Gearing up for Healthcare 3.0

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Gearing up for Healthcare 3.0

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Foreword

India’s economy has grown at the impressive rate of over 7 per cent a year, on average, in the last decade. The contribution of healthcare to Indian GDP has risen in the last few years and this sector has the potential to be an engine of growth for the nation as it can create 70 million to 80 million jobs in the next 10 years, adding 2 to 3 per cent annually to GDP.

India’s health sector is now at a crucial stage. India currently has 0.9 beds per 1,000 people as against the global average of 3.3, requiring 100,000 additional hospital beds each year, at an investment of approximately INR 45,000 to INR 50,000 crore per year for the next 10 years. Moreover, there is a shortfall of 1.4 million doctors and 2.8 million nurses in India.

The first wave of healthcare provision in India was the government-run healthcare network. The influx of private players defined the second wave. Now a discerning and interconnected nation demands a new incarnation: Healthcare 3.0, which will transform the very ground rules of healthcare and catalyse its participants to engage with a billion plus people across the length and breadth of this diverse nation.

Healthcare 3.0 will ordain that revenues are linked to patient satisfaction. Earning consumer trust will emerge as the key to success and growth. The focus on quality of care and outcomes will become more stringent. Seamless public-private partnerships will be the backbone of the new dispensation, emerging as fundamental to growth. Product and service innovations, strong collaborations with the public healthcare system and global players, technology, retail health insurance and e-health will enhance geographic and economic access to quality healthcare. Emulating their urban peers, rural Indians will also demand quality healthcare from the public healthcare system. Mobile health technology and many such innovations will be needed to meet their aspirations and healthcare needs.

Healthcare 3.0 will be the blueprint for healthcare delivery in the near future. Healthcare personnel will need to prepare and reorient themselves to more informed and evolved customers. They will need to view their customers as co-creators and not just patients looking for miracles. With a changing mindset, individuals will soon want to prevent or delay diseases. A preference for wellness would overtake the healthcare environment with a thrust on outcomes being reserved for extremely critical illnesses.

The industry needs to prepare itself for this next wave. This report, Gearing Up for Healthcare 3.0, will focus on closing the demand-supply gap, streamlining supply, learning to use technology, and partnerships among healthcare providers and with the government.
The Confederation of Indian Industry (CII) has identified healthcare as a main focus area because of its overriding importance to the national economy. According special status to the Indian healthcare industry will help the industry secure long-term funding from institutions such as the India Infrastructure Finance Company Limited. With priority status, Healthcare 3.0 will be able to meet the major challenges and fill the huge demand-supply gap in beds, provide significant employment and help build a healthy nation, all the while increasing our GDP.

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Chairperson — CII Seventh India Health Summit 2010  
Executive Director — Finance, Apollo Hospitals Group

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Executive Vice-President, Siemens Limited

Mr Chandrjit Banerjee  
Director General, CII
Acknowledgements

We thank the Confederation of Indian Industry (CII) for giving us the opportunity to provide our perspective on the healthcare industry.

The theme for the seventh annual CII Health Summit is ‘Healthcare 3.0 – The Next Generation of Healthcare’. In line with the imperative for India to create accessible and affordable healthcare for all its people, the summit will focus on the finer balance between profitability and corporate responsibility required to achieve this, given that patients are now more aware and discerning.

This report provides a point of view on how the healthcare industry in India can prepare for Healthcare 3.0. Its focus is on creating linkages between patient demand and healthcare supply, use of technology (particularly mobile technology), and the partnerships needed to achieve what should be a decade of tremendous growth in healthcare in India.

Sathya Sriram, an Engagement Manager based in our Chennai office, led the preparation of this report. We are grateful for the contributions of Chirag Adatia, Ajay Bakshi and Sathya Pratipathi to the articles included in this publication. We would also like to thank Gautam Rau and Jeanne Subramaniam for their editorial support; Kulsum Merchant, Fatema Nulwala and Yashshri Sonam for their support in external relations; and Pooja Thakkar for administrative support.

The contents of this report are not based on any primary research we have conducted but synthesise our perspectives gained from past research and experience in serving multiple stakeholders in healthcare in India over many years. For these experience and perspectives, we would like to acknowledge our Healthcare practice in India as a whole, without whose efforts this report could not have been published.

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Introduction

With India’s GDP poised to continue on the growth path established in the last decade, the country can look forward to a period of sustained economic development. Maximising the potential of the population is an indispensable part of development and for India is crucial to reaping its ‘demographic dividend’ – the predominant number of young people in the population, and the entrepreneurial spirit in all sectors, including healthcare.

A crucial element of sustained development for India will be better and more healthcare. Already, we see economic trends fuelling growth in healthcare services in the country, with rising incomes, shifting spending patterns, growing urbanisation, and expanding government expenditure on healthcare.

