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Healthcare delivery in Rural India – ITC experience

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Healthcare Delivery in Rural India – ITC's experience

The case study highlights the challenges in delivering health services in rural India. ITC's international business division wanted to leverage its e-Choupal platform to develop a business model for the provision health care services in its catchment area. The case describes the design of the health care service delivery system, progress made thus far in the few pilots that have been conducted in Madhya Pradesh and Maharashtra, and the successes and the challenges faced by ITC.

Rural Healthcare System in India

In the span of a little over a decade, India has made significant strides in economic development, maintaining an average annual growth rate of a little over 7.5 percent and lifting millions out of poverty. Yet India has been a laggard on other measures of human development, notably health. While indicators such as infant mortality rate, maternal mortality ratio, life expectancy at birth, malnutrition, etc., have improved significantly over the last few decades, they remain far below that of countries at similar stage in their economic growth. For example, by the more comprehensive human development index, India not only ranks last amongst the BRIC countries but was ranked 134th across all nations[1]. Furthermore, within the country, there are significant disparities in healthcare infrastructure, spending, and outcomes across states and between urban and rural areas.

The public health system, in existence since 1946 (Bhore committee)[2] and strengthened after the Alma Ata declaration[3] in 1978, plays a dominant role in healthcare delivery to rural India. For example, all government-sponsored programs including preventive, curative and rehabilitative programs are delivered through this system. The public health system is a three-tier network of sub centers (SCs), primary health centers (PHCs), and community health centers (CHCs). At the lowest level, SCs are the first point of care for patients, with PHCs and CHCs forming the next two layers delivering a comprehensive set of services to rural India. There are a total of 147,069 SCs, 23,673 PHCs, and 4535 CHCs as of March 2010[4]. While this infrastructure is extensive, accessibility, quality and affordability of care is still a major problem for a majority of the rural population. Inadequate government funding[5], shortage of skilled human resources, and absenteeism are some of the major causes. Not satisfied with the quality and availability of care in the public system, people often seek care from private providers. While a few grant-funded organizations engage in health education and awareness creation, curative care delivered by single practitioner clinics dominates the private

[1] http://hdrstats.undp.org/en/countries/profiles/IND.html

[2] Bhore committee set up by the government of India in 1943 to investigate and recommend improvements to the Indian Public Health system chaired by Sir Joseph Bhore

[3] Declaration of Alma-Ata articulated primary health care as a set of guiding values for health development, a set of principles for the organization of health services, and a range of approaches for addressing priority health needs and the fundamental determinants of health

[4] Rural Health Statistics bulletin - 2010

[5] Even though total health expenditure is close to six percent of GDP, government expenditure remains at a low two percent.

sector. Private providers are popular because they, unlike their public counterparts, are always present in their clinics and attempt to provide for a large variety of healthcare needs of the villagers. Unfortunately, as substantiated by a recent study in Central India[6], the quality of care is questionable and patients spend significant amount on unnecessary medicine. In fact it is estimated that 80 percent of all health care expenditure in the country is out-of-pocket, placing a huge burden on lower income segments of the population.

While there is tremendous scope to improve the public health system, the private sector can play an important role in the provision of affordable and quality health care in rural India.

ITC e-Choupal

The ITC group (www.itcportal.com) is one of India's largest private sector companies with a market capitalization of approximately INR 1.6 trillion (July 2011) and annual sales of INR 211.68 billion. ITC has diversified presence in fast moving consumer goods including branded packaged goods, personal care products, cigarettes, education and stationery products, lifestyle apparel, incense and matches, hotels, paperboards, paper and packaging, agri-business and information technology.

The International Business Division (IBD) of ITC, set up in 1990, exports agricultural commodities, such as soybean meal, rice, wheat, shrimp, fruit pulps and coffee. As a buyer of agricultural commodities, ITC-IBD faced the consequences of inefficient farm-to-market supply chain. Increased competition in commodities from other origins due to global trade integration in late 90s resulting in low margins made it imperative for ITC-IBD to rethink how it could create a sustainable competitive advantage in the farm-to-market supply chain of which it was only a part. With a mandate to grow its agri-business, in the year 2000 ITC-IBD (hereafter referred to as ITC) embarked on an initiative known as e-Choupal to reengineer the commodity buying value chain using information and communication technology (ICT) that raises farm incomes while bringing ITC's costs down. The experiment has been extremely successful for ITC, and by 2010 the network consisted of more than 6500 e-Choupals covering 40000 villages and servicing 4 million farmers in ten states of the country.

