much less than the Organization for Economic Co-operation and Development (OECD) countries’ average of 3.4 and 9.0 respectively. [13] Hence, primary care needs innovative and non-conventional thinking to make it stronger and responsive to the healthcare needs of the majority of the Indian population.

Innovations in healthcare service delivery

Primary health care in rural India is at the crossroads of transformation. Use of ICT tools such as telemedicine, task shifting of health workers, and service delivery through social enterprises and public and private digital initiatives are some of the emerging solutions. These approaches are not new and are already in practice in other resource-constrained countries. In the following section, we briefly describe each of them.

Telemedicine- Reaching the Unreached

Telemedicine uses internet and ICT to establish audio-visual communication between doctor and patients located in different places. The doctor virtually examines a patient based on patient’s health reports, lab results, and current health status and offer tentative treatment. It is particularly of use in hard to reach, remote and underserved areas having inadequate infrastructure and acute shortage of healthcare providers. If implemented properly, minimal numbers of trained human resources can deliver the quality health care services without burdening the existing delivery channels or the systems.

In India, Apollo group of hospitals pioneered telemedicine on a pilot project basis. Following the success, Government of India created a National Task Force on Telemedicine in 1999 with an aim to improve the health care in rural areas. Since then, several projects had been implemented in public-private partnership (PPP) mode with varying degree of success. [14,15] Though the initial set up cost for telemedicine ventures is high, the benefits reaped are immense. For example, least efforts are required to reach vulnerable and inaccessible population saving travel time, loss of wage days along with cutting back on incentives given to the specialist doctors.

Task Shifting- Training and involving local health care providers

Another way to maximize the benefit of telemedicine in rural settings could be through task shifting. Task shifting is characterized by redistributing tasks between the healthcare providers with narrowly tailored training. The Clinical Officers in Africa is a good example suggesting reduced burden on doctors; trained in half the time and a fifth of the cost. In India, Accredited Social Health Activists (ASHAs) at grass root level assisting in bridging the gap between community and health systems is another notable example. Amidst this, however, the potential of large unorganized informal health providers (IHPs) remain untapped. Recent research suggests training of IHPs on modern medicine is useful in enhancing the healthcare provisions in short-term. [16] In India, the task-shifting process, therefore, could involve redistributing the work from physicians to nurses and to IHPs. However, the medical
fraternity disapproves this idea on the grounds of IHPs professional incompetence, worse clinical outcomes among treated patients apart from poor understanding and lack of knowledge.[17] Moreover, IHPs may also be reluctant to join the health system formally fearing an impact on their net monthly earnings. Nonetheless, a win-win situation can be created, incorporating a few IHPs initially on a pilot basis through intermediaries by creating an incentive structure that is well above their monthly margin.

One among such intermediary “World Health Partners” (WHP) created distinctive innovative models of care in the states of Uttar Pradesh and Bihar. WHP linked village level IHPs through social franchising and ICT to deliver quality healthcare in rural population. In Bihar, the aim was to engage private providers to better the detection/treatment of Tuberculosis, Visceral Leishmaniasis, childhood pneumonia, and diarrhea. While in Uttar Pradesh, the focus was on the improvement of family planning services. This was possible through the creation of a network consisting of SkyCare providers, SkyHealth centers, central medical facilities, franchise clinics and diagnostic test laboratories created and managed by local health providers.

Social Entrepreneurship-Business with Service

Social entrepreneurship in healthcare domain has started recently. These are for-profit business enterprises that use consumer market to create social impact and influence the lives of the underserved population. The primary aim is to provide affordable, low cost, and quality healthcare services while making reasonable profits. Again, ICT remains the central cornerstone of such enterprises. In India, examples of such enterprises are Arvind eye care, Narayana health, Vaatsalaya healthcare, Karma healthcare, Neurosynaptic Communications private limited and Drishti EyeCare. Generous funding from the market leaders or the impact investors is the common feature for all enterprises. Though in nascent stages yet the market size and demand is growing. [18]

Online Consultations (mHealth)-Emerging Trend

Mobile-based technology in healthcare (mHealth) in developing countries is seen as a tool for increased healthcare access while developed economies see them as a way of improving convenience, quality, and cost of care. Among developing economies, India ranked second in the adoption of mHealth.[6] mHealth has empowered both patients and doctors to communicate and deliver health messages effectively and efficiently. Passing the benefit, few companies in India (Practo, Lybrate etc.) developed mHealth applications for mobile users. Anyone with the internet-enabled mobile phone can download and install the health application. In India, currently, these services are limited to users in urban and semi-urban areas. Finding a doctor, fixing an appointment, online patient-doctor interaction and paying doctor fee online are the few listed services. Considering 432 million internet users, 31% of overall internet penetration, and more rapidly growing user base in rural (@22%) than urban India (@7%), mHealth can be a great tool organizing primary care services in rural India.[19]

Above all, recognizing the importance of technology and internet tools, Government of India too responded
with some of the innovative healthcare solutions under recently launched digital India initiative. A few of these health initiatives using technology and tools are (1) Digital AIIMs (for online appointment booking at public hospitals), Integrated Health Information System (for creating electronic medical records), e-hospital (open source hospital management software), mother and child tracking system (for efficient tracking and service delivery), Nikshay (for TB case tracking and treatment), mCessation (for tobacco cessation). [20] It is therefore imperative to state that all of these initiatives have a common goal of making quality healthcare available to Indian residents especially the rural counterparts.

2. Conclusion

Due to resource constraints and growing healthcare needs, neither the public nor the private sector can work alone to make the best interest in the primary healthcare delivery. The rise of social enterprises and expanding ICT and telephony services in remote and rural areas is an opportunity to bridge the service gap to last mile population. The government of India, therefore, should consider the sectoral integration of the proven initiatives both in public and private space through three-pronged combination strategy. First, empaneling the private sector health care providers so that they are available on fixed schedule (specific day and time) for their services through telemedicine networks; second, engage/train local village level informal health providers making them an interface between the doctor and patient; third, using the network of urban telehealth providers for organizing advanced patient care and referrals. The likely results of this triad approach could be improved quality of primary care services, reduced out of pocket expenditure, patient satisfaction and overall improvement in the community health outcomes. However, patient confidentiality, treatment rationalization, and patient grievances and redressal mechanisms need special attention.

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6. References


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