CHAPTER 5
CHAPTER 5

The global healthcare with its subset retail and the Indian healthcare with its subset retail: A Comparison

THE GLOBAL HEALTHCARE AND ITS SUBSET RETAIL

Retail is the largest ‘industry’ in the world with total sales in excess of US $16 trillion. In developed economies retail accounts for 8% of the gross domestic product yielding high returns to its shareholders. The world spent US $4.4 trillion on healthcare during the year 2005 as indicated by the World Health Organization pie chart furnished below. This is a whopping 27% of the total retail spend.

![Composition of World health expenditures](image)

Figure (2) Composition of world health expenditures.

Source: World Health Organization report 2005

Also the retail industry is one of the largest employers. Table below gives some details of the revenues generated and the number of people employed by the retail sector by some leading retail stores including drugs.
<table>
<thead>
<tr>
<th>Rank</th>
<th>Organization</th>
<th>Type</th>
<th>Country (Origin)</th>
<th>Revenues $ M</th>
<th>No. of Employees</th>
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<tr>
<td>1</td>
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<td>161</td>
<td>Ito-Yokado</td>
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<td>Japan</td>
<td>26,823</td>
<td>97,532</td>
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<td></td>
<td>Groupe-Pinau-Printemps</td>
<td>General</td>
<td>France</td>
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<td>Food &amp; Drug</td>
<td>USA</td>
<td>24,623</td>
<td>106,000</td>
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<tr>
<td></td>
<td>TOTAL</td>
<td></td>
<td></td>
<td>856,627</td>
<td>1448761</td>
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</table>

Table 2: Revenue, Segment & Employment

*Source  Fortune, July 22, 2002*
From the above it is clear that while the top seventeen retailers who also figure in the Fortune 500 list account for US$ 856627'0 in revenues of this US$ 373898'0 is accounted for by the food & drugs segment which is constituted by 9 out of the top 17 retail stores. This works out to approximately 44% of the total revenues of the top seventeen retailers indicating the importance of the health segment and its contribution to the retail industry as also providing an indication of the employment potential in healthcare retail. Besides the above names which are essentially ‘shop in shop’ concept you also have dedicated pharmacy chains like CVS, Boots, The Medicine Shoppe, and others. Sales through retail pharmacies of the developed economies for the period August 2007 up to July 2008 amounted to US$ 438 billion with growth ranging from 3 to 12 % over the previous 12 months depending on the country.

In the United States retail is the second largest Industry in terms of number of people employed as well as the number of establishments. For example the annual retail sales in the United States are US$ 3.8 trillion. These are figures for the year 2002-2003. In the European Union, for example, the retail turnover for the year 2001 was almost £ 2000 billion (i.e. approximately US $ 3.6 trillion) and accounting for around 13 million employees. This retail market is divided into organized and unorganized supply markets and we can observe from the figure below that developed economies enjoy a greater proportion of organized retail and this is the case with healthcare retail also. There is a well structured healthcare channel which is process driven and formally recognized.

Figure (3) gives an indication of this split in the retail market. The figure also indicates that in the case of developed markets (USA, Taiwan, etc...), organized retail
market plays a major role which is amply supported with figures in Table 2 both in terms of turnover as well as employment.

![Bar chart showing share of organized and unorganized retail in various countries](image)

Figure (3) Share of Organized and Unorganized retail

*Source: Text Book on Retailing Management. By Swapna Pradhan Pg 12

The healthcare system which is an important part of the retail sector comprises the following constituents in the developed economies:

Patient

Doctor

Pharmacy

HMO (Health Management Organization)

Insurance company

These constituents are linked as given below:-
In order to connect the various links it is imperative to study the characteristics of each of the constituents and also what drives these constituents.

PATIENT: The patient is the source of revenue, 'the customer', and is a very important link in this entire chain. He is the revenue to the insurance company through the concept of insurance premium. He is also the revenue to the HMO/Doctor/Pharmacy through the insurance company. The insurance company pays to the Doctor/HMO/Pharmacy. The patient having paid the premium now only accepts services from the doctor/HMO/Pharmacy. The patient's only payment is the insurance premium.

DOCTOR: The doctor is a well qualified medical practitioner who examines and treats the patient and, if need arises, medicines are prescribed which are normally generic and not branded. This helps in reducing costs. The doctor, under normal circumstances, does not dispense. Besides this at frequent intervals he will have to
earn professional credits by attending courses and programs to ensure continuing education.

PHARMACY: Every pharmacy is manned by a fully qualified and trained / registered pharmacist. The job of a pharmacist is to investigate the prescription and dispense the same. If required the pharmacist may be involved in counseling the patient on drug-drug interactions / food–drug interactions besides other aspects. Again the pharmacist, like the doctor, will periodically undergo continuing education programs to keep him current on knowledge and developments in the pharmacy field.

HMO: This is essentially the third party administrator more popularly called TPA.. The role of TPA is indirect as he has essentially nothing to do with the patient. The Pharmacy and the doctor send their demands directly to the HMO who pays the doctor and the pharmacy and later settles the matter with the Insurance Company.

That is why they are called administrators.

INSURANCE COMPANY: The insurance company is the one which accepts the premium from the patient and through the HMO reimburses the costs to others in the health link.

In most developed countries there exists a well – structured format of healthcare and therefore health insurance. In the US there is in the private sector a system of PPO’s (Preferred Provider Organization) which is very similar to HMO’s except that the PPO’s first provide the service and then charge the fee.

In the UK the National Health Service (NHS) is the publicly funded healthcare system. The NHS was, and largely remains, a system of medicine, intended to be “free at the point of delivery “and paid for by taxes. A vast majority of healthcare in the UK is taken care of by NHS.
Particularly in the USA and UK a number of health care facilities including retail pharmacy chains like CVS, Medicine Shoppe, Wal-Greens, Boots, Guardian etc have tie ups with large insurance groups through TPA's/HMO's like CIGNA etc. With more than three decades of data available and trends studied the US healthcare system would be an ideal segment from the organized market which could be treated as a true representative market of the developed healthcare sector which forms a majority of the total market.