However, a significant challenge India faces in expanding healthcare is the demand-supply gap, with low utilisation of hospital infrastructure and medical professionals, gaps between incidence and diagnosis/treatment, and low immunisation levels. Four measures can help overcome this challenge: linking demand and supply to better utilise available resources, using mobile technology to better inform and build awareness about diseases and treatments, forging partnerships among all stakeholders involved, and expanding health insurance. The first three of these measures are covered in this report.

ESTABLISHED TRENDS ARE FUELLING HEALTHCARE GROWTH

Healthcare services in India are expected to grow at the compounded annual rate of 12 to 15 per cent between 2010 and 2020. This is based on four irreversible trends already apparent in the healthcare sector, inspiring confidence that this pace of growth can be sustained through the decade.

First, India will undergo a demographic transition between now and 2020. The number of middle class households (earning between INR 200,000 and INR 1,000,000 a year) will increase almost four-fold from 24 million in 2010 to 93 million in 2020, primarily due to a rise in incomes (Exhibit 0.1).

Second, over the same period, India will undergo an urban transformation at a speed and scale comparable only to that of China. Research by the McKinsey Global Institute (MGI) projects that the population of India’s cities will grow from 340 million in 2008 to 590 million in 2030, reaching 40 per cent of India’s total population. Five states in the country (Tamil Nadu, Gujarat, Maharashtra, Karnataka and Punjab) are likely to be more than 50 per cent urbanised by that time. MGI estimates that urban India will contribute nearly 70 per cent of India’s GDP by 2030 (Exhibit 0.2).

The sizeable and largely urban middle class will shift consumption from basic necessities (such as food and apparel) to more discretionary items, including healthcare. Spending on healthcare is likely to rise substantially from 8 per cent of average household spending today to 13 per cent in 2025, much higher than that in peer benchmark countries (e.g., Brazil, China and South Korea) (Exhibit 0.3).

Third, the prevalence of chronic diseases such as coronary heart disease and diabetes is steadily rising in India, increasing by 25 to 45 per cent of the patient pool for some diseases. Even as the incidence of more acute conditions may be falling due to improved awareness and sanitation, the number of untreated cases resulting in morbidity remains substantial.
EXHIBIT 0.1

By 2020, the number of middle class households will increase almost four times, increasing the purchasing power of the population

<table>
<thead>
<tr>
<th>Households income brackets¹</th>
<th>2010</th>
<th>2020 (F)</th>
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<td>INR Thousand</td>
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<tr>
<td>Globals (&gt;1,000)</td>
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<tr>
<td>Strivers (500-1,000)</td>
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<tr>
<td>Seekers (200-500)</td>
<td>5.6</td>
<td>10.9</td>
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<tr>
<td>Aspirers (90-200)</td>
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<td>81.8</td>
</tr>
<tr>
<td>Deprived (&lt;90)</td>
<td>92.1</td>
<td>61.7</td>
</tr>
</tbody>
</table>

¹Annual household income, 2001 prices


EXHIBIT 0.2

Cities are likely to house 40 per cent of India’s population by 2030, with five states more than 50 per cent urbanised

<table>
<thead>
<tr>
<th>State</th>
<th>Urban population Million</th>
<th>Urbanisation rate, 2030 %, total population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tamil Nadu</td>
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<td>Gujarat</td>
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<td>Punjab</td>
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</tr>
<tr>
<td>Madhya Pradesh</td>
<td>32</td>
<td>29.9</td>
</tr>
</tbody>
</table>

¹Defined as the ratio of urban to total population based on the census definition of urban areas; population >5,000; density >400 persons per square kilometer; 75 percent of male workers in non-agricultural sectors; and other statutory urban areas.

SOURCE: India Urbanization Econometric Model; McKinsey Global Institute analysis
Finally, the government is making a greater thrust to expand health access. Healthcare expenditure in India is low as compared to that of benchmark peers (e.g., 8.1 per cent of GDP in Brazil versus 4.8 per cent in India), with 70 per cent of spending being out-of-pocket. However, government outlay on health is increasing rapidly, with the share of central health spending increasing from 4.0 per cent in the Tenth Five-Year Plan to 6.5 per cent in the Eleventh Plan. Most of this spending is directed towards the National Rural Health Mission (NRHM) programme, accounting for around 70 per cent of funds. This programme has encouraged partnerships between central and state governments in health initiatives such as Janani Suraksha Yojana.

Further, the government has taken unprecedented steps to collaborate with the private sector to offer quality health services at subsidised costs to the poor. The Rashtriya Swasthya Bima Yojana (RSBY) is expected to be the main avenue of public health insurance to increase access to healthcare among the poor. This unique partnership framework between central and state governments, private health insurers and providers has been remarkably successful in covering about 56 million people in 23 of India’s 28 states as of May 2010.

