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Affordable Health Care Service Innovations from India

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Abstract

India faces several challenges in healthcare such as improving access, affordability and quality. India's health achievements are low in comparison to the country's income level. The health care system is seriously broken despite the existence over many decades of primary, secondary and tertiary health centers. The objective of this paper is to investigate the challenges faced by India in addressing the healthcare needs of its people especially maternal and child health. The affordable healthcare trend in India pioneered by Aravind Eye Care is now innovatively taken forward by Lifespring Hospitals and few others. They are adopting various innovative practices by adopting optimum asset utilization, asset light strategy and many more. The paper also highlights the role of secondary care hospitals in making affordable healthcare for all Indians a reality.

Keywords:

Healthcare, Innovation, Affordability, Service delivery, Millennium Development Goals, BOP

Introduction

India faces several challenges in healthcare industry such as improving access, affordability and quality. The health care system is seriously broken despite the existence over many decades of primary, secondary and tertiary health centers and public hospitals open to all. India has one of the most fragmented and commercialized healthcare systems in the world. A study by Muralidharan et al. (2011) shows that, the national average absence rate for primary health center (PHC) and community health center (CHC) medical providers is over 39 per cent. The absence rate for doctors exceeded 43 percent. In seven states, more than 40 per cent of facilities surveyed had no doctor in attendance at the time of the visit as reported by the study. Such high absence rate is a clear indicator of low quality health care available at many of the PHCs and CHCs in India, making consumers seek alternate service providers mostly in the private sector. As on 31st March 2013, at a national level, there is a short fall of 2489 doctors in PHCs and 13,477 specialists in CHCs. This data was stated by minister of health and family welfare Ghulam Nabi Azad in a written reply to a question in the Rajya Sabha on 17th December, 2013.

Healthcare is one of India's largest service-sector industries in terms of revenue and employment. The factors driving the growth in the sector include increasing population, growing lifestyle related health issues, cheaper costs for treatment (especially for foreign patients), improving health insurance

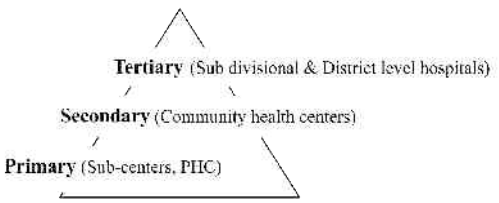
penetration, increasing disposable income, thrust in medical tourism, government initiatives, focus on Public Private Partnership (PPP) models and the Government of India's decision to increase health expenditure to 2.5 per cent of GDP by the end of the 12th Five Year Plan (2012-17), from the existing 1.4 per cent.

The overall objective of this paper is to investigate the challenges faced by India in addressing the healthcare needs of its people especially maternal and child health. Maternal and child health are included in the millennium development goals. The specific objectives are; (1) Analyze the status of infant mortality in India, (2) Describe the emerging healthcare service providers who are trying to provide high quality healthcare at affordable cost, (3) Delineate the innovative service models and practices adopted by them to address the healthcare challenges of India.

Health Service Delivery- The Current System and Structure

Indian healthcare industry is poised to double from $60 billion to $120 billion by 2015, growing at a 15 per cent CAGR (Rao, 2012). According to Fitch, the Indian healthcare sector is expected to reach US$ 100 billion by 2015 from the current US$ 65 billion, growing at around 20 per cent a year (Dutt, 2012). According to McKinsey Global Institute (2007), health care spending in India is expected to touch 13% of average household income by 2025 from 7% in 2005. Health service delivery in India is characterized by a three-tier system (see **Figure 1**). At the lowest level are the sub centers (each covering a population of about 5,000). Only paramedical staff is available in these sub centers. The first points of contact with a doctor are the primary health centers (each covering about 30,000 people). Community health centers provide secondary care and are organized at the block levels. The sub divisional hospitals and district level hospitals constitute the higher tiers. In principle, the sub centers, primary health centers (PHCs), and community health centers (CHCs) are required to handle the preventative aspects of health care, institutionalize deliveries, treat minor diseases, and act as referral centers. The subdivision and district level hospitals would then treat major ailments as referral hospitals (Rao & Choudhury, 2012). According to Ministry of Health and Family Welfare-Government of India, there are 1, 48,124 Sub Centres, 23,887 PHCs and 4,809 CHCs functioning in the country as on March 2011.