The six exhibits following clearly indicate the facts in figures and trends for the US market and what should be particularly noted is the retail outlet category trend in exhibit, Table 3 - over the said 30 year period. Of particular interest in this exhibit is the trend of prescription drugs not that the other spending categories lag far behind. With a mature market exhibiting this trend it would not be difficult for one to imagine the scene in a developing market like India with a population almost three times that of United States of America and with a very low healthcare spend which is essentially focused towards curative efforts rather than preventive. This is clearly indicative of the huge potential to be tapped which in turn would require the mobilization of a healthcare force.
<table>
<thead>
<tr>
<th></th>
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<tr>
<td>NHE billions</td>
<td>$73.10</td>
<td>$245.80</td>
<td>$558.10</td>
<td>$696.10</td>
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<td>$1,219.70</td>
<td>$1,310.00</td>
<td>$1,424.50</td>
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<td>Health services and supplies</td>
<td>67.3</td>
<td>233.5</td>
<td>535.4</td>
<td>669.6</td>
<td>856.3</td>
<td>1178.7</td>
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<td>Personal health care</td>
<td>63.2</td>
<td>214.6</td>
<td>493.3</td>
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<td>775.8</td>
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<td>1137.6</td>
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<td>7.3</td>
<td>9.6</td>
<td>16.1</td>
<td>33.6</td>
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<td>40.9</td>
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<td>32.3</td>
<td>31.7</td>
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<td>89.6</td>
<td>93.8</td>
<td>98.9</td>
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<td>58.7</td>
<td>73.3</td>
<td>87.5</td>
<td>152.1</td>
<td>170.5</td>
<td>190.7</td>
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<td>12.0</td>
<td>30.6</td>
<td>40.3</td>
<td>51.3</td>
<td>104.4</td>
<td>121.5</td>
<td>140.6</td>
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<td>3.9</td>
<td>8.7</td>
<td>10.6</td>
<td>12.8</td>
<td>17.3</td>
<td>17.8</td>
<td>18.4</td>
</tr>
<tr>
<td>Other nondurable medical products</td>
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<td>9.8</td>
<td>19.4</td>
<td>22.5</td>
<td>23.4</td>
<td>30.4</td>
<td>31.2</td>
<td>31.8</td>
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<td>12.1</td>
<td>26.6</td>
<td>40.0</td>
<td>53.3</td>
<td>73.2</td>
<td>80.7</td>
<td>89.7</td>
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<td>15.5</td>
<td>20.2</td>
<td>27.2</td>
<td>40.9</td>
<td>44.1</td>
<td>46.4</td>
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<td>22.7</td>
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<td>17.6</td>
<td>18.8</td>
<td>19.2</td>
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<td>6.8</td>
<td>11.9</td>
<td>13.7</td>
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<td>17.6</td>
<td>18.6</td>
<td>19.2</td>
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<td>254.2</td>
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<td>$2,738.00</td>
<td>$3,381.00</td>
<td>$4,392.00</td>
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<td>68.0</td>
<td>77.5</td>
<td>90.3</td>
<td>107.3</td>
<td>110.9</td>
<td>115.0</td>
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<td>care deflator</td>
<td>Real NHE billions of dollars</td>
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<td>$804.30</td>
<td>$944.20</td>
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<td>$1,225.50</td>
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<td>5108</td>
<td>5803</td>
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<td>94.1</td>
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<td>4901</td>
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<td>6708</td>
<td>7063</td>
<td>8859</td>
<td>9191</td>
<td>9215</td>
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<td>NHE as percent of GDP</td>
<td>7.00%</td>
<td>8.80%</td>
<td>10.90%</td>
<td>12.00%</td>
<td>13.40%</td>
<td>13.20%</td>
<td>13.30%</td>
<td>14.10%</td>
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Exhibit, Table 4 - only emphasis the figures in numbers (value) & Table 3- as a percentage. One should not fail to recognize the fact that we are indeed looking at a mature healthcare market which continues to grow.
Table 4

<table>
<thead>
<tr>
<th>National Health Expenditures (NHE), Average Annual Percentage Growth From Prior Year Shown, Selected Calendar Years from 1970 - 2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>NHE</td>
</tr>
<tr>
<td>Health services and supplies</td>
</tr>
<tr>
<td>Personal health care</td>
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<tr>
<td>Hospital care</td>
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<tr>
<td>Professional services</td>
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<td>Physician and clinical services</td>
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<td>Other Professional services</td>
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<tr>
<td>Nursing home and home health</td>
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<td>Home health care</td>
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<tr>
<td>Nursing home care</td>
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<tr>
<td>Retail outlet sales of medical products</td>
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<tr>
<td>Prescription drugs</td>
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<tr>
<td>Durable medical equipment</td>
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<tr>
<td>Other nondurable medical products</td>
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<tr>
<td>Program admn and net cost of private health ins</td>
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<td>Government public health activities</td>
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<tr>
<td>Investment</td>
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<tr>
<td>Research</td>
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<tr>
<td>Construction</td>
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<td>Population</td>
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<td>NHE per capita</td>
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<td>Personal health</td>
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<tr>
<td>care deflator</td>
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<tr>
<td>--------------</td>
</tr>
<tr>
<td>Real NHE</td>
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<tr>
<td>GDP</td>
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<tr>
<td>Chain weighted GDP</td>
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<tr>
<td>index</td>
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<tr>
<td>Real GDP billions of dollars</td>
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</tbody>
</table>


The trend in exhibit’s Table 3 & Table 4 is indicative of the important role healthcare plays in the country’s economy. Also figures 5&6 indicate an average rise of 25% in the health expenditure as a share of GDP year on year for the three decades and the greater role which personal healthcare spending is assuming implying the opportunities in the healthcare market.
Figure (5)

