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Latest in Healthcare Management

Pradeep Bhardwaj



Forewords
DS Rana
Maj. Gen. SB Akali (Retd)

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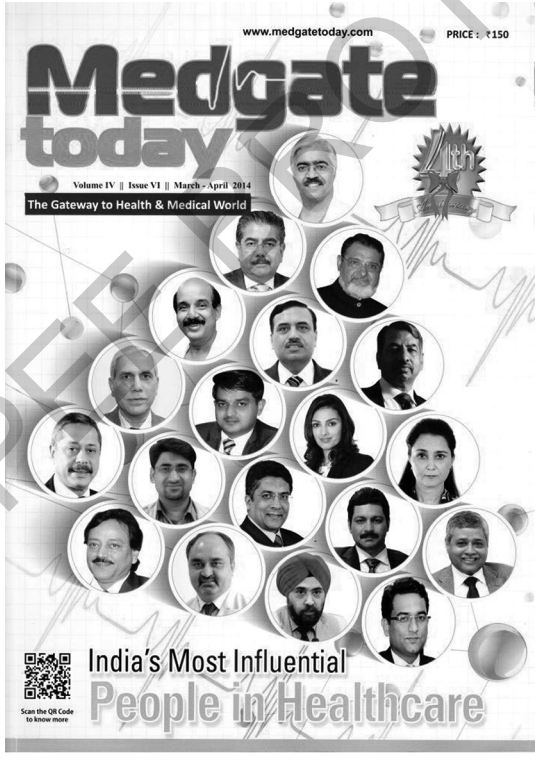
Chapter 2

Emerging Trend in Healthcare

INTRODUCTION

India healthcare expenditure is still amongst the lowest globally and there are significant challenges to be addressed both in terms of accessibility of healthcare service and quality of patient care.



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CURRENT STATE OF HEALTHCARE IN INDIA

The India healthcare sector currently represents a US$ 40 billion industry. A break-up of the sector as of 2009 is provided (Fig. 2.1).

India's healthcare spend is significantly low when compared to the global, developed and other similar emerging economies. To future illustrate this point, we have examined the Indian healthcare spend on various parameters.

The Indian healthcare spend is less than half the global average in percentage terms when compared on a 'percent a gross domestic product (GDP)' basis (Fig. 2.2).

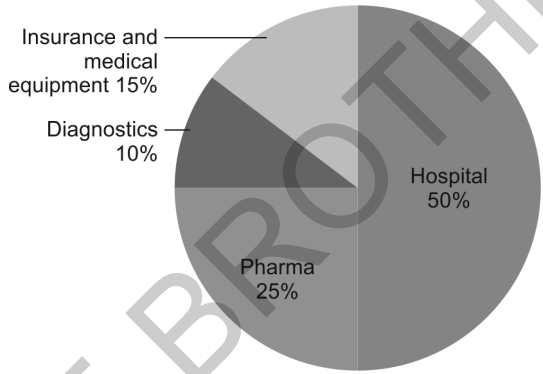

Fig. 2.1 Healthcare industry break-up
Source: IDFC Securities Hospital Sector November 2010.

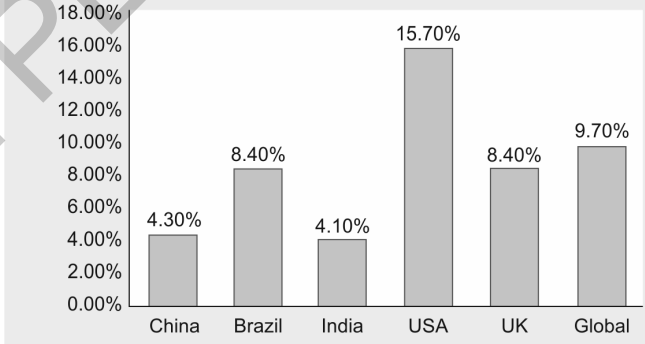

Fig. 2.2 Spending as a percent of GDP
Source: WHO World Health Statistics 2010.