Figure 1. Healthcare in India – The three tier system



Healthcare Challenges

India faces several challenges in healthcare industry such as improving access, affordability and quality. The health care system is seriously broken despite the existence over many decades of primary, secondary and tertiary health centers and public hospitals open to all. India has one of the most fragmented and commercialized healthcare systems in the world. A study by Muralidharan et al. (2011) shows that the national average absence rate for PHC and CHC medical providers is over 39 percent. The absence rate for doctors exceeded 43 percent. In 7 states, more than 40 percent of facilities surveyed had no doctor in attendance at the time of the visit as reported by the study. Such high absence rate is a clear indicator of low quality health care available at many of the PHCs and CHCs in India, making consumers seek alternate service providers mostly in the private sector.

Healthcare, one of the basic needs of human beings is not delivered cost effectively for majority of Indians. The cost of healthcare at private hospitals is not affordable to lower middle class and lower class consumers. In the government hospitals, there is under investment and under management. The district hospitals, primary health centers (PHCs) and community health centers (CHCs) are understaffed and overworked. The KPMG study (2011) highlighted the lack of health care infrastructure in the country and noted that maternity was the second most common reason for hospitalization in India, next only to acute infection. The quality of ante-natal care and the number of institutional deliveries in the country were also found to be quite low. Importantly, the utilization of services from non-governmental medical care institutions was found to be expanding at the rate of 30% annually.

India's health achievements are low in comparison to the country's income level. According to UNDP's Human Development Report 2010, in a set of 193 countries, while India ranked 119th on the human development index, it ranked 143rd in infant mortality rate, and 124th in maternal mortality rate (Rao & Choudhury, 2012). In India, private expenditure on health is among the highest in the world. About 60% of all the hospitals in India are private. With the high economic growth and emergence of the famed Indian middle class, 20th century models of health care will not deliver the care India need in the 21st century. Health care, far from helping people rise out of poverty, has become an important cause of household impoverishment and debt. India has among the highest rates of infant mortality and maternal deaths in childbirth. The national level estimate of infant mortality rate is likely to be 44 against the MDG target of 27 in 2015. Some of the largest states like Madhya Pradesh (62), Odisha (61), Uttar Pradesh (61), Assam (58), Meghalaya (55), Rajasthan (55), Chhattisgarh (51), Bihar (48) and Haryana (48) still have infant mortality rate(IMR) above the national estimates. India will reach maternal mortality rate (MMR) of 139 per 100,000 live births by 2015, falling short by 30 percentage points.

As per the data maintained by UNDP at their web site (www.undp.org), India's Under Five Mortality Rate (U5MR) declined from 125 per 1,000 live births in 1990 to 74.6 per 1,000 live births in 2005-06. U5MR is expected to further decline to 70 per 1,000 live births by 2015. This means India would still fall short of the target of 42 per 1,000 live births by 2015. In view of these statistics, child survival in India needs sharper focus. This includes better managing neonatal and childhood illnesses and improving child survival, particularly among vulnerable communities. Survival risk remains a key challenge for the disadvantaged who have little access to reproductive and child health services. From a MMR of 437 per 100,000 live births in 1990-91, India is required to reduce MMR to 109 per 100,000 live births by 2015. Between 1990 and 2006, there has been some improvement in the MMR which has declined to 254 per 100,000

live births as compared to 327 in 1990. However, despite this progress, India is expected to fall short of the 2015 target by 26 points. Safe motherhood depends on the delivery by trained personnel, particularly through institutional facilities. However, delivery in institutional facilities has risen slowly from 26 percent in 1992-93 to 47 percent in 2007-08. Consequently, deliveries by skilled personnel have increased at the same pace, from 33 percent to 52 percent in the same period. By 2015, it is expected that India will be able to ensure only 62 percent of births in institutional facilities with trained personnel.