National Health Expenditures As A Share Of Gross Domestic Product, Calendar Years 1971-2001

Percent

14

12

10

8

6


Figure (6)

Annual Percentage Change in Personal Health Care Spending Per Capita Growth Factors, Calendar Years 1989-2001

<table>
<thead>
<tr>
<th>Percent</th>
<th>Medical price index</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Quantity of service use per person</td>
</tr>
<tr>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

---|---|---|---|---|---|---
0 | 2 | 0 | 2 | 0 | 2 | 0

**SOURCE:** Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group.

**NOTES:** These factors are calculated by first dividing personal health care expenditures by population. Per capita spending is then deflated using the medical price index. The residual that results represents the quantity of service use per person. Because this factor is calculated as a residual, it also includes any errors in measuring prices or total spending. The medical price index is the personal health care chain-type index constructed from the Producer Price Index for hospital care, Nursing Home Input Price Index for nursing home care, and Consumer Price Indexes specific to each of the remaining personal health care components. The quantity of service use per person includes quality, intensity, and changing mix of services.
### Table 5

<table>
<thead>
<tr>
<th>Expenditures For Health Services and Supplies, by Type of Service And Source of Funds, Calendar Year 2001</th>
</tr>
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<tbody>
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<td><strong>Expenditure Category</strong></td>
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<td>---------------------------</td>
</tr>
<tr>
<td>Total</td>
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<tr>
<td>Out-of-pocket</td>
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<tr>
<td>Personal services</td>
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<tr>
<td>Physician and clinical services</td>
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<tr>
<td>Other professional services</td>
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<td>Mental services</td>
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<tr>
<td>Nursing home and home health</td>
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<td>Nursing home care</td>
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<tr>
<td>Retail outlet sales</td>
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<td>Medical products</td>
</tr>
<tr>
<td>Prescription drugs</td>
</tr>
<tr>
<td>Durable medical equipment</td>
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<tr>
<td>Other nondurable medical products</td>
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<tr>
<td>Government public health activities</td>
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## National Health Expenditures (NHE), Amounts And Average Annual Percentage Growth

By Source of Funds, Selected Calendar Years, 1970 - 2001

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<tbody>
<tr>
<td>NHE, billions</td>
<td>$73.10</td>
<td>$245.80</td>
<td>$558.10</td>
<td>$696.00</td>
<td>$888.10</td>
<td>$1,219.70</td>
<td>$1,310.00</td>
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<td>Private funds</td>
<td>45.4</td>
<td>140.9</td>
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<td>413.5</td>
<td>297.7</td>
<td>669.7</td>
<td>718.7</td>
<td>777.9</td>
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<td>293.8</td>
<td>370.8</td>
<td>445</td>
<td>596.5</td>
<td>643.7</td>
<td>701.6</td>
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<td>Out-of-pocket payments</td>
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<td>58.2</td>
<td>118.9</td>
<td>137.3</td>
<td>146.9</td>
<td>184.4</td>
<td>195.7</td>
<td>205.5</td>
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<tr>
<td>Private health ins</td>
<td>15.5</td>
<td>68.2</td>
<td>174.9</td>
<td>233.5</td>
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<td>449</td>
<td>496.1</td>
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<tr>
<td>Other private funds</td>
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<td>37.9</td>
<td>42.8</td>
<td>52.7</td>
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<td>75</td>
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<td>226.4</td>
<td>282.5</td>
<td>390.4</td>
<td>550</td>
<td>591.3</td>
<td>646.7</td>
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<tr>
<td>Federal</td>
<td>17.6</td>
<td>71.3</td>
<td>154.1</td>
<td>192.7</td>
<td>274.4</td>
<td>386.2</td>
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</tr>
<tr>
<td>Medicare</td>
<td>7.7</td>
<td>37.4</td>
<td>89</td>
<td>110.2</td>
<td>148.3</td>
<td>213.6</td>
<td>224.4</td>
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<tr>
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<td>2.8</td>
<td>14.5</td>
<td>31</td>
<td>42.5</td>
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</tr>
<tr>
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<td>34.1</td>
<td>39.9</td>
<td>49.3</td>
<td>64.6</td>
<td>73.1</td>
<td>83</td>
</tr>
<tr>
<td>State and Local</td>
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<td>72.3</td>
<td>89.8</td>
<td>116</td>
<td>163.8</td>
<td>176.2</td>
<td>191.8</td>
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<tr>
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<td>11.5</td>
<td>24.1</td>
<td>31.1</td>
<td>44.8</td>
<td>78.1</td>
<td>84.7</td>
<td>94.3</td>
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<tr>
<td>Other state and local</td>
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<td>22</td>
<td>48.2</td>
<td>58.7</td>
<td>71.1</td>
<td>85.8</td>
<td>91.4</td>
<td>97.5</td>
</tr>
<tr>
<td>Average annual growth in NHE from prior year shown</td>
<td>10.60%</td>
<td>12.90%</td>
<td>10.80%</td>
<td>11.70%</td>
<td>8.50%</td>
<td>5.40%</td>
<td>7.40%</td>
<td>8.70%</td>
</tr>
<tr>
<td>Private funds</td>
<td>8.5</td>
<td>12</td>
<td>11.3</td>
<td>11.7</td>
<td>6.4</td>
<td>5.1</td>
<td>7.3</td>
<td>8.2</td>
</tr>
<tr>
<td>Consumer payments</td>
<td>8</td>
<td>12</td>
<td>11.1</td>
<td>12.3</td>
<td>6.3</td>
<td>5</td>
<td>7.9</td>
<td>9</td>
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<tr>
<td>Out-of-pocket payments</td>
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<td>8.8</td>
<td>9.3</td>
<td>7.4</td>
<td>2.3</td>
<td>3.9</td>
<td>5.6</td>
<td>5.6</td>
</tr>
<tr>
<td>Private health ins</td>
<td>10.2</td>
<td>15.9</td>
<td>12.5</td>
<td>15.5</td>
<td>8.5</td>
<td>5.5</td>
<td>9</td>
<td>10.5</td>
</tr>
<tr>
<td>Other private funds</td>
<td>14</td>
<td>11.6</td>
<td>12.8</td>
<td>6.2</td>
<td>2-Jul</td>
<td>5.6</td>
<td>2.4</td>
<td>1.7</td>
</tr>
<tr>
<td>Public funds</td>
<td>15.4</td>
<td>14.3</td>
<td>10.1</td>
<td>11.7</td>
<td>11.4</td>
<td>5.9</td>
<td>7.5</td>
<td>9.4</td>
</tr>
</tbody>
</table>
Federal  | 20.1 | 15  | 10.1 | 11.8 | 12.5 | 5.9  | 7.5  | 9.6  
Medicare | 0    | 17.2 | 11.4 | 11.3 | 10.4 | 6.3  | 5    | 7.8  
Medicaid | 0    | 17.7 | 10   | 17.1 | 21.7 | 5.8  | 9    | 10.4 
Other federal | 9.6  | 10.6 | 7.3  | 8.3  | 7.2  | 4.6  | 13.1 | 13.6 
State and local | 10.2 | 12.8 | 10.1 | 11.4 | 8.9  | 5.9  | 7.5  | 8.9  
Medicaid | 0    | 16.8 | 9.6  | 13.7 | 13   | 9.7  | 8.5  | 11.3 
Other state and local | 7.2  | 11.2 | 10.3 | 10.3 | 6.6  | 3.2  | 6.6  | 6.6  