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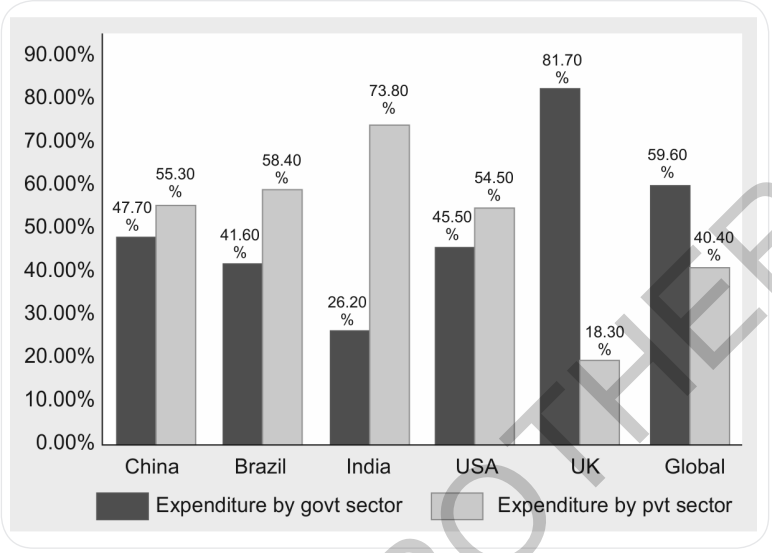

Fig. 2.3 Comparison of healthcare speed
Source: WHO World Health Statistics 2010.

The healthcare spend, when compared on the basis of public-private contribution, also depicts a skewed picture. As is noted from the comparison below, private sector contribution to the healthcare sector at ~75% is amongst the highest in the world in percentage terms. Public spending, on the other hand, is amongst the lowest in the world and is ~23% points lower than the global average. Figure 2.3 shows comparison of healthcare management.

Finally, the healthcare spend examined on a per capita basis, both in terms of US$ (at average exchange rate conversion) and in terms of purchasing power parity (PPP), is amongst the lowest globally. Further, when compared to the global average, the per capita India healthcare spend is ~95% lower on an average exchange rate basis and ~87% lower on a PPP basis.

GROWTH IN THE HEALTHCARE INDUSTRY

As stated earlier, the India healthcare industry is currently estimated at US$ 40 billion. The industry is expected to grow to ~US$ 79 billion by 2012 and ~US$ 280 billion by 2020. The average compound annual growth rate (CAGR) for the next 10 years, therefore, has been estimated at ~ 21%.

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DRIVERS OF GROWTH FOR THE HEALTHCARE SECTOR

A combination of demographic and economic factors is expected to bring about increases healthcare coverage in India which is expected to drive the growth of the sector.

Demographic Factors

- *Increase in population*: Expected increase in population from about 1.1 billion in 2009–2010 to 1.4 billion by 2026.
- *Shift in demographics*: 60% of the population in the younger age bracket and an expected increase of geriatric population from current 96 million by 2026. This represents a huge patient base and creates a market for preventive, curative and geriatric care opportunities.
- *Rise in disposable income*: Households in the above INR 200,000 per annum bracket can benefit from an increase in disposable income from 14% in 2009–2010E to 26% in 2014–2015P making healthcare more affordable.
- *Increase in incidence of lifestyle-related diseases*: There is likely to be a marked increase in the incidence of lifestyle-related diseases, such as cardiovascular, oncology and diabetes, when compared to the communicable and infectious diseases.
- *Rising literacy*: Growing general awareness, patient preferences and better utilization of institutionalized care as a result of increase in literacy rates.

Economic Factors

- *Tax benefits*: Lower direct taxes, higher depreciation on medical equipment, income tax exemption for 5 years to hospitals in rural areas, etc. are being provided by the Government to the sector.
- *Medical tourism*: India emerging as a major medical tourist destination with medical tourism market expected to reach US$ 2 billion by 2012.
- *Insurance coverage*: Increase in health insurance coverage with a number of private players and foreign players entering the market to cater to increased demand. The sector is expected to see an increase in the penetration from the current 10–15% to almost 50% at a CAGR of 24%. At an institutional level, insurance penetration is likely to continue to increase from 5–20%. In tertiary care this is almost as high as 40–55% with the inclusion of employer paid coverage.