Infant Mortality Rate - The Gold Standard

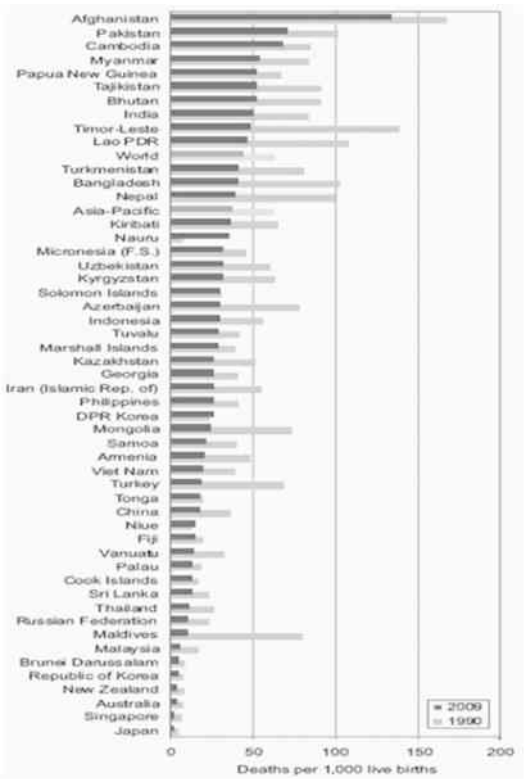
The infant mortality rate is a count of deaths of infants under one year of age per 1000 live births in one year. It is considered a key indicator of health services, nutritional levels, poverty and educational level of the people. Reduction of IMR is one of the millennium development goals (MDG) set by the UN with a deadline of 2015.Sample Registration System (SRS) released by the Registrar General of India (RGI) shows that IMR has come down by three points from 47 to 44 deaths per 1,000 live births during 2011. IMR for rural areas has dropped by three points from 51 to 48 deaths per 1,000 live births while the urban rate now stands at 29 from the previous 31. Among the states, Goa and Manipur have the lowest IMR of 11, followed by Kerala with 12 deaths per 1,000 live births. Madhya Pradesh has the highest IMR of 59 per 1,000 live births followed by Uttar Pradesh and Odisha with 57 each. Assam, Chhattisgarh, Rajasthan and Meghalaya have IMRs higher than the national average of 44 (Joshi, 2012).

As per the SRS 2012, the wide gap between rural and urban areas in infant death rates continues in India but is declining. Rural IMR in 2012 was 46 infant deaths per 1000 live births while the urban rate was 28. In fact, the rural IMR declined by 30% compared to the urban decline of 28% since 2003(Varma, 2013). Karnataka is the only big-population state where urban IMR has worsened, increasing by 4% despite a 40% decline in rural areas. The lack of a coherent national policy on urban health for a long time is a direct cause of this, even as urbanization is increasing all-round.

The state level data clearly reveals the way public health is being tackled by state governments. Tamil Nadu, with its extensive and relatively better run primary health services and nutrition programs has clearly emerged as a frontrunner in the reduction (51% compared to 2003) of infant mortality. Two tiny states, Manipur in the north-east and Goa on the west coast now lead the country with an IMR of just 10, surging past Kerala at 12. These IMRs are comparable to rich-country standards. In Kerala, in the past 10 years, IMR has marginally worsened, increasing by 9% (Varma, 2013).

The under-five mortality rate (U5MR) in Asia and the Pacific was reduced from 86 per 1,000 live births in 1990 to 49 per 1,000 in 2009 (see **Figure 2**). While this is an impressive improvement, many countries are unlikely to achieve Millennium Development Goal 4 (MDG-4), which targets a two-thirds reduction in U5MR between 1990 and 2015. India's U5MR is higher than Asia-Pacific and World averages. This is an area which requires immediate attention by government and private healthcare institutions.