Table’s 5 & 6 - enables us clearly visualize the important role private funds play in the healthcare sector hence the increased need for greater efficiencies as well as acting as an eye-opener for developing economies in terms of opportunities in store.

The following Table no 7 only serves to further substantiate the fact that the global retail healthcare scenario is indeed booming and that this growth is dominated by the developed economy as they account for more than two thirds of the world market. What does this manifest into for the developing economies and in particular India?

Table 7: Source IMS Health

U.S. Retail Pharmacy Drug Sales Grew 5% to $190 billion

Retail pharmacy drug sales in 13 key world markets in the 12 month period from July 2005 through to July 2006 grew 5% to reach $377.39 billion, according to latest data from global healthcare information company IMS Health.
<table>
<thead>
<tr>
<th>Top 5 Drugs</th>
<th>Top 5 Companies</th>
<th>Top 5 Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Lipitor</td>
<td>Pfizer</td>
<td>USA</td>
</tr>
<tr>
<td>2. Nexium</td>
<td>GSK</td>
<td>Japan (inc. hosp)</td>
</tr>
<tr>
<td>3. Plavix</td>
<td>Novartis</td>
<td>Germany</td>
</tr>
<tr>
<td>4. Seretide</td>
<td>AstraZeneca</td>
<td>France</td>
</tr>
<tr>
<td>5. Zocor</td>
<td>Merck</td>
<td>UK</td>
</tr>
</tbody>
</table>

Source: IMS Health (October 2006)

North America posted a 5% sales growth at $203.52 billion in sales in the 12 months to July.

U.S drug sales registered a 5% growth rate to hit $190 billion mark during the 12 month period.

Sales in the top five European markets showed a 4% growth.

Japan’s overall growth at constant exchange was 3%, with a market worth $57.47 billion in the 12 months to July 2006.

Cardiovascular remains the largest therapeutic category with total sales of $75 billion with U.S. accounting for $37 billion.

Lipitor from Pfizer continues to be the best selling drug with sales of over $11.58 billion, but at a reduced growth rate of 4.4%.

Nexium has the largest growth rate of 16.2%.

The top five corporations by sales in the year are: 1. Pfizer, 2. GSK, 3. Novartis, 4. AstraZeneca 5. Merck.

Notes on the Data
Sales figures in these tables cover direct and indirect pharmaceutical channel purchases (pharmacies plus hospitals and mail order where indicated) from pharmaceutical wholesalers and manufacturers in 13 key international markets. Figures include prescription and certain over-the-counter data, and represent manufacturer prices. **These 13 countries account for over two thirds of the world market.**

The Indian Healthcare and its subset Retail
The Indian economy is witnessing phenomenal growth, currently at 8.5% of GDP which is likely to accelerate in the future. This has made India one of the fastest growing economies in the world. A large fraction of this growth is attributed to the rapid changes in the educational and healthcare sector.

The last decade has witnessed the transition of the healthcare sector from a static and inconspicuous industry to an increasingly dynamic and important industry. A decade ago in India, health and healthcare sector was not considered as a key driver of national economic performance. However, over the years, there has been a radical change to this paradigm establishing strongly that improved health leads to better economic performance. (Refer figure no 7). Along with the fact that India enjoys a high rating in the Global Retail Development Index (Refer table 8) which only amplifies its high rating as a potential investors market. India’s economic growth is
bringing with it an expected health transition in terms of shifting demographics, socioeconomic changes and changes in disease pattern.