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EMERGING TRENDS IN HEALTHCARE: CHALLENGERS AND INTERVENTIONS

While the Indian healthcare sector is poised for growth in the next decade, it is still plagued by various issues and challenges:

- *Dual disease burden*: Urban India is now on the threshold of becoming the disease capital of the world and facing an increased incidence of lifestyle related diseases such as cardiovascular diseases, diabetes. cancer, chronic obstructive pulmonary disease (COPD), etc. At the same time, the urban poor and rural India are struggling with communicable diseases such as tuberculosis, typhoid, dysentery, etc. Rural India is also seeing a higher occurrence of noncommunicable lifestyle related diseases. This represents a serious challenge that the India healthcare system would need to address.
- *Lack of infrastructure and manpower*: Accessibility to healthcare services is extremely limited to many rural areas of the country. In additional, existing healthcare infrastructure is unplanned and is irregularly distributed. Further, there is a severe lack of trained doctors and nurses to service the needs of the large India populous.

The private sector has evolved a multipronged approach to increase accessibility and penetration. It has tackled the issue of lifestyle related diseases with the development of high-end tertiary care facilities. Also new delivery models such as day-care centers, single specialty hospitals, end-of-life care centers, etc. are on the horizon to service larger sections of the population and address specific needs.

The public sector is keen to continue to encourage private investment in the healthcare sector and is now developing public-private partnerships, i.e. PPP models to improve availability of healthcare services and provide healthcare financing.

Both sectors have also undertaken initiatives to improve functional efficiencies in the form of accreditations, clinical research, outsourcing of noncare areas, increased penetration of healthcare insurance and third party payers.

CHANGING DISEASE TRENDS

India rates poorly on even the basic healthcare indicators when benchmarked against not only the developed economics, but also the other Brazil, Russia, India and China (BRIC) nations. This is evidence of the fact that a significant portion of the Indian population is unable to access healthcare services (Table 2.1). This is a consequence of:

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- Lack of healthcare infrastructure
- Lack of trained and qualified manpower.

Table 2.1 Disease indicators

Indicator	Year	India	Developed economies			Emerging economies		
			US	UK	Japan	Brazil	Russia	China
Life expectancy at birth (years)	2008	64	80	80	83	73	68	74
Infant mortality rate (probability of dying by age 1 per 1000 livebirths)	2008	52	7	5	3	18	9	18
Maternal mortality rate (per 100000 births)	2000–09	254	13	7	3	77	24	34

Source: WHO, World Health Statistics, 2010.

BURDEN OF NONCOMMUNICABLE DISEASES

Table 2.2 shows burden of noncommunicable diseases.

Table 2.2 Burden of noncommunicable diseases

Disease	Number of cases	Deaths 2005*	Projected number of cases 2015*	Projected deaths 2015**
Cardiovascular	3,80,41,090	20,89,508	6,40,71,981	34,20,752
Diabetes	3,10,39,932	N/A	4,58,09,149	N/A
COPD	1,70,20,000	N/A	2,22,10,000	N/A
Cancer	20,16,700	5,38,858	24,96,133	6,66,563

* CVD/diabetes data from 2005; COPD from 2004.

** Projected data for CVD/diabetes is for 2015; COPD is 2016; cancer is 2014.

Source: World Health Organization, World Health Statistics 2010.

CURRENT INFRASTRUCTURE

The healthcare infrastructure in India is inadequate compared with the global standards. It lags behind the global average in terms of healthcare infrastructure and manpower. India has an average 0.6 doctors per 1000 population against the global average of 1.23 which suggest an evident manpower gap (Tables 2.3 to 2.6).

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Table 2.3 Hospital and doctors bed density

Indicators	Year	India	USA	UK	Brazil	China
Hospital bed density (per 10000 population)	2000–2009	12	31	39	24	30
Doctor density (per 10000 population)	2000–2009	6	27	21	17	14

Table 2.4 Evident manpower gap

Indicators	Year	India	USA	UK	Brazil	China
Births attended by skilled health personnel (percent)	2000–2009	47	99	NA	97	98
No. of doctors	2009	6,43,520	7,93,648	1,26,126	3,20,013	18,62,630
No. of nurses	2009	13,72,059	29,27,000	37,200	5,49,423	1,22,59,240
No. of dentists	2009	55,344	4,63,663	25,914	2,17,217	1,36,520
Average no. of doctors per bed	2009	0.6	0.81	0.53	0.69	0.46
Average no. of nurses per bed	2009	1.27	3	0.16	1.18	3.02
No. of doctors per 1000 population	2009	0.6	2.7	2.1	1.7	1.4
No. of nurses per 1000 population	2009	1.3	9.8	0.6	2.9	1

Source: www.oecd.org, www.whoindia.org.

Table 2.5 Forecast of bed required

	2008	2018	2028
Additional beds required	1.1 million	3.1 million	2 million
Bed/1000 population ratio	0.7–1.7	4	5

Source: CLL Technopak.