HEALTHCARE GROWTH WILL BE PRIVATE, MORE STANDARDISED AND INCREASINGLY AWAY FROM METROS

Recent McKinsey research suggests that medical infrastructure will grow dramatically over the next decade, mostly driven by private investment. While
government investment will focus primarily on upgrading facilities in Tier-II and rural areas, private providers are likely to invest in building tertiary facilities in metros and secondary care in Tier-I towns.

Private players have started to innovate in new healthcare delivery formats and lower cost models to overcome geographic and economic access barriers. Hub-and-spoke delivery models will increase access to secondary care in the top 200 to 250 towns. Lowering overall treatment costs through operational improvements and low-cost business models will be critical to success in non-metros.

A recent but slow trend is the establishment of treatment protocols, primarily among corporate providers, allowing standardisation of quality care and oversight of treatment costs. Leading physicians seeking to leverage international and national clinical trial opportunities are also moving towards protocols. Additional factors likely to increase the use of protocols of medicine in India are greater patient awareness, rising private and public payor influence, and increasing regulation.

A SIGNIFICANT AND VARIABLE DEMAND-SUPPLY GAP EXISTS

Indian healthcare is fundamentally a supply-constrained market – we do not have enough doctors, nurses, beds or operation theatres. India currently has 0.9 beds/1,000 population compared with the global average of 3.3, requiring 100,000 additional hospital beds each year. Moreover, there is a shortfall of 1.4 million doctors and 2.8 million nurses. This supply is not evenly spread between the metros, towns and villages; the rich and the poor; the critically ill and the slightly unwell. Hence, the gap is both significant and variable, with a few metros getting saturated with beds catering to the rich.

FOUR CRITICAL LEVERS CAN ADDRESS THIS GAP

In a world of supply constraints and underutilised resources, linking demand to supply is critical. Better trained primary healthcare personnel (including doctors), greater access to diagnostic facilities and reporting mechanisms, and improved referral linkages will enable providers in non-metro geographies to enhance their practices/facilities. Ensuring common incentives across stakeholders (providers, payors, and regulators) will further ensure that everyone is focused on doing what is best for the patient including awareness and preventive care, and not just treatment. This may require innovation, e.g., in role definitions, some of which is already happening in parts of India.

Inadequate information and data gaps can be best addressed through mobile technology to overcome geographic dispersion. Regular and systematic data capture can enable several services, such as managing the performance of health workers, outreach/reach for health advice, basic diagnostics and mobile payments. In addition, physicians can offer remote diagnosis and use SMS services for reminders, health information, and drug authentication.
Different stakeholders will need to forge partnerships – providers, infrastructure players, investors, suppliers (e.g., of pharmaceuticals, devices and diagnostics) and payors – among themselves and with the government. This will enable them to provide the optimal solution and overcome bottlenecks together. The capabilities required to address the healthcare demand/supply gap will require commitment and collaboration and no one stakeholder is fully equipped or empowered to achieve this single-handedly.

Broader uptake of public or private health insurance will help address the problems of affordability and financial liquidity that prevent many in India from seeking appropriate treatment and complying with it. In addition, payors can help by encouraging referrals and innovating to lower treatment costs without compromising care quality. While there has been significant momentum in universal coverage in recent years, much more needs to be done about awareness of benefits, more engagement from payors to understand patient needs, and close monitoring of services and health outcomes.

In keeping with the theme of the Seventh CII Health Summit, this publication addresses three of the initiatives required in detail: linking demand and supply, using mobile technology, and forging partnerships. While ensuring broad coverage of health insurance is just as important, the CII dedicates a two-day annual summit to this topic each year; hence it is not covered in this publication. The articles include global examples of successful models with elements of the critical requirements for India and lessons relevant to the country.
Healthcare 3.0 will strive to provide access to quality prevention and care of medical problems to all India’s people. It will do so by facilitating the linkage of demand and supply, the use of technology, the forging of partnerships, and efficient and effective operations.

A fundamental issue remains to be resolved—not all healthcare demand (both prevention and treatment) is serviceable, and therefore does not put appropriate pressure on supply. In other words, although demand far outstrips supply on paper, not all points of supply feel the right kind of pressure on quality, efficiency and effectiveness. Making demand serviceable is a prerequisite of Healthcare 3.0.

**WHAT ARE THE ISSUES WITH DEMAND-SUPPLY LINKAGE?**

Mismatch in demand and supply is a critical problem, and one that is not understood well. In India the total number of hospital beds is far below world averages, yet most hospitals do not have optimum utilisation. While the total number of doctors in the country is 45 per cent lower than required, not all doctors are fully occupied. Even though we need 120 per cent more nurses than we have now, not all nurses are performing the right set of duties that will help maximise their efficiency (Exhibit 1.1). Finally, while the government spends 0.9 per cent of GDP on healthcare, which is low by all reckonings, available funds are not fully utilised (Exhibit 1.2). The health ministry procures enough vaccines to vaccinate all the children under the national routine immunisation scheme. Yet full immunisation rates are just above 40 per cent (Exhibit 1.3). In short while we do not have enough healthcare resources, the resources we do have are not used appropriately or fully.