Figure no (7) Relationship between disease and economic growth

### Table no (8) Global Retail Development Index

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Region</th>
<th>Country Risk</th>
<th>Market Attractiveness</th>
<th>Market Saturation</th>
<th>Time Pressure</th>
<th>GDP Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>India</td>
<td>Asia</td>
<td>67</td>
<td>42</td>
<td>90</td>
<td>74</td>
<td>92</td>
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<tr>
<td>2</td>
<td>Russia</td>
<td>Eastern Europe</td>
<td>62</td>
<td>52</td>
<td>53</td>
<td>10</td>
<td>80</td>
</tr>
<tr>
<td>3</td>
<td>China</td>
<td>Asia</td>
<td>75</td>
<td>46</td>
<td>46</td>
<td>84</td>
<td>86</td>
</tr>
<tr>
<td>4</td>
<td>Vietnam</td>
<td>Asia</td>
<td>57</td>
<td>34</td>
<td>70</td>
<td>59</td>
<td>74</td>
</tr>
<tr>
<td>5</td>
<td>Ukraine</td>
<td>Eastern Europe</td>
<td>41</td>
<td>43</td>
<td>64</td>
<td>68</td>
<td>68</td>
</tr>
<tr>
<td>6</td>
<td>Chile</td>
<td>Americas</td>
<td>90</td>
<td>51</td>
<td>42</td>
<td>43</td>
<td>59</td>
</tr>
<tr>
<td>7</td>
<td>Latvia</td>
<td>Eastern Europe</td>
<td>77</td>
<td>32</td>
<td>21</td>
<td>86</td>
<td>68</td>
</tr>
<tr>
<td>8</td>
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<td>Asia</td>
<td>70</td>
<td>44</td>
<td>46</td>
<td>54</td>
<td>68</td>
</tr>
<tr>
<td>9</td>
<td>Mexico</td>
<td>Americas</td>
<td>83</td>
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<td>33</td>
<td>20</td>
<td>64</td>
</tr>
<tr>
<td>10</td>
<td>Saudi Arabia</td>
<td>Middle East/N. Africa</td>
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<td>40</td>
<td>66</td>
<td>35</td>
<td>64</td>
</tr>
<tr>
<td>11</td>
<td>Tunisia</td>
<td>Middle East/N. Africa</td>
<td>60</td>
<td>23</td>
<td>77</td>
<td>37</td>
<td>64</td>
</tr>
<tr>
<td>12</td>
<td>Bulgaria</td>
<td>Eastern Europe</td>
<td>62</td>
<td>32</td>
<td>42</td>
<td>48</td>
<td>63</td>
</tr>
<tr>
<td>13</td>
<td>Turkey</td>
<td>Middle East/N. Africa</td>
<td>52</td>
<td>50</td>
<td>57</td>
<td>43</td>
<td>62</td>
</tr>
<tr>
<td>14</td>
<td>Egypt</td>
<td>Middle East/N. Africa</td>
<td>43</td>
<td>57</td>
<td>85</td>
<td>35</td>
<td>61</td>
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<tr>
<td>15</td>
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<td>59</td>
<td>23</td>
<td>70</td>
<td>37</td>
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<td>30</td>
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<tr>
<td>17</td>
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<td>47</td>
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<td>70</td>
<td>10</td>
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<td>30</td>
<td>Colombia</td>
<td>Americas</td>
<td>44</td>
<td>50</td>
<td>53</td>
<td>26</td>
<td>47</td>
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</table>

The table no 9 shown below clearly brings out the correlation between preventive healthcare and profitability of Indian companies by size. A clear indication of the requirement for healthcare to nurture a nation’s economy which would again imply employment opportunities in this segment.

---

Table no (9)

<table>
<thead>
<tr>
<th></th>
<th>Preventive health care</th>
<th>Absenteeism</th>
<th>Mandays lost</th>
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<tbody>
<tr>
<td>All</td>
<td>0.172</td>
<td>-0.047</td>
<td>-0.218</td>
</tr>
<tr>
<td>Small</td>
<td>0.299</td>
<td>-0.105</td>
<td>-0.079</td>
</tr>
<tr>
<td>Medium</td>
<td>0.28</td>
<td>0.057</td>
<td>-0.151</td>
</tr>
<tr>
<td>Large</td>
<td></td>
<td>-0.314</td>
<td>-0.368</td>
</tr>
</tbody>
</table>

Source: Based on ICRIER Survey

Health care, is the prevention, treatment, and management of illness and the preservation of mental and physical well being through the services offered by the medical, nursing, and allied health professions. A study commissioned by ICRIER on employees clearly revealed the benefits which transpire through preventive healthcare. The figure 8 is a representation of the same.

Figure no (8) ICRIER SURVEY BENEFITS OF PREVENTIVE CARE

Source: ICRIER Survey
The Indian healthcare sector constitutes:

Medical care providers: physicians, specialist clinics, nursing homes and hospitals
Diagnostic service centers, pathology laboratories and pharmacies
Medical equipment manufacturers
Contract research organizations (CRO's), pharmaceutical manufacturers,
Third party support service providers (catering, laundry)
Third Party administrators and Insurers

The market as a matter of fact has grown (actual) from US$ 22.8 billion in the year 2005, at a CAGR of 16% to US$ 34.2 billion in 2006. This translates to $34 per capita, or roughly 6% of GDP. The market is further estimated to grow to US$ 50.2 billion and US$ 78.6 billion by 2011 and 2016 respectively. There is a great emphasis on preventive and holistic healthcare. There would be a dire requirement for trained manpower just to manage this growth in each of the constituents mentioned above.

Figure (9) Indian Healthcare Market. Source: IBEF Research Reports
Revenues from the healthcare sector account for 5.2 per cent of the GDP and it employs over 4 million people. By 2012, revenues can reach 6.5 to 7.2 per cent of GDP and direct and indirect employment can double.

Primary Growth Drivers in retail sector

Population & Economy

One driver of growth in the healthcare sector is India’s booming population, currently 1.1 billion and increasing at a 2% annual rate. By 2030, India is expected to surpass China as the world’s most populous nation. By 2050, according to a Goldman Sachs report the population is projected to reach 1.6 billion.

This population increase is due in part to a decline in infant mortality, the result of improving healthcare facilities and the government’s emphasis on eradicating diseases such as hepatitis and polio among infants. In addition, life expectancy is rapidly approaching the levels of the developed economies. By 2025, an estimated 189 million Indians will be at least 60 years of age—triple the number in 2004, thanks to greater affluence and healthcare.