At six doctors per 10,000 people, the number of qualified doctors in the country is not sufficient for the growing requirements of Indian healthcare. Moreover, rural 'doctors to population' ratio is lower by 6 times as compared to urban areas.

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Table 2.6 Doctors and nurses gap

Parameter	Current annual production	To fill the gap
Physicians	30,558	9,93,500
Nurses	1,14,218	2,510,250

Source: CLL Technopak.

EMERGING TRENDS IN HEALTHCARE DELIVERY

Investment Trends

Driven by increased domestic demand for high-end investment services as well as medical tourism, the healthcare sector has attracted huge investments lately. The healthcare sector is likely to see an increase in investment from US$ 34.2bn in 2012E (CAGR of 15%), with ~80% of investments from private players. The investments to this scale are expected to increase the bed ratio from 0.9 beds per 1000 people to 1.85 beds per 1000 people.

Moreover, large scale investments in infrastructure are required to make healthcare facilities on par with developed countries.

Foreign Direct Investment

The foreign direct investment (FDI) inflows in the hospital sector have not been significantly high despite government incentives to attract FDI investments (including 100% FDI in most health-related services). There are currently limited number of '100% foreign-owned healthcare' players in the Indian market. However, this scenario is expected to change given the attractiveness of the sector. Many foreign players are making a foray into the market through joint ventures with local healthcare units. For example, Singapore's Pacific Healthcare made its first foray into the Indian market, opening an international medical center, which is a joint venture with Indian's Vitae Healthcare, in the Indian city of Hyderabad. Singapore-based Parkway Group Healthcare PTE Ltd has entered the Indian healthcare market in 2003 through a joint venture with the Apollo group to build the Apollo Gleneagles hospital, a 325-bed multispecialty hospital at a cost of US$ 29 million and is looking at a joint venture for another tertiary care hospital in Mumbai. Many international diagnostic care players have entered India and others including medical education players are looking keenly at sectoral entry points.

Hospital and Research

In India, many corporate hospitals and major public hospitals are actively involved in conducting clinical trials of various drugs.

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Private corporate hospitals such as Apollo Care, Narayana Hrudayalaya, Usha Cardiac Institute, Sankara Nethralaya, Indraprastha, Breach Candy, and Bayer diagnostics as well as public hospitals such as All India Institute of Medical Sciences, Nizam Institute of Medical Sciences and many of the Medical colleges and teaching hospitals are actively involved in various stages of clinical trials.

Many of them have state-of-the-art infrastructure facilities for conducting clinical trials and treating patients. These have not only helped in improving patient outcomes but also helped in tackling increased volume of patients suffering from debilitating diseases.

DEVELOPMENTS IN PRIVATE HEALTHCARE

Evolving Delivery Models

Day-care Centers

Need: The concepts of outpatient surgeries is growing worldwide as inpatient facilities can be expensive and inconvenient in some cases. A large number of surgeries can be performed without the patient having to be admitted at all with the help of Day-care Surgery Centers. This delivery model is advantageous for both healthcare providers and consumers. It is estimated that by 2020, 75% model is surgical operations will be carried out in ambulatory surgery centers/units. Today over a quarter of the surgeries are contributed by ophthalmic procedures. The cost advantage of day surgery is best achieved in free-standing centers or free-functioning units within hospitals.

In India, the concept of stand-alone day-care surgery centers is currently in its infancy. Many of the major hospitals have a separate day-care surgery center which caters to the management of ambulatory (also commonly referred to as 'same day surgery') procedure. In India, about 20% of all surgical procedures are performed on outpatients.

Studies reveal that treatment in these centers would cost about 47% less than in hospitals. This model can be economically efficient for the Indian healthcare which is scarce in resources.

Potential Benefits

The range of services provided and the cost are the prime benefits of the day-care services.

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Nova Day-care Center: Case Study

The promoters and the US-based private investment firm, plan to set-up around 100 day-care surgery centers in the next three to four years with an investment of over INR 800 crore. The company executives' claim that the patients could save about 15–20% in surgery costs at Nova's day-care centers compared to the corporate hospitals rates.

The low-cost model and the high efficiency rates of 450 surgeries per month per center would make it a befitting model for India, which has a bed to population ration of 0.7 per thousand persons compared to the word average of 3.3. Overnight room costs and related overhead costs are eliminated and the model enables surgeons to attend to more patients in less time.