The e-Choupal platform is a 3-tiered infrastructure that connects farms to markets. The first layer consists of the village level ICT kiosks (or *e-Choupal*) with Internet access, housed and managed by an ITC trained local farmer (called a *Sanchalak*) and within walking distance (1-5 kilometers) of each target farmer. The relatively sparse population density in rural India justified the location of one e-Choupal per a cluster of six villages on an average.

The second layer consists of a bricks-and-mortar infrastructure (called *Choupal Saagar*) located within tractorable distance (10-30 kilometers) of the target farmer and managed by the traditional intermediary who had local knowledge/skills, called a *Samyojak*. Because the infrastructure was initiated to facilitate procurement, it was decided that the location of the hub should be at a distance similar to those for other channels available to the farmer for selling his harvest, typically a few kilometers outside of the main town located in the middle of some 40 to 50 e-Choupals.

[6] Das J (2011) The Quality of Medical Care in Low-Income Countries: From Providers to Markets. PLoS Med 8(4): e1000432. doi:10.1371/journal.pmed.1000432

Finally, the third layer consists of a network of companies (consumers of farmers' produce and providers of products and services to the farmers and other rural consumers) orchestrated by ITC providing a pan-Indian presence. Together this three-layered infrastructure allows ITC to provide a complete end-to-end solution to satisfy the needs of both the farmers and the consumers at village as well as global level.

Overall, the e-Choupal network delivered an efficient farm-to-market supply chain increasing farm incomes as well as provided quality goods and services to farmers at affordable prices.

ITC's Healthcare Initiatives

ITC continued to look for ways to address unmet needs of the rural population using their e-Choupal infrastructure. One such idea was to bring good quality healthcare at affordable prices to the villages covered by their e-Choupal network.

To better understand the ground realities pertaining to healthcare, in 2004 ITC carried out a need gap analysis in Sehore[7], Madhya Pradesh (state in central India). The survey covered 108 respondents and 78 healthcare providers in 27 choupal villages. Their analysis reaffirmed the inadequacy of public health facilities available to the villagers; it also became clear that biggest challenge in accessing quality health care at an affordable cost was for villages farther than 11 kilometers from the town. People in these areas more often sought the services of a local private practitioner. However, of the 78 health practitioners interviewed it was found that only 16 percent were qualified to practice medicine. Villagers expressed the need for a health centre with a larger focus towards preventive services close to their homes.

Based on the gaps analyzed and their visits to other institutions, ITC felt that their existing three tier e-Choupal infrastructure could be leveraged to deliver a range of health services and products. For example, at the choupal level, a basket of services consisting of preventive and curative primary level services could be delivered by a trained healthcare worker (called a *village health champion*). These services could be complemented by basic diagnostics support, good quality medicines and a higher level of care by a medical professional at the hub level. For more advanced needs a referral network via a telemedicine facility that would connect to external healthcare providers could be orchestrated. Delivery could be made affordable by leveraging the existing hub infrastructure with Internet and video conferencing (for telemedicine), introducing health insurance, and partnering with providers for specialist care. The three-tiered model would be supported by a robust supply chain for drugs, supplies and consumables.

The first tier would be situated at the choupal (village) level managed by a village health champion (VHC), usually a female. The primary focus here would be on wellness. The health champion would be the first point of contact between the patient and the health-care delivery infrastructure. In addition, basic health information and awareness would be dispersed through information and communication technology (ICT) – choupal portal and radio. The e-Choupal portal would carry health and wellbeing content as well as have provision for relevant frequently asked questions to be

[7] Sehore is a district(administrative unit) in Madhya Pradesh, central India and Sehore town being the headquarters of the district. The survey was conducted in the villages of Sehore

monitored and responded to remotely by a doctor. The ICT kiosk would be supplemented by a weekly health talk on relevant health topics delivered by a doctor through the Choupal radio. Regular health camps conducted by visiting doctors would further enhance access to basic services such immunizations, preventive care and early detection of curable diseases. The village health champion would conduct door to door survey to enable creation of health profile database of the community eventually enabling customization of services.