The Indian economy, estimated at roughly $1.10 trillion, is growing in tandem with the population. Goldman Sachs predicts that the Indian economy will expand by at least 5% annually for the next 45 years and that it will be the only emerging economy to maintain such a robust pace

Expanding Middle Class

India’s thriving economy is driving urbanization and creating an expanding middle class, with more disposable income to spend on healthcare. While per capita income was $620 in 2005, over 150 million Indians have annual incomes of more than
$1,000, and many who work in the business services sector earn as much as $20,000 a year.

More women are entering the workforce as well, further boosting the purchasing power of Indian households. Between 1991 and 2001, the percentage of women increased from 22% to 26% of the workforce, according to the 2001 Indian government census.

If the economy continues to grow faster than the economies of the developed world, and the literacy rate keeps rising, much of western and southern India will be middle class by 2020.

Rise of Diseases

Another factor driving the growth of India’s healthcare sector is a rise in both infectious and chronic degenerative diseases. While ailments such as poliomyelitis, leprosy, and neonatal tetanus will soon be eliminated, some communicable diseases once thought to be under control, such as dengue fever, viral hepatitis, tuberculosis, malaria, and pneumonia, having returned in force or have developed a stubborn resistance to drugs. This troubling trend can be attributed in part to substandard housing, inadequate water, sewage and waste management systems, a crumbling public health infrastructure, and increased air travel.

In addition to battling infectious diseases, India is grappling with the emergence of diseases such as AIDS as well as food- and water-borne illnesses. And as Indians live more affluent lives and adopt unhealthy western diets that are high in fat and sugar, the country is experiencing a rise in lifestyle diseases such as hypertension, cancer, and diabetes, which is reaching epidemic proportions.
Over the next 5-10 years, lifestyle diseases are expected to grow at a faster rate than infectious diseases in India, and this could result in an increase in cost per treatment. Wellness programs targeted at the workplace, where many sedentary jobs are contributing to an erosion of employees’ health, could help to reduce the rising incidence of lifestyle diseases.

Technology & Infrastructure

New and improving technology has been a key driver for this rapid growth. Better machines for carrying out various tests, more accurate results, and shorter feedback time are just a few outcomes of the growing technological input in the healthcare industry.

Technology has significantly changed healthcare in India. It affects the way we get health information and use it. From contacting your doctor to delivering health care services over great distances, technology is making a difference. Thus there exists today, an opportunity to transform health care further and improve the efficiency, accuracy and effectiveness of the health care system.

A boom in the healthcare market has also led to more hospitals with better and improved infrastructure. The significant gap between supply and demand for health care in India represents a huge opportunity for more hospitals and health care centers with modern infrastructure to be set up.

Infrastructure

India’s healthcare infrastructure has not kept pace with the economy’s growth. The physical infrastructure is woefully inadequate to meet even the present day’s healthcare demands, much less tomorrows. While India has several centers of excellence in healthcare delivery, these facilities are limited in their ability to drive
healthcare standards because of the poor condition of the infrastructure in much of the
country. This in itself is a huge gap and requires serious attention and investment.
Healthcare has emerged as one of the largest service sectors in India. In 2004, national
healthcare spending equaled about 5.2 per cent of nominal GDP, or about US$ 34.9
billion. Healthcare spending- Table (10)- in India is expected to rise by 12 per cent
per annum through 2005-09 (in rupee terms) and scale up to about 5.5 per cent of
GDP, or US$ 60.9 billion, by 2009. Other estimates suggest that by 2012, healthcare
spending could contribute 8 per cent of GDP and employ around 9 million (million)
people. From a pan-India perspective, presently there are more than half a million
doctors employed in 15,097 hospitals. Additionally there are 0.75 million nurses, who
look after more than 870,000 hospital beds. During the previous decade, the number
of doctors has increased by 36.6 per cent. An estimated 30 per cent of medical
practitioners hold specialist qualifications.

Table (10) Healthcare Spending-India

<table>
<thead>
<tr>
<th>Particulars</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
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</thead>
<tbody>
<tr>
<td>Life expectancy,</td>
<td>64</td>
<td>64.3</td>
<td>64.7</td>
<td>65.1</td>
<td>65.4</td>
<td>65.8</td>
</tr>
<tr>
<td>average (years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Healthcare spending</td>
<td>1,582</td>
<td>1,763</td>
<td>1,967</td>
<td>2,216</td>
<td>2,463</td>
<td>2,771</td>
</tr>
<tr>
<td>(Rs bn)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Healthcare spending</td>
<td>34.9</td>
<td>40.4</td>
<td>45.7</td>
<td>52.1</td>
<td>56</td>
<td>60.9</td>
</tr>
<tr>
<td>(US$ bn)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Healthcare spending</td>
<td>5.2</td>
<td>5.3</td>
<td>5.3</td>
<td>5.4</td>
<td>5.4</td>
<td>5.5</td>
</tr>
<tr>
<td>(% of GDP)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Healthcare spending</td>
<td>32</td>
<td>37</td>
<td>41</td>
<td>46</td>
<td>49</td>
<td>53</td>
</tr>
<tr>
<td>(US$ per head)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: US Census Bureau; Economist Intelligence Unit.
Higher healthcare spending due to lifestyle diseases

While rising incomes and growing literacy are likely to drive higher per capita expenditures on healthcare, the shift in disease profiles from infectious to lifestyle-related diseases is expected to raise expenditures per treatment. Lifestyle-related diseases are typically more expensive to treat than infectious ones. In 2001, the average inpatient cost for lifestyle-related diseases (cardiac problems, digestive issues etc.) was US$ 658 compared to US$ 91 for infectious diseases.