Three main factors are behind this gap. First, a lack of accurate and accessible information means that care is not provided at the right site for the right patient—in terms of acuteness of illness, ability to pay for treatment and geographic proximity to the patient. Second, there are leakages in demand—ranging from awareness, through diagnosis and treatment, to compliance. Third, stakeholder incentives differ—primary caregivers do not have incentives to prevent illnesses and refer
EXHIBIT 1.1

India is supply constrained, with a shortfall in beds, physicians and nurses

Per thousand population, 2009

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<tr>
<th></th>
<th>Beds</th>
<th>Physicians</th>
<th>Nurses</th>
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<td>0.9</td>
<td>0.6 1.3</td>
<td>1.3</td>
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<td>Other low-income countries (e.g., sub-Saharan Africa)</td>
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<td>1.0</td>
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<tr>
<td>Middle-income countries (e.g., China, Brazil, Thailand, South Africa, Korea)</td>
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<td>2.4</td>
<td>4.0</td>
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<td>High-income countries (e.g., US, Western Europe, Japan)</td>
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<td>2.8</td>
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<td>World average</td>
<td>3.3</td>
<td>2.7</td>
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1 Allopathic physicians account for 0.64 per 1000 and traditional providers account for 0.65 per 1000 population; does not include unregistered practitioners
2 Registered general and auxiliary nursing midwives

SOURCE: World Health Statistics WHO 2010; Central Bureau of Health Investigations 2009; team analysis

EXHIBIT 1.2

Not all funds allocated by central government to state governments get utilised

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<th>State</th>
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</table>

cases that need more specialised care to secondary and tertiary providers; secondary providers have no incentives to refer cases to tertiary care, and the reverse linkages between tertiary and secondary/primary care are equally weak.

POTENTIAL APPROACHES TO BETTER LINK DEMAND AND SUPPLY

Linking variably constrained demand to inconsistently present supply will require action on three fronts: ‘right siting’ of care, plugging demand leakages, and providing appropriate and aligned incentives for stakeholders.

Right siting of care

Typically the term right siting means ensuring patients go to the right type of provider to get the required type of care—health workers and nurses for preventive care, outpatient facilities for primary care, clinics for secondary care, and so on. Here, however, we use the term in three dimensions—clinical right siting, geographic right siting and economic right siting. Balancing these three dimensions requires a system view rather than a stakeholder-specific view. The question remains, who has this system view today? This is discussed at the end of the chapter.

Payors might be best positioned to push for overall effectiveness of the system, but as more and more providers span the spectrum of care, they too will need to focus on building stronger referral linkages, simplifying primary care provision, and pushing primary care seekers to primary care. In turn, patient awareness will gradually increase.
Clinical right siting of care: Currently, patients or their families opt for type of healthcare based on which provider is available, what they know, and referral systems. These appear to be insufficient to arrive at an optimal decision. To compensate, providers have taken on a ‘side-step’ role, with tertiary set-ups conducting basic procedures and specialist physicians delivering primary care, leading to less than optimal utilisation. This is bound to happen in any fragmented, private-investment driven and entrepreneurial market. In a resource-constrained environment such as India’s, it exacerbates the demand-supply imbalance. This makes clinical right siting particularly important in unlocking supply.

Geographic right siting: Physical access to care is difficult in many parts of the country. The problem is compounded by the lack of information among patients, which in turns adds to the cost of care. Players will need to innovate to resolve the geographical challenges. Some solutions and innovations are already in play, albeit in small pockets spread across the country. There are successful examples of ambulance networks backed by call centres, attempts at providing affordable secondary care in Tier-II and Tier-III towns, using technology to link referrers to specialists underway, some more successful than others. Nevertheless, even these solutions are difficult to scale up. Bottlenecks range from managerial resources and investment muscle, to insufficient forums for multiple stakeholders. Chapter 3 of this publication describes options for stakeholder partnerships that can address some of these issues.

Economic right siting: Ultimately, affordability and liquid funds available with patients affect the way healthcare is accessed across the country, including for patients with higher affordability. Since the bulk of healthcare is still out-of-pocket, people make inefficient decisions on the cost-benefit equations of a particular
healthcare offering. As a result, poor(er) patients are often pushed into bankruptcy when care could have been available at the same quality but lower cost. At the same time, rich(er) patients often find themselves dissatisfied with care given, and are willing to pay more for better quality and service.

The majority of such decisions are driven purely by funds on hand with the patient, as most patients have limited payment options. Currently, choices are driven by physical proximity and word of mouth.

In Healthcare 3.0, these options should be better linked and easier to choose among through more efficient information systems and greater payor coverage, streamlining the pricing variances among providers.