It essentially aspires to focus on minimally invasive surgeries, which use the technological advances in most optimum manner. The day-care surgery model has a market potential of INR 42,000 crore in the country. (Suresh Soni, chairman and co-founder, Nova told FE.) In the first phase, the group plans to build 25 centers in 10 major cities in the next two years. They plan to build around 125 operation theaters.

In a hospital with the day-care services the surgery department provides services for eye surgery, including removal of foreign bodies, providing the patient with plethora of services in a small the frame.

An average corporate hospital on the other hand takes a minimum of 18 months in the making and a minimum of three to five years to break even. Company executives point out that even in a hospital set-up around 75% of revenue is finally made from the surgeries. This fact further supports the growth of day-care centers.

Capex and EBIDTA: Due to the dependency on the specialty and level of care that a Day-care Center would cater to it is difficult to pen down an industry on the Capex but a fair indicator would be INR 3.5–4.5 million /bed for an international standard day-care center. EBIDTA margins for day-care centers range between 25% and 30% with a pay back of ~3–4 years.

DEVELOPMENTS IN PUBLIC HEALTHCARE

Initiatives by the Government

To tackle the challenges mentioned, the Government has taken various initiatives to improve the public healthcare system in India. The Government launched the National Rural Health Mission (NRHM) in 2005 which aims to provide quality healthcare for all and increase the expenditure on healthcare from 0.9% of GPD to 2–3% of GDP by 2012–11.

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According to Union Budget 2010–11, the plan allocation for Ministry of Health and Family Welfare has increased from US$ 4.2 billion in 2009–10 to US$ 4.8 billion in 2010–11.

Moreover, in order to meet revised cost of construction, in March 2010 the government allocated an additional US$ 4.2 billion for six upcoming AIIMS–like institutes and up-gradation of 13 existing Government Medical Colleges.

The Union Cabinet on October 20, 2010 approved the proposal of the Ministry of Health and Family Welfare to declare National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru as an Institute of National Importance on the lines of All India Institute of Medical Sciences, New Delhi, Postgraduate Institute of Medical Education and Research, Chandigarh and Jawaharlal Institute of Postgraduate Medical Education and Research, Puducherry.

Private-Public Partnerships

The Indian Government is focused on developing the PPP model to cover the demand-supply gap prevalent in the healthcare sector. Private sector expertise coupled with efficiencies in operation and maintenance would lead to improved healthcare services delivery to the masses. This model can act as a catalyst in the creation of new capacity and improvement of efficiency in the existing infrastructure established. The Government also embraced PPP model to counter epidemics like H1N1 swine flu, HIV, etc. However, it is evident that this model be far more beneficial.

Few successful PPP projects are mentioned below.

- Karnataka Karuna Trust; Yashaswini Scheme
- Tamil Nadu Mobile Health Services
- Andhra Pradesh Aarogyasri
- Andhra Pradesh Diagnostic Services for 4 Medical Colleges
- West Bengal Mobile Health Services
- Madhya Pradesh Community Outreach Program
- Rajasthan Contracting in Public Hospitals
- Gujarat Chiranjeevi Project.

Emerging Role of TPAs

The TPAs (Third Party Administrators) have added to the changing scenario of health insurance in India. Their role is gradually changing from green field ventures to an established system. Their wide spread networking with hospitals and other healthcare providers have certainly strengthened the health insurance structure in India. There are more then 45 TPAs.

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OPPORTUNITIES WITHIN INDIA'S HEALTHCARE SECTOR

Medical Tourism on the Rise

Medical tourism is one of the major external drivers of growth of the Indian healthcare sector. A Google search of 'Indian medical tourism' turns up more than 2 two million results.

The emergence of India as a destination for medical tourism leverages the country's well educated, english-speaking medical staff, state-of-the-art private hospitals and diagnostic facilities, and relatively low cost to address the spiraling healthcare costs of the western world. India provides best-in-class treatment, in some cases at less than one-tenth the cost incurred in the US (Table 2.7). India's private hospitals excel fields such as cardiology, joint replacement, orthopedic surgery, gastroenterology, ophthalmology, transplants and urology.