India’s disease profile is expected to follow the same pattern as in developed economies. Based on demographic trends and disease profiles, lifestyle diseases - cardiovascular, asthma and cancer have become the most important segments, and inpatient spending is expected to represent nearly 50 per cent of total healthcare expenditure. In the inpatient market, the share of infectious diseases is expected to decline from 19 per cent in 2004 to 16 percent in 2008.

Figure (10) India Vs Developed economies
The number of cardiac-disease-related treatments in India is expected to grow from 1.5 million to 1.9 million per year over 2004-08, which would constitute 5.1 per cent of all treatments. The spend share of inpatient cardiac treatment is estimated to grow to 19 per cent of the total in 2008 from 16 per cent in 2004. This would drive a 13.4 per cent CAGR in the inpatient cardiac care market from US$ 1.2 billion in 2004 to US$ 2.04 billion in 2008. The average realization per inpatient for cardiac-related treatment is much higher than for other disease segments.

Role of Increased life expectancy

In the domestic market, health spending will be sustained by two demographic trends: increased life expectancy and an ageing population. Life expectancy, which averaged 63.3 years in 2000-04, is expected to increase to 65.1 years in 2005-09 and to 66 years in 2006-10. As per Goldman Sachs proportion of the population aged 65 years and over is also on the rise, and will increase from 4.7 per cent in 2000 to 5.3 per cent in 2005 and 5.8 per cent in 2010. Although the rate of ageing in India is slower than the developed world, the large population makes any increase significant in terms of absolute numbers, and therefore also in terms of market potential.

The contribution of the private healthcare sector is on the rise, with investments from the corporate sector steadily growing since the mid-1990s. In the last few years, a number of new players have entered the healthcare delivery sector, and set up specialty and super-specialty centers.

In the government sector, the states provide the bulk of healthcare. Presently, the public spending is at a level of 1.3 per cent of the GDP (Goldman Sachs). Public spending on healthcare will continue to rise, but the prospect of large and sustained increases is low. It is expected to increase to 3 percent over the next few years.
Studies by the Central Bureau of Health Intelligence has shown that a majority of Indians trust private healthcare despite the average cost being higher at US$ 4.3 than the US$ 2.7 it costs at government-owned healthcare agencies. It has further been estimated that while 59 per cent of healthcare expenditure comes from the ‘self-paid’ category, less than 30 percent is contributed by the states.

Role of private healthcare sector

The majority of healthcare services in India are provided by the private sector. In 2002 fee-charging private companies accounted for around 82 per cent of overall healthcare expenditure, with various levels of government covering the remaining 18 per cent.

Significant investment opportunities for private sector

Limited government investment provides significant opportunities for private healthcare service providers as large investments are required to scale up the country’s healthcare infrastructure. India’s healthcare infrastructure needs substantial investment. By certain estimates, to reach even half of China’s current beds per 1,000 population over the next 10 years, India would need an additional 920,000 beds entailing an investment of between US$ 32 billion and US$ 49.1 billion, assuming that 20 per cent of those beds would be in the tertiary-care segment.

The government is likely to meet only 15-20 per cent investment in hospital beds, assuming it increases expenditures by 6-7 per cent from the current base. Assuming 10-15 per cent commitment from international donors, there would be a shortfall of 70 per cent, which could be funded by private companies.

Similarly, to match China’s level of physician availability (1.1 per 1,000 populations) over the next 10 years, it is estimated that an additional 818,000 physicians would be
needed in India - which translates into a need for more medical schools. Investment is also needed in medical equipment and training facilities for professionals such as nurses and pharmacists. India’s unmet demand for healthcare facilities, rapidly changing demographics, increasing private spending on healthcare, and a readily available intellectual pool are fuelling the growth of the healthcare industry and making it highly attractive for international investors.

A growing healthcare sector

Healthcare is one of India’s largest sectors, in terms of revenue and employment, and the sector is expanding rapidly. During the 1990s, Indian healthcare grew at a compound annual rate of 16%. Today the total value of the sector is more than $34 billion. This translates to $34 per capita, or roughly 6% of GDP. By 2012, India’s healthcare sector is projected to grow to nearly $40 billion.

The private sector accounts for more than 80% of total healthcare spending in India. Unless there is a decline in the combined federal and state government deficit, which currently stands at roughly 9%, the opportunity for significantly higher public health spending will be limited.

Growing population and economy

One driver of growth in the healthcare sector is India’s booming population, currently 1.1 billion and increasing at a 2% annual rate. By 2030, India is expected to surpass China as the world’s most populous nation. By 2050, the population is projected to reach 1.6 billion.

India is forecast to grow by at least 5% a year for the next 45 years.
This population increase is due in part to a decline in infant mortality, the result of better healthcare facilities and the government’s emphasis on eradicating diseases such as hepatitis and polio among infants. In addition, life expectancy is rapidly approaching the levels of the western world. By 2025, an estimated 189 million Indians will be at least 60 years of age—triple the number in 2004, thanks to greater affluence and better hygiene. The growing elderly population will place an enormous burden on India’s healthcare infrastructure (See figure 11) and that it will be the only emerging economy to maintain such a robust pace of growth.

Expanding middle class

India traditionally has been a rural, agrarian economy. Nearly three quarters of the population still lives in rural areas, and as of 2004, an estimated 27.5% of Indians were living below the national poverty line. Some 300 million people in India live on less than a dollar a day, and more than 50% of all children are malnourished.
Table (11) Middle class as a % of total population

Source CRIS INFAC, 2005

<table>
<thead>
<tr>
<th>MIDDLE CLASS</th>
<th>% OF ENTIRE POPULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998-1999</td>
<td>44.92</td>
</tr>
<tr>
<td>2001-2002</td>
<td>50.53</td>
</tr>
<tr>
<td>2009-2010</td>
<td>62.95</td>
</tr>
</tbody>
</table>

However, India’s thriving economy is driving urbanization and creating an expanding middle class, with more disposable income to spend on healthcare. While per capita income was $620 in 2005, over 150 million Indians have annual incomes of more than $1,000, and many who work in the business services sector earn as much as $20,000 a year. While this is a fraction of the income that their US peers earn, it is the equivalent of more than $100,000 per year when adjusted for purchasing power parity.