Plugging demand leakages
Healthcare demand encompasses prevention (through education or preventive care) incidence/prevalence, diagnosis, treatment and compliance.

EXHIBIT 1.5

In India, gaps in demand are caused by the behaviour, skills and means of stakeholders, as follows:

- **Prevention**: Limited public awareness of prevention and the absence of incentives for any stakeholders to increase awareness results in very low use of preventive care.
- **Incidence**: Those who actually seek healthcare (even diagnosis) are much lower in number than those who suffer from disease. This is caused by limited awareness of symptoms and limited access to facilities.
Healthcare 3.0
The next generation of healthcare

- **Diagnosis:** A lack of complete knowledge or skills among providers can result in flawed diagnosis, providing a less than optimal solution to the patient, even to those who reach a provider.

- **Treatment:** This is one of the most visible forms of leakage. The challenge here is limited affordability as well availability of funds among patients. Limited access to the right set of providers is another factor.

- **Compliance:** A lack of affordability and funds among patients often compromises compliance as well. Players need to have completely aligned incentives to ensure delivery of appropriate longevity of care, thus reducing chances of later costlier health events.

**Appropriate and aligned incentives for stakeholders**
Without the incentives to seek and provide the appropriate level and quality of healthcare, certain behaviours have developed in India that are very difficult to change. Providers are not incentivised to prevent diseases. Payors take the cost-benefit choice of the doctor’s chamber. Patients do not have full information. Regulators struggle with enforcement in a market so fragmented and diverse.

An essential requirement of right siting is that all stakeholders have a stake in the overall health cost of a patient. Only then will the ecosystem create the optimal healthcare solution.

While these are not as yet the perfect solutions, some existing models strive to achieve this balance. The government’s Employee State Insurance Scheme is an example. It is funded partly by government employees and their employers (that is, the government), and has its own healthcare delivery infrastructure. This provides the incentive to optimise costs and outcomes. Another example is a private health insurance player that acts as a facilitator between various service providers. The entity enrols households for regular healthcare benefits, and strives to provide best quality care at reasonable prices through the existing healthcare infrastructure.

Such models will create demand that is serviceable and exert pressure on supply to make it efficient and right sited.

**WHO WILL DO THIS?**
Healthcare providers may not be the only right stakeholders to remedy the demand-supply imbalance. For one thing, focusing on prevention will be beneficial to the healthcare provider only if the provider has an interest in reducing the overall cost of healthcare in the community or for that patient, and not only in the revenue earned. The desired outcome is a scenario in which all involved seek to optimise costs. The government will need to play this role, and is already doing so as evidenced by its push toward investing in healthcare payment rather than healthcare provision.

Chapter 3 describes in detail the various partnerships needed to remedy the demand-supply mismatch, and the role that various stakeholders will need to play.
Mobile telephony has penetrated India deeper and faster than has any other technology in the past. There are now nearly 600 million mobile subscribers in the country and nearly 13 million subscribers are being added every month. Given the highly inadequate health infrastructure (physical and human), a largely out-of-pocket healthcare system (nearly 70 per cent of total spend is out-of-pocket) and increasing willingness to develop innovative business models, mobile healthcare (mHealth) is an answer to the problem of access and is set to take India by storm. A whole range of healthcare services can be provided over the phone. This chapter will describe the potential of mHealth in India and what needs to happen to accelerate growth in this exciting area.

To date, diagnosis and treatment have always required a face-to-face meeting between physicians and patients (once or several times depending on the health condition). After the visit, patients are on their own until the next visit. This approach has many disadvantages and costs for society, since access to and quality of care are not homogenously available across geographies.

All this could change thanks to ubiquitous mobile telecoms and the increasing acceptance of technology in our daily lives. mHealth would decouple healthcare delivery from meetings between patient and physician. The opportunities could be endless – from abdominal injury examination of a soldier using a hand-held ultrasound device to the beating of a patient’s heart heard hundreds of miles away by a top cardiologist.

HYPE OR REALITY?

Some may consider mHealth just another mobile phone craze. Sceptics might point to the long history of unrealised hype in telecom and the poor track record of telecom firms in innovation beyond their core business. But mHealth is different. It does not require any technological breakthrough and it addresses a fundamental need of the world’s population.

mHealth is not a technology game. It just builds on basic voice, data, and SMS communications to deliver efficient and effective healthcare. Existing technology can be used to innovate in business and operating models. Technological
improvements are and will be needed to further ‘power up’ mHealth’s disruptive potential. Still, it is not a technology-driven innovation.

The second substantial difference is that mHealth does not depend on generating new demand or triggering latent needs among consumers. It meets an existing fundamental need: widely accessible and affordable quality healthcare. What it does hinge on is effective innovation in healthcare delivery. This is where the real challenge lies.