Figure 2. Infant mortality rate, Asia and the Pacific, 1990 and 2009



Source -The United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) – [http://www.unescap.org/stat/data/syb2011/I-People/Child-health.asp]

Need for Affordable Innovations

India's healthcare challenges can be addressed only through innovative approaches. According to Shaw(2014) India has a low cost base and a large talent pool of scientists and engineers. India is now driving a new model of innovation that focuses on quality and affordability. Affordable innovations will ensure better healthcare for all especially the poor. Innovation is the application of new ideas to solve problems, which are sometimes specific to a region or a context, with resultant benefits to different stakeholders (Krishnan, 2013). 'New' can simply mean not done before in a particular context.

Clarity on service design is a must to initiate innovations in services. Service design encompasses a number of elements namely- customers, service concept, service encounters, and service delivery system. Service design acts as an integrator of these components. The purpose of service design is to have processes that consistently deliver high quality services to drive customer satisfaction and retention, whilst maintaining process efficiency (Johnston & Clark, 2005).

Designing a service product is a complex task. It requires good understanding of how the core and supplementary services should be combined, sequenced, branded and delivered to create a value proposition that meets the needs, wants and preferences of target market segments. New service development demands that marketers adopt innovative approaches. As per Frei (2008), a service design has four core elements namely; (1) the offering, (2) the funding mechanism, (3) the employee management system and (4) the customer management system. Getting all of them right and aligning them well is crucial for the success of any business. The design is good when the managers are clear about the preferences of target customers and have decided the attributes which the service organization will excel at and the ones in which they will remain weak. Frei (2008) argues that service excellence can be achieved by clearly deciding the attributes on which company will not do well. Successful innovation requires multiple iterations of testing and refining ideas till the problem is solved. Aravind Eye Care, Lifespring Hospitals and Narayana Health have shown that it is possible to achieve the best international quality in cataract surgery, obstetrics and cardiac surgery, respectively, at costs that are much lower than anywhere else in the world (Krishnan, 2013).

Emerging Affordable Healthcare Service Providers

Aravind Eye Care has pioneered the affordable healthcare trend in India. In the last decade, few new hospitals has emerged which are adopting innovative approached to make healthcare more accessible and affordable. Brief descriptions about them are given below;

Lifespring Hospitals

LifeSpring was formed as a Private Limited Company in 2008. It is a 50/50 joint venture between HLL Lifecare and the Acumen Fund. HLL Lifecare is a government of India enterprise (Mini Ratna Company under the Ministry of Health & Family Welfare) providing contraceptives and other health care products and services and the Acumen Fund is a U.S.-based social venture capital firm. The two partners jointly invested about US$4 million in the venture. LifeSpring is formally registered in Kerala, India. The company's corporate headquarters is located in Hyderabad, India (Pingali, 2010).

The Board consists of six directors (including the Chairman), with two Directors each from HLL Lifecare and Acumen Fund, and two Independent Directors with extensive industry experience. LifeSpring's management team consists of professionals with a blend of different backgrounds and expertise, recruited from India and the US. Mr. Anant Kumar, who is the CEO, has worked extensively in areas of social & rural marketing. Mr. M. Ayyappan is the Founder Chairman of LifeSpring Hospitals Pvt. Ltd. LifeSpring offers pre-natal, delivery and post-natal services both for outpatients and inpatients. It also offers laboratory, pharmacy and family planning services. In addition, it has a community outreach program to educate the surrounding communities on maternity and related health issues. Each hospital is typically a 20-bed facility and has one general ward and two to three deluxe rooms.