The second tier would consist of a health center located at the *Choupal Saagar* or the hub clinic. The health center would comprise of a primary health clinic, a pathology lab and a pharmacy established in partnership with a health care provider. A general practitioner, a licensed pharmacist, and a pathologist would staff the center. In addition, the hub staff of ITC would assist in various activities at the Choupal level. The hub clinic would also have a telemedicine facility for tele-consultation with specialists, as well as online training and learning modules for the doctor.

The third tier would consist of network partners including local hospitals, specialist doctors, diagnostic centers, tertiary care hospitals, and insurance companies. Telemedicine consultation would be used for specialty consultation on an as-needed basis. A partnership with secondary hospitals in the immediate vicinity of the hub for services such as maternity, basic surgical requirements and diagnostics not available at the clinic including hospitalization were also envisaged. Partnership with health insurance companies would address the financial dimension of healthcare consumption. ITC would work only as a facilitator and would be involved in execution of the insurance schemes.

For the model to take off, ITC required a partner experienced in healthcare delivery. ITC would remain an infrastructure provider and facilitate the leveraging of the already established community network. The onus of providing good quality health care and training the required personnel would remain with the healthcare partner. It would be the responsibility of the partner to recruit and train the staff, develop quality protocols, conduct health camps, monitor activities at the villages as well clinic and ensure affordable healthcare of good quality. Because financial sustainability of the initiative was critical, the clinic would charge a fee for services provided. The partner would pay ITC a rental for occupying the space and once sustainable model was sustainable share revenues with ITC on mutually agreed terms. Between 2005 and 2009 two pilots with different healthcare partners were conducted in Madhya Pradesh and Maharashtra[8]. The 2005 pilot in Madhya Pradesh involved only the execution of hub level activities. In the later experiments in Maharashtra the complete model including the village level activities was piloted.

Implementation Challenges

The ITC healthcare initiative was unique. Up until then, there was no for-profit primary healthcare initiative in rural India. Extant not-for-profit initiatives were prima facie financially unsustainable. ITC was keen on developing a model that would be self-sustainable. Challenges were plenty, so were the lessons.

[8] State in western part of India

Key to primary healthcare delivery is human resources including doctors, community health workers, and other paramedic staff. ITC soon realized that finding a qualified MBBS doctor for its hub clinic was difficult; finding one who was willing to work in the rural area and tuned to the needs of the community was even more difficult. They considered an option of working with Ayurvedic doctors[9] but the state regulations would not permit that.

The village health worker was crucial for demand generation and was a connecting link between the village and the hub clinic. She was selected by the community. With no previous experience of healthcare, appropriate training was of utmost importance. Development of standardized protocols for providing services was also essential. Because there were no off-the-shelf training modules or protocols, these had to be developed in-house. With no prior history of village level health workers in the region and little understanding of specific tasks to be done, recruitment of health workers was challenging. Among those recruited and trained, the novelty of the task coupled with uncertainty of expectations, combined with low remuneration, led to a high rate of attrition. Developing a system for monitoring performance of the health workers was also challenging.

It was hoped that telemedicine technology would bring higher-level services to the population at an affordable cost. Unfortunately, in spite of the hype surrounding the promise of telemedicine, there was no cost effective technology platform available at the time. High capital cost, poor connectivity, delayed development of service delivery protocols, and availability of doctors on demand became significant barriers. Further, from an overall service delivery perspective, it was not very clear which conditions needed to be treated at the village level and which were appropriate to be addressed at the hub.

Other factors such as procurement of licenses for distribution and sale of drugs, establishing clinical and administrative systems crucial to the pilot took longer than expected; for example, the licenses were delayed due to long bureaucratic processes. Easy accessibility of the hub clinic via public transport was also an issue. All these factors affected the uptake of services which were lower than those required to break even.

Finally, alignment of goals and priorities of the two stakeholders – ITC and the healthcare providers – in the partnership to deliver health care is also crucial for initiatives to succeed. After a few years of piloting, with slow progress on the ground due to the challenges highlighted above, delays in implementations of some of the elements of the model and shifting priorities, ITC determined that the healthcare service delivery concept as envisaged may not lead to a sustainable model in the near future. Currently ITC is exploring alternate strategies to reach their objective of sustainable healthcare model for rural India.

[9] Ayurveda is a recognized system of medicine of Indian origin and involves use of herbal medicines. By law, these doctors are not permitted to practice allopathy medicine.

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