THE INDIAN HEALTH OPPORTUNITY

Economic growth on the scale of India’s will only increase the already enormous demand for healthcare services. Fulfilling this demand with traditional solutions requires substantial investments in a vast network of sub-centres, primary health centres, community health centres and district hospitals. In addition, private investments have also been channelled into hospitals and diagnostic facilities on a big scale; it could take decades for us to reach developed country levels in healthcare delivery.

Mobile telephony, on the other hand, provides unprecedented access and deep penetration into the Indian heartland. By the end of 2010, nearly 600 million Indians are likely to have access to mobile phones. Considering that nearly 40 per cent of India’s population is less than 18 years of age, it appears that a large majority of Indians would soon have access to a phone – either owned or borrowed.

The opportunity is ripe to offer healthcare services across all the technologies deployed by mobile operators. These include remote health monitoring, reminders, drug authentication, and health information to people via mobile phone, as depicted in Exhibit 2.1.

EXHIBIT 2.1

Mobile healthcare offers a range of services

<table>
<thead>
<tr>
<th>Type of mHealth service</th>
<th>First generation offerings based on existing technologies but needing business innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. SMS-based services (reminders, health information, drug authentication)</td>
<td>Disruptive technology – needs ecosystem development</td>
</tr>
<tr>
<td>2. Voice based services</td>
<td></td>
</tr>
<tr>
<td>▪ Basic Remote Doctor – patient focused</td>
<td></td>
</tr>
<tr>
<td>▪ Enhanced – includes healthcare professionals</td>
<td></td>
</tr>
<tr>
<td>3. Electronic health records</td>
<td></td>
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<tr>
<td>4. Remote health monitoring</td>
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</tbody>
</table>
The potential advantages of integrating mobile technologies into healthcare delivery include better services to a larger number of patients; easily standardised care through centralisation and IT developments (e.g., diagnostic algorithms used in telemedicine centres); and greater collaboration to provide integrated care by sharing patient data with all parties involved. We believe that successful deployment of mHealth could transform healthcare delivery, as depicted in Exhibit 2.2.

EXHIBIT 2.2

Global primary market research by McKinsey & Company shows that consumers have a lot of interest in mHealth services and are willing to pay a significant premium (over airtime rates) for them. In fact, Indian consumers seem to have the highest demand and willingness to pay among all the six countries we surveyed (Brazil, United States, Germany, South Africa, China and India) as shown in Exhibit 2.3.

MAKING HEALTH HAPPEN

India is a huge market and there is ample space for many different models to evolve. We believe that several start-ups will emerge and try to disrupt the market with innovative business models. One such company already exists and provides access to doctors online and over the phone. Another focuses on SMS-based reminder services and health tips delivered directly to consumers.

In addition to these start-ups, we are seeing a lot of interest in government departments (central and state), foundations, large hospitals, and technology companies in joining this ecosystem. A few mobile operators have also announced partnerships with providers.
Success will require three things. First, the ability to understand the consumer very well is critical. Indian patients are very discerning and while willing to experiment, they want to see real value. Second, it is crucial to develop the right partnerships enabling multiple players to contribute towards the development of a successful mHealth service and get a rightful share of the value created. Finally, the governments and regulatory authorities would need to play a watchful but enabling role so malpractices do not emerge and sound mHealth services are allowed to reach consumers across the country.
Partnerships between critical stakeholders—public and private—are critical to providing sustainable and high quality healthcare services to all Indians. While there are several recent examples of thriving partnerships, it is imperative to accelerate, replicate and scale up these models in addition to exploring new ways to collaborate that can achieve the vision of Healthcare 3.0.

A RISING NUMBER OF HEALTHCARE PARTNERSHIPS IN INDIA ARE ADDRESSING PATIENT NEEDS

The government is increasingly open to partnering with the private sector to improve health outcomes—as seen by the numerous successful partnerships in recent years. These include a telemedicine programme in Andhra Pradesh and other states and a health insurance scheme also in Andhra Pradesh. Partnerships range from large-scale programmes reaching millions, such as a public health foundation operating at the all-India level, to much smaller initiatives driven by individuals (e.g., a non-profit trust adopting and managing primary healthcare centres in Karnataka and Arunachal Pradesh).

Slowly and gradually, new and innovative partnership formats are emerging to creatively meet patients’ needs. A pharmaceuticals firm and a hospital chain are partnering to offer the first institutionalised disease management programme for heart disease. A recently announced venture by device suppliers and an institute of medical science is setting up 10 “see and treat” cancer centres to address the growing oncology needs in rural India at affordable costs.

PARTNERING FOR VALUE OFFERS LARGE POTENTIAL

If done well, partnerships can provide four fundamental benefits, delivering significant value for money, as described below.
New sources of financing: Healthcare services and infrastructure require large investments in the coming decade to ensure accessible and quality healthcare at reasonable costs. Recent research by McKinsey & Company suggests that building and upgrading medical infrastructure alone is likely to require over USD 200 billion between 2010 and 2020. The government has announced plans to increase public spending on healthcare from the current 1 per cent of GDP to 3 per cent, and has been consistently increasing annual health expenditures (Exhibit 3.1). Nevertheless, there is still a significant funding gap for capital expenditures.