The mission of LifeSpring is to be the leading health care provider delivering high-quality, affordable core maternal health care to low-income mothers across India. LifeSpring offers an alternative to resource constrained government hospitals and higher priced private hospitals. With 80 percent of all health care expenditures in India being out-of-pocket, the goals are;

1. To operate small sized maternity hospitals in the proximity of urban slums, catering to pregnant women whose husbands work in the informal sector and who have no health coverage.
2. To provide core maternal healthcare (antenatal and postnatal, normal and caesarian deliveries, and family planning services) at an affordable price.
3. To maintain a very high level of quality control (clinical and operations), continuously benchmarked with the best health systems in the world.
4. To serve its “patients” as customers, and treat them with respect and dignity.

LifeSpring's twin focus on reducing costs and improving volumes help its hospitals become profitable in two years. Mr. Kumar, who is the driving force behind the organization, opened the first 20-bed low-cost LifeSpring hospital in 2005. This was the pilot phase at Moula Ali, a low-income suburb of Hyderabad. The hospital broke even in just 18 months. This was achieved with the support of the management at HLL Lifecare (Kumar, 2011). LifeSpring developed a low-cost, no-frills maternal care model focusing on service specialization, high asset utilization and para-skilling (the breaking down of a complex process into multiple simple tasks that can be performed by less skilled professionals). The model was designed keeping in mind the core customer base which is the bottom 60% of the Indian population with a monthly household income of INR 3600 to 8400. Most of LifeSpring's customers at present are employed in the informal sector. Each consultation with a LifeSpring doctor is priced at Rs. 80 and pediatricians cost Rs.100. A normal delivery costs Rs. 4000 and a caesarean delivery costs Rs. 9000 in the general ward.

LifeSpring's prices are 30 to 50 percent lower than market rates. A tiered pricing model helps its commercial viability. Women, for instance, can choose to give birth in a general ward, semi-private room or private room. Rates will rise accordingly. LifeSpring's general ward, which makes up 70 per cent of each hospital, is 30-

50 per cent cheaper than comparable market rates; its private room is at par with the rest of the market. Normal deliveries that costs Rs. 4000, includes the cost of a two-day stay in the hospital and medicines. The cost of caesarean operation, that costs Rs. 9000 at LifeSpring, is just a fifth of what is charged by private hospitals. While that is more than the official rate at public hospitals, which are supposed to be free though they often require undisclosed payments, these are still only about a sixth of the price at a private clinic (Joshi, 2012). LifeSpring also provides pediatric care (including immunizations), diagnostic and pharmacy services, and health care education to the communities in which its hospitals are located.

LifeSpring's focus on a particular niche - maternal and child care - cuts down on the need for many specialist doctors and also on the range of equipment needed (Joshi, 2011a). Specialising in in-patient gynecology and obstetrics leads to easy standardization. It has over 90 standard procedures, including standardized surgery kits and clinical protocols. LifeSpring uses a narrow range of drugs and equipment for large numbers of repeat procedures and thus purchases standard equipment and generic medicines in bulk. LifeSpring's highly standardized processes allow for quality control and easy routines and replication by lesser-skilled hospital employees. LifeSpring doctors earn fixed salaries rather than the variable consulting fees of their private clinic peers. Doctors nevertheless have strong non-monetary incentives to stay, like less administrative duties and more clinical practice. LifeSpring hires less qualified auxiliary nurse midwives (ANMs) rather than graduate nurse midwives (GNMs). The former are trained as birth attendants. As the ANMs are less qualified, they are less costly to employ than GNMs, whose degrees are more advanced and expensive to attain. Moreover, the attrition rate of ANMs is low as well (Joshi, 2011b).