Table 2.7 Cost of key healthcare procedures

			India HC	
Currency: US$	US	Thailand	India	Cost-x of US
Cardiac surgery	50,000	14,250	4,000	12.5
Bone marrow transplant	62,500	62,500	30,000	13.33
Liver transplant	500,000	75,000	45,000	11.11
Orthopedic surgery	16,000	6,900	4,500	3.56

Source: India Brand Foundation Report, IBEF Research.

Emerging Health Insurance Market

The Insurance Regulatory and Development Authority (IRDA) eliminated tariffs on general insurance as of January 1, 2007, and this move is expected to drive additional growth of private insurance products. In the wake of liberalization, health insurance is projected to grow to $5.75 billion by 2010, according to a study by the New Delhi-based PHD Chamber of Commerce and Industry. The IRDA believes that eliminating tariffs will encourage scientific rating and adoption of better risk management practices, and lead to independent pricing for each line of business, so that premiums will be based on actual risks and costs. The implementation of the new policy also will encourage the development of innovative practices and customer-friendly options for policyholders, boosting penetration.

In the postliberalization era, some companies have been licensed to act as third party administrators of health services. The objective is to strengthen the health insurance industry and increase its penetration by bringing more

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professionalism to claims management, facilitating cashless services to policyholders, and reducing the claims ratio. Currently there are 25 licensed third party administrators in the Indian health insurance industry.

Growth of Telemedicine

Only 25% of India's specialist physicians reside in semiurban areas, and a mere 3% live in rural areas. As a result, rural areas, with a population approaching 700 million, continue to be deprived of proper healthcare facilities.

Clinical Trials

India historically lacked the expertise to perform clinical trials, because most companies only tested different processes for producing copycat versions of Western products, and the rules were quite lenient. Several drug makers have also been caught behaving unethically or even illegally.

However, in recent years, India has become a more attractive market for clinical testing. One reason is that in November 2004, the federal government amended Schedule Y of the Drugs and Cosmetics Act to make the rules on clinical trials more consistent with international practice. In addition, in January 2005 India became compliant with the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement and formally recognized product patents. This triggered growth in Indian clinical trial activity by contract research organizations, such as Quintiles, Omnicare, PharmaNet and Pharma-Olam, and by multinational corporations such as Novo Nordisk, Sanofi-Aventis, Novartis and GSK. Some multinationals, such as Pfizer and Eli Lilly, have been conducting tests locally for a while. Government taxation incentives are further boosting R&D in India.

As a market for clinical testing, India holds other attractions as well. According to a study by Rabo India Finance, a subsidiary of the Netherlands-based Rabo Bank, the huge patient population offers vast genetic diversity, making the country 'an idea site for clinical trials'. It has the largest pool of diabetic patients, the population is relatively easy to access, and many people are 'treatment-naïve'; they have not been treated with medications being tested, which potentially could distort test results.

EMERGING TREND IN HEALTHCARE 2015

New research highlights leading industry trends for healthcare and what to expect more of in 2015. Consumers are increasingly seeking to take a more active role in their own care. To that end, providers and payers are

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working together to harness technology to enable an integrated approach to healthcare.

MOBILE HEALTH

As consumers are becoming more dependent on their smartphones, there is great opportunity for health care professionals, retailers and brands to develop innovative strategies to reach and engage with consumers when they are on the go. Analysts note a shift from stand-alone 'unsponsored' mobile apps to more meaningful 'sponsored' apps supported by insurance companies, healthcare providers and other institutions, which will result in higher patient adoption and engagement. It addition, integrated mobile health apps will be created that can connect with other devices, apps and data for more holistic healthcare, where information is safely shared across platforms regardless of the vendor.

CONSUMERS' ONLINE AND OFFLINE WORLD'S MERGE

Marketers need to be thinking about the complete consumer experience across all touch points. Take, for instance, CEO of National Retail Federation Matt Shay's comment in USA Today: "What we're going to see is that the two (online/offline) become further and further indistinguishable from one another. Everyone is playing everywhere now."

Advertisers, of course, need individual strategies for mobile, retail and other platforms, but they must start to integrate all those consumer touch points for a better, more holistic consumer experience.

SOCIAL MEDIA'S GROWING IMPORTANCE

Facebook has more than 1 billion users, Twitter has 500 million, and platforms like Pinterest and Instagram are growing in popularity. Social is here to stay and is where consumers are increasingly spending their time interacting, learning and being influenced. Healthcare marketers need to create vibrant, engaging and real-time social identities.