Increased efficiency: The private sector brings demonstrable efficiency benefits that can outweigh the higher cost of private capital. Private players are driven by their financial interest to deliver on time, while meeting budgets and optimising life-cycle costs (investments versus operating costs). Further, competition between bidders reduces prices and holds them to high efficiency standards.

Appropriate risk allocation: Ensuring common incentives among all groups involved and balanced risk sharing are critical to creating long-term ‘win-win’ situations for all. Partnering allows risk to be allocated to the party best able to manage them. Effective incentive systems can ensure maintenance of quality service as well.

Unique capabilities: The private sector can bring deep expertise and capabilities required in all stages of a programme, from conception to implementation. In their respective competitive markets, each has developed distinctive tools such as in procurement or marketing that can be leveraged in the partnership.

Public-private partnerships still face many challenges. Weak and overly complex incentives that do not match the public’s interest; limited contract management by
the government; and limited risk transfer, with the government often carrying all the risk, lead to less than optimal partnerships. Further, a lack of focus on sustainable partnerships results in inflexible relationships.

LESSONS FROM GLOBAL HEALTH PARTNERSHIP MODELS CAN BE APPLIED IN INDIA

Some global partnerships combine several of the benefits outlined above and are relevant to healthcare in India, as described below and summarised in Exhibit 3.2.

Integrated health care in Valencia, Spain
A programme in Valencia (a region of Spain with 5 million people) provides total primary and secondary care for the population at costs 25 per cent lower than those of other programmes in other regions of Spain. This was accomplished by tendering management of healthcare for the entire population to private consortia that could improve health services and outcomes at a significantly lower cost.

Aspiring to improve the financial performance and operational efficiency of its public health system, the Valencia government decided to decentralise public healthcare provision from the regional to the sub-regional level, involve the private sector and introduce ‘management by outcomes’ rather than process, as had been the practice. The programme encouraged different health districts to compete by giving patients free choice of hospitals, and granted concessions to the private sector for managing health systems in 5 out of 21 districts.

EXHIBIT 3.2

<table>
<thead>
<tr>
<th>Programme</th>
<th>Highlights</th>
<th>Impact</th>
</tr>
</thead>
</table>
| Integrated health care, Valencia, Spain | - Public healthcare decentralised from regions to sub-regions  
- Contracted to private sector with capitation reimbursement  
- IT systems integrate medical records  
- Competition between hospitals | - Primary and secondary care at 30 per cent less cost when managed by private sector  
- High patient satisfaction |
| Private Finance Initiative, United Kingdom | - Long-term contracts with private sector to build, maintain asset  
- Annual payment by public sector client | - 900+ projects worth over GBP 70 billion  
- Project costs do not impact government balance sheet  
- Three times more likely to be completed on budget and in time |
| Child and Family Wellness Shops, Kenya | - Network of franchised micro pharmacies and clinics  
- Central procurement of drugs and training to franchise owners  
- Strict compliance with rules and procedures | - 82 clinics and shops service 550,000 customers  
- Official tie-up with Ministry of Health for National Malaria Strategy |

Healthcare 3.0
The next generation of healthcare

The programme was implemented using lean principles through an integrated IT system and patient swipe card, which tracks patient data. Incentives were aligned to ensure individual hospital profit is linked to the choice of hospital by each patient. The hospitals are paid 100 per cent of the costs incurred by patients from their region but only 85 per cent of costs if the patient is from a different region. In addition, hospitals are expected to pay 100 per cent charges for any patients who use another region’s facilities. Further, incentives are provided for good performance by providers and strong cost control mechanisms are also used.

Limited by a capitation reimbursement 25 per cent lower than that for public systems, the privatised health districts have achieved promising improvements in operational efficiency, cost containment and patient satisfaction in a short time.

The key reasons for this success are lean methods and simple governance of the entire system, excellent information systems to integrate patient medical records, managerial responsibility and empowered providers, and partnership with an experienced private company well-suited to financing and managing large-scale projects. The main challenge with replicating the Valencia model is overcoming political sensitivities about the involvement of the private sector in providing public healthcare service.

The Private Finance Initiative, United Kingdom

The Private Finance Initiative (PFI) was developed in 1992 as a means to encourage public authorities to join with the private sector in long-term contracts for financing, building and running an infrastructure asset. The private sector construction companies/project managers build and maintain the asset for up to 30 years in return for an annual payment from the public client. While most projects are in healthcare, this initiative extends to other sectors as well (e.g., transport, education) and has introduced a cultural shift in the way public-private partnership support is provided.

The main benefits for the public sector include transferring risks to the private partner; ensuring better quality and control of planning, process and delivery; and allowing the undertaking of more capital projects for a given level of public expenditure.