Vaatsalya Hospitals (VH)

Vaatsalya Hospitals opened a chain of hospitals that offer inexpensive medical care to rural and semi-urban communities. With a very humble of beginning of one hospital in 2005 with 20 beds, today VH has 17 Multi specialty Hospitals spread across Karnataka and Andhra Pradesh. VH's total bed strength is around 1200, including 100 bedded MICU, 120 NICU beds, and 90 SICU beds with 1500 well trained and motivated employees. VH serve around 1,30,000 patients/month on OPD basis and 5,000 patients/month on IPD basis. Vaatsalya hospitals are 50-70 beds in size, with Neonatal Intensive Care facilities, Operation theatres, Maternity Room, Intensive care facilities, a mix of general rooms (dormitory style), and private/semi-private rooms. In addition, there is a 24 hour pharmacy as well as basic laboratory and diagnostics facility. The specialties offered by VH include Obstetrics & Gynaecology, Paediatrics, General Medicine, General Surgery, Nephrology and Diabetology. To keep costs down, hiring local talent was vital, but that local talent wasn't plentiful. So Vaatsalya opened a training center to teach nurses and paramedics on the job. Vaatsalya raised $10 million last year in seed funding, which should last it two years, during which it hopes to double the amount of hospitals. In the past two years, the hospital group has seen 500% growth and more than 500,000 patients are treated annually. VH has created positions like physician assistants and nurse practitioners to reduce the pressure on doctors. They examine patients before the doctor examines and decides on a treatment. Standardization is done where ever possible to ensure high quality of service delivery at low cost.

Merrygold Health Network (MGHN)

State Innovations in Family Planning Project Services Agency (SIFPSA), Government of Uttar Pradesh (UP), India and United States Agency for International Development (USAID) in collaboration with Hindustan Latex Family Planning Promotion Trust (HLFPPT), a not for profit trust promoted by Hindustan Latex Limited, India, launched Merrygold Health Network (MGHN) on 23rd August 2007. UP with 16% of the Indian population (Census, 2011) is the most populous state of India. The MMR in UP is 359, second highest rate after the state of Assam with 390 (SRS, 2007-09). MGHN is an innovative Social Franchising Program in India providing essential health care services to the poorer sections in the society. The program is being implemented through a Public Private Partnership (PPP) in an endeavor to make health care services accessible for the underprivileged. MGHN aims at creating access to low cost good quality Maternal and Child Health (MCH) services by networking with private health service providers as franchisees.

The project has a hub and spoke design with Level 1 franchisees (Merrygold) established at district levels as the hub connected to level 2 and level 3. Level 2 comprises of fractional franchisees (Merrysilver) established at subdivision and block level. Level 3 (merryAYUSH) comprises of providers like auxiliary nurse midwives (ANMs), and ASHA (Accredited Social Health Activist) workers. It acts as the first point of contact with the community. Level 3 also provides referral support to Merrysilver and MerryGold hospitals. Emphasis is on affordable pricing, quality assurance, customer servicing and efficient service delivery through standardized operating protocols. With 70 Merrygold hospitals, 371 Merrysilver clinics and 10,814 Merrytarang members functioning currently in 36 districts of UP, it is the single largest health network in the state. It has provided safe delivery service to 1, 37, 830 women till August 2012. Since its inception in 2007, Merrygold have been continuously endeavoring to scale new heights in provision of quality maternal & child care health services. Over the years, MGHN aims at covering the entire state of UP in India.

Narayana Health (NH)

In India, where accessibility to good healthcare facility still depends on one's economic status, Dr. Devi Shetty decided to bring about a revolution in the health sector as the founder of NH. Narayana Health, from a humble beginning of a 300 beds hospital in 2001, has grown to a 6000 beds healthcare conglomerate in 2013 with 17 hospitals present in 13 locations within the country. The group has already established its presence in Bangalore, Kolkata, Ahmedabad, Hyderabad, Jaipur, Raipur, Jamshedpur, Guwahati, Mysore, Dharwad, Kolar, Shimoga and Davangere. NH is India's largest and world's most economical healthcare service provider and is set to emerge as a global industry model for its ability to reconcile quality, affordability, scale, transparency, credibility and sustainable profitability. Equipped with all super-specialty and tertiary care facilities that the medical world has to offer, it is now a one-stop destination for any healthcare requirement a common man needs. The affluent visit NH for the world's best healthcare and the poor visit NH for the focused attention they can get from a

private hospital. Dr. Shetty is striving to make access to quality healthcare non-discriminatory. He has successfully leveraged technology and economies of scale to make medical care accessible and affordable to the masses (Shaw, 2014).