PERSONALIZATION DRIVERS CONSUMER EXPERIENCE

The rise of digital, social and mobile—along with the empowerment of consumers—is directly tied to the growing trend of consumes wanting personalized communications from brands. No more cookie-cutter approach. Consumers know advertisers have a wealth of data about them and they expect it to be used to customize consumer preferences and needs.

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Other healthcare trends that are expected to move from pilots to large-scale implementation in 2013 include:

- Hospitals and other healthcare institutions will begin to move more and healthcare data into the cloud, with data analytics to better manage healthcare costs by finding and addressing patient needs earlier.

  Remove patient monitoring will move from pilots to large-scale adoption as more hospitals adopt the accountable care organization model to reduce hospital readmission costs associated with chronic conditions.
- Upswing on telehealth to bridge the significant gap between physician resources and patient demand.

Source: Foster, Bart. "Top 10 Trends for 2013." MediaPost's Marketing: Health blog. 4 Dec. 2012. Web. 19 Dec. 2012; AT&T Forhealth. AT&T. 3 Dec. 2012. Web. 19 Dec. 2012.

MOVING BEYOND CLINICAL EXPERTISE

Rising costs, expanding demand, and increasing customer expectations characterize healthcare today and are redefining the roles of patients, providers and payers. This is especially true as health facilities across the chain (primary, secondary, tertiary) are increasingly being run by corporate and funded through private equality—which demands better management practices and accountability mechanisms. The need for efficiently managed health systems, while containing costs and increasing access and profitability, has brought about a shift in focus from just medical expertise to principles of business and management. A part from clinical specialization, corporate hospitals are focusing on internal business functions such as inventory, asset, financial and human resource management, as well sales and marketing and customer relationship management (CRM). This trend will continue and create a demand for a specialized resources base.

The striking feature of the healthcare sector is its potential to grow at an exponential rate in the foreseeable future and present new opportunities within related industries, which will emerge as growth drivers. There is immense potential for each stakeholder (e.g. government, entrepreneurs, healthcare service providers, pharmaceutical companies, medical equipment manufactures) to invest in and grow with the sector. However, given the complex and interdependent nature of the sector there is a need for a cohesive and collaborative and interdependent nature of the sector there is a need for a cohesive and collaborative approach, where all stakeholders effectively work synergistically and leverage the opportunities to create a lasting impact.

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Pradeep Bhardwaj is an alumnus of the world famous Indian Institute of Management, Ahmedabad, Gujarat, India, recipient of many prestigious national and international awards such as Limca Book of Records Holder for being the "Youngest Medical Superintendent" at the age of 26 years, Rajiv Gandhi Award—2010, Padma Award—2012 nominated by Delhi CM, Youth Idol and Youth Icon Award—Delhi University, Indian Achiever Award, Medical Excellence Award, Listed India's Top-10 Doctors in Hospital Administration, India's Most Influential People in Healthcare—2014, Healthcare Personality of the year 2014 and Rashtriya Rattan Award—2009. He has created several landmarks in healthcare sector and has written more than 10 reference books on hospital management. A 360 degree achiever, he is one of the few young leaders who have made a mark for themselves, without having a godfather in the industry. He is currently making waves in healthcare industry at Six Sigma Accreditation Board, India, Six Sigma Star Healthcare Limited, New Delhi, India.

Dr Bhardwaj started his career from Deen Dayal Upadhyay Hospital, New Delhi, Apollo Hospitals Group, Fortis Healthcare Group, Sir Ganga Ram Hospital and Indian Spinal Injuries Center, New Delhi, India. He has expertise in Management Leader in Healthcare, Medicolegal Expert, Prolific Author-Editor, Visiting Professor and Faculty in leading Management Institutes like Harvard, IIM—Lucknow, IIM—Ahmedabad, ISB—Hyderabad, Global Institute of Healthcare Management, Amity University, Symbiosis International University, AIIMS, National Board of Examinations, etc. He is also Board of Advisory, Jury in many healthcare organizations/management institutes/universities. He participated in over 245 symposia as Jury, Faculty, Chairperson, Key Note Speaker, Chief Guest and Panelist.

Dr Bhardwaj organized first of its kind High Altitude Medical Services, Holy Amarnathji Yatra—2014, Sheshnag, Jammu and Kashmir, India, and previously he organized "Medical Rescue Operations" at Kedarnath, Gaurikund, Badrinath and saved 511 people.

For further details, please visit www.drpradeepbhardwaj.com

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