The initiative has had a significant impact, with procurement of over 900 projects worth over GBP 70 billion. Close to 90 per cent of these projects do not affect the government’s balance sheet and project cost overruns have been passed on to contractors. PFI initiatives are up to three times more likely to be completed on budget and delivered on time.

Child and Family Wellness Shops, HealthStore Foundation, Kenya

A private sector-driven initiative in Kenya, HealthStore (a non-profit foundation), has a network of franchised micro pharmacies and clinics providing essential, good quality medicine at affordable prices for the most common and serious diseases in Africa. The Child and Family Wellness Shops (CFW) ensure compliance with quality standards in healthcare provision, while improving health access for local rural communities.
HealthStore achieves cost advantage through scale by procuring drugs and offering training to franchise owners centrally. They maintain regular check-ups to ensure strict compliance with standardised rules and procedures. Credit facilities have been opened to help patients who are unable to pay right away. About 550,000 patients and customers were served in 2008 through 82 clinics and shops and the network continues to expand in Kenya and neighbouring countries.

This collaboration between a non-profit foundation and individuals to set up reliable profit-making franchises for rural populations has helped tremendously in improving the availability and reliability of medications for the most common diseases. The model has challenged the failing government system and one of its biggest successes is the official tie-up with Kenya’s Ministry of Health for its National Malaria Strategy.

India’s own Health Management and Research Institute (HMRI) and Emergency Management and Research Institute (EMRI) provide operational examples of public-private partnerships offering diverse services. These include ‘104 Advice’, providing basic triage advice from a medical professional on the phone; ‘104 Mobile’, a mobile medical unit that visits villages regularly; ‘108 Ambulance’ services that handle medical, police and fire emergencies around the country.

A FUNDAMENTAL OPERATING MODEL SHIFT IS REQUIRED

Public-private collaborations vary in their scope and ambition. Traditionally, the private partner has primarily been a supplier of products or services with a low potential reward and low risk, but also limited engagement in health outcomes. It is now time to take these partnerships to the next level of collaboration, with significant involvement of the private partner to supplement any shortcomings of the public sector. This can range from a financing role, where the private partner takes an ownership stake, to delivering health outcomes, with a high potential reward but also high risk.

The challenges with the traditional partnership model are many. Historically, partnerships have relied on tightly specified legalistic divisions of responsibility, with a small number of occasional interfaces between partners. The public sector tends to rely on turnkey solutions from a single partner and has a limited desire to integrate multiple partners. Also, these partnerships are based on operational risk transfer to the private sector, depending heavily on private sector capabilities to manage the risk. Finally, in order to ensure easy measurability of the true success of projects, given the government’s limited expertise in procurement and contractual enforcement, simple contracts with specified deliverables do not capture the complexity of large capital-intensive projects.

The most successful partnerships seem to have evolved beyond a focus on getting the deal done to a longer term, more holistic perspective. Delivering the vision of Healthcare 3.0 will require shifting to a fundamentally different operating model, as described below (Exhibit 3.3).
A spirit of true partnership

Partnerships must move away from stark lines of responsibility dividing the partners to long-term, mutual trust-based relationships of learning from each other, leading to mutual prosperity. Fair competition based on an open-door policy, with agreement on a common vision in addition to deliverables, and open-book pricing will be important. Further, clear benefit sharing, where suppliers face economic risk but gain the benefits of productivity improvements must be included.

Government acts as integrator, not purchaser

The government needs to broaden its perception of its own role in facilitating effective partnerships. It must focus on project management, with fast decision making, involving as many partners as needed to complete the project. Defined and consistent governance principles with clear roles for each party and a process for managing changes to agreements will be necessary. A strong government entity that brings together all the necessary stakeholders will be critical for successful partnerships.

Risk sharing, not risk shifting

Shifting risk entirely to the private sector as is done today is not a sustainable model. Risks must be shared across the parties involved, with clear allocation of accountability and built-in incentives for working together. Risk management capability building is a must for all involved in the partnership, with specific training for the non-profit and public sector, if required.
Comprehensive outcome-based contracting

Identifying the right success metrics based on health outcomes, rather than inputs or outputs, will become important. This also ensures sufficient empowerment of the partners versus unnecessary focus on process. This comes with the small risk of unpopular steps to deliver outcomes, but that can be managed with the appropriate contracting agreements.

Lowering the cost of health insurance through public subsidies and encouraging providers to innovate in delivery mechanisms, reducing capital expenditure through land subsidies and working closely with experienced private sector parties, and using technology to take healthcare to non-metro towns and rural areas are some ways in which partnerships can help achieve the vision of Healthcare 3.0.

The challenges facing healthcare in India need to be tackled together by all parties, instead of following a fragmented approach with limited outcomes. In this context, partnerships become crucial and their success lies in the integrity and commitment of the stakeholders involved.