With 120 major surgeries performed everyday and 80,000 OPD patients attended per month, NH offers super-specialty tertiary care facilities across areas of specialization including cardiac surgery, cardiology, gastroenterology, vascular, endovascular services, nephrology, urology, neurology, neurosurgery, paediatrics, obstetrics & gynaecology, psychiatry, diabetes, endocrinology, cosmetic surgery and rehabilitation, solid organ transplants for kidney, liver, heart and bone marrow transplant as well as general medicine. NH also has oncology services for most types of cancer including head, neck, breast, cervical, lungs and gastro intestinal. Famous for its frugal approach in many ingenious ways, NH has been ranked 36th among 'World's 50 Most Innovative Companies' by Fast Companies in 2012. NH has also been a proud recipient of Frost & Sullivan India Healthcare Excellence Awards 2012 in the category Healthcare Service Provider Company of the Year and FICCI Health Care Excellence Award 2012 for 'Addressing Industry Issues'.

Some of the innovative factors that have contributed to NH delivering affordable healthcare include Unique Health City Model, Telemedicine, Yeshaswini, Increasing life span of medical equipment, Daily Profit and Loss tracking, Cloud ERP system, Staff and Patient feedback system, Scholarship for Medical studies, Investment towards training and development and also the Asset Light Strategy. NH's strategy of keeping an asset light model has worked in its favour by keeping operating costs low. NH has invested in green field projects where land and buildings belong to the Group. NH has further explored other models of partnership e.g. running a specialty department in an existing hospital. They have also entered into agreements with existing hospitals which own the land and buildings but NH manages the entire facility. Other parameters that contribute to a healthy bottom line are manageable sizes of hospitals and number of beds which differ with locations and ensure a much lower capex than the industry norm through innovative planning and construction.

Innovative Models and Practices Adopted by New Players

Based on analysis of new players described above, we can delineate the models and innovative practices adopted by them to make healthcare more affordable and inclusive. Some of the important models and practices are;

I. Better/optimum asset utilization

II. Keeping assets low (Asset light strategy)

III. Hub and spoke model

IV. High focus on training all employees

V. Para-skilling of staff

VI. Tiered pricing of services

VII. Telemedicine

VIII. Segmenting patients strategically

IX. Partnership[with NGOs and Government institutions(PPP)]

Managerial Implications

Organizations which look at innovation as a principal source of differentiation and competitive advantage would do well to incorporate design thinking into all phases of the innovation process (Brown, 2008). Strategic innovation, which is a must for all marketing firms in today's market place, in developing markets is fundamentally different from what occurs in developed economies. It is not about locating new consumers (assuming the products and services are affordable), there are plenty of under and non-consuming customers to tap. More often, it involves adapting existing products to customers with fewer resources or different cultural backgrounds and creating basic market ingredients such as distribution channels and customer demand from the ground up (Anderson & Markides, 2007; Paninchukunnath, 2010).

The components of service design namely the offering, the funding mechanism, the employee management system and the customer management system of LifeSpring Hospitals are well aligned. Within the Indian context, secondary care institutions are the most suited to address the challenge of inclusive healthcare delivery. Tertiary care institutions are very capital intensive. Primary care organizations cannot address a large number of medical needs. Secondary care institutions, especially the ones which have specialized in one, two or a maximum of three medical specialties are the most suited to penetrate the BOP. They are less capital intensive and can address a large number of medical needs apart from effectively doing the work of primary care institutions.

Managers of the existing tertiary and primary care institutions need to understand and appreciate the unique strengths of secondary care institutions. Introduction of many secondary care hospitals with specialization in various domains of medical specialty can effectively address the challenge of affordable and accessible health care especially at the BOP and rural areas of India. Government can also promote secondary care institutions by giving fast track clearances for new projects, tax incentives during the initial years of a new project establishment or by partnering with private players through PPP models.

LifeSpring hospitals are a major service innovation as a new offering to the market place. It is for the first time in India that a dedicated low cost model of secondary care hospital chain is introduced to address the healthcare needs of mother and child. Through its process-driven model, each LifeSpring Hospital is easily replicable in other locations, ensuring scalability and supporting rapid expansion. With a dual goal of fulfilling its social mission while achieving financial sustainability, LifeSpring hospitals is a good model for providing high quality health services to the poor in emerging markets. Making healthcare inclusive is a major hurdle for many emerging economies.

LifeSpring's innovation lay in figuring out how to deliver world-class care at a price that many of the poor could afford and that also made economic sense. Maintaining hygiene, privacy, transparent and economic pricing, and retaining skilled medical personnel allowed LifeSpring to position themselves as a trusted provider of consistently high-quality package of maternity services to low-end markets. LifeSpring's high throughput/high asset use model is vastly more productive than that of its counterparts, allowing it to become profitable quickly and sustain itself. LifeSpring presents a scalable model for healthcare because it services densely-

populated peri-urban areas, filling gaps left by the alternately dismal and highly exclusive maternity care services preceding it and awakening latent demand for trustworthy, credible healthcare services. Its no-frills approach allows for minimum costs and optimum asset utilization, as well as highly standardized and replicable processes. Its strongly customer-centric positioning and strategic retention of skilled staff is also the key to the sustainability of this model. Clear focus on few specialties and understanding the target market well can contribute to reducing the cost of healthcare service delivery. Over focus on tertiary care and super-specialty hospitals to address even small, minor or routine healthcare needs can be very costly approach.

Conclusion

A healthy India is crucial for the country to make the most of its demographic advantage and to sustain economic prosperity. Innovation is about looking ahead, and helping people believe that they can make a difference. Innovation is a team activity; it has to be integrated into the fabric of the company. Innovative solutions have to be identified to address the healthcare challenges especially of lower middle class and lower class consumers of society. India needs strategies that are customized to address its needs and in alignment with the financial resource available. This calls for rigorous participation from both the public and the private sectors. We need to improve our management capacity and the health system should not be doctor dependent. We should focus on task-shifting, where nurses and paramedics are trained to handle work efficiently. Innovation in management of healthcare is the way forward rather than depending only on medical technology to make healthcare more accessible and affordable.

Secondary care hospitals are the most suited to make modern healthcare more accessible and affordable to Indian consumers, especially for those at BOP. A large number of medical interventions can be effectively handled by small secondary care hospitals which are much easier to set up and manage. The focus on one, two or three specialties can further make the processes simple and faster contributing to better customer outcomes, customer satisfaction and bottom line of the organization. The affordable healthcare trend in India pioneered by Aravind Eye Care is now innovatively taken forward by Lifespring Hospitals, Merrygold Health Network, Vaatsalya Hospitals and Narayana Health. They are adopting various innovative practices by adopting better/optimum asset utilization, asset light strategy, hub and spoke model, high focus on training, para-skilling, telemedicine, **segmenting patients strategically and partnering with NGOs and Government institutions.**

LifeSpring, a secondary care hospital based at Hyderabad, India has developed an innovative and sustainable model to address some of the current challenges in healthcare inclusion. By building an affordable hospital system with uncompromising quality and a focus on new mothers as consumers, LifeSpring has changed the way we think about what low-income women should expect when it comes to reproductive health care. LifeSpring's business model on the operations and marketing side make it an excellent double bottom line business (people and profit). Innovative approaches by organizations like LifeSpring should be encouraged by government for making healthcare more accessible and affordable to the BOP. LifeSpring's focus on providing benefits to a neglected but important target segment has made healthcare more inclusive in India. Sustainable innovations in health care delivery models, as introduced by LifeSpring, Merrygold Health Network, Vaatsalya Hospitals and Narayana Health can make 'health for all' in India a reality.

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