More women are entering the workforce as well, further boosting the purchasing power of Indian households. Between 1991 and 2001, the percentage of women increased from 22% to 26% of the workforce, according to the latest Indian government census. Many of these women are highly educated: the ratio of women to men who have a college degree or higher level of education is 40:60.

Thanks to rising income, today at least 50 million Indians can afford to buy Western medicines—a market only 20% smaller than that of the UK. If the economy continues to grow faster than the economies of the developed world, and the literacy rate keeps rising, much of western and southern India will be middle class by 2020.

Rise of disease
Another factor driving the growth of India’s healthcare sector is a rise in both infectious and chronic degenerative diseases. While ailments such as poliomyelitis, leprosy, and neonatal tetanus will soon be eliminated, some communicable diseases once thought to be under control, such as dengue fever, viral hepatitis, tuberculosis, malaria, and pneumonia, having returned in force or have developed a stubborn resistance to drugs. This troubling trend can be attributed in part to substandard housing, inadequate water, sewage and waste management systems, a crumbling public health infrastructure, and increased air travel.

Wellness programs targeted at the workplace, where many sedentary jobs are contributing to an erosion of employees’ health, could help to reduce the rising incidence of lifestyle diseases.

Pharmaceuticals

Paralleling the rise of disease is the emergence of a robust pharmaceutical industry in India. The Indian pharmaceutical market is one of the fastest growing markets in the world; sales increased by 17.5% to $7.3 billion in 2006, according to IMS Health. Many factors, including a strong economy and the country’s growing healthcare needs have contributed to the accelerated growth, which is especially strong in the over-the-counter (OTC) market.

Overall, the domestic pharmaceutical industry is highly fragmented; more than 10,000 firms collectively control about 70% of the market. Only three foreign multinationals rank in the top 10 companies, as measured by sales, and collectively they have only 11.9% of the market between them. But many of the local players are generics producers specializing in anti-infective, and as the illnesses of affluence and age increase, the demand for innovative new pharmaceuticals will rise.
The federal government uses price controls to ensure that vital drugs are affordable to the Indian population. Under the proposed pharmaceutical policy 2006, the government revealed its intention to raise the number of essential drugs under price controls from 79 to nearly 354, which would bring almost a third of the industry under price controls and adversely impact foreign pharmaceutical firms that want to business in India. It is an ongoing challenge to balance the commercial interests of pharmaceutical companies with the broader social objective of curing disease and preventing epidemics that could decimate the Indian population.

Deteriorating infrastructure

India’s healthcare infrastructure has not kept pace with the economy’s growth. The physical infrastructure is woefully inadequate to meet today’s healthcare demands, much less tomorrows. While India has several centers of excellence in healthcare delivery, these facilities are limited in their ability to drive healthcare standards because of the poor condition of the infrastructure in the vast majority of the country.

Of the 15,393 hospitals in India in 2002, roughly two-thirds were public. After years of under-funding, most public health facilities provide only basic care. With a few exceptions, such as the All India Institute of Medical Studies (AIIMS), public health facilities are inefficient, inadequately managed and staffed, and have poorly maintained medical equipment.

The number of public health facilities also is inadequate. For instance, India needs 74,150 community health centers per million populations but has less than half that number. In addition, at least 11 Indian states do not have laboratories for testing drugs, and more than half of existing laboratories are not properly equipped or staffed.
The principal responsibility for public health funding lies with the state governments, which provide about 80% of public funding. The federal government contributes another 15%, mostly through national health programs. However, the total healthcare financing by the public sector is dwarfed by private sector spending. In 2003, fee-charging private companies accounted for 82% of India’s $30.5 billion expenditure on healthcare. This is an extremely high proportion by international standards. Private firms are now thought to provide about 60% of all outpatient care in India and as much as 40% of all in-patient care. It is estimated that nearly 70% of all hospitals and 40% of hospital beds in the country are in the private sector.

**Table (12)** The Urban – Rural split. Source: Review of Healthcare in India, 2005

<table>
<thead>
<tr>
<th>PER LAKH (100K)</th>
<th>POPULATION</th>
<th>BEDS</th>
<th>HOSPITALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISPENSARIES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>URBAN</td>
<td>178.78</td>
<td>3.6</td>
<td>3.6</td>
</tr>
<tr>
<td>RURAL</td>
<td>9.85</td>
<td>0.36</td>
<td>1.49</td>
</tr>
</tbody>
</table>

The healthcare divide

When it comes to healthcare, there are two India’s, the country which provides high-quality medical care to middle-class Indians and medical tourists, and the India in which the majority of the population lives—a country whose residents have limited or no access to quality care. Herein lies the opportunity. Today only 25% of the India’s population has access to Western (allopathic) medicine, which is practiced mainly in urban areas, where two-thirds of India’s hospitals and health centers are located.
Many of the rural poor must rely on alternative forms of treatment, such as ayurvedic medicine, unani and acupuncture.

The federal government has begun taking steps to improve rural healthcare. Among other things, the government launched the National Rural Health Mission 2005-2012 in April 2005. The aim of this Mission is to provide effective healthcare to India’s rural population, with a focus on 18 states that have low public health indicators and/or inadequate infrastructure. These include Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Himachal Pradesh, Jharkhand, Jammu & Kashmir, Manipur, Mizoram, Meghalaya, Madhya Pradesh, Nagaland, Orissa, Rajasthan, Sikkim, Tripura, Uttarakhand and Uttar Pradesh. Through the Mission, the government is working to increase the capabilities of primary medical facilities in rural areas, and ease the burden on to tertiary care centers in the cities, by providing equipment and training primary care physicians in how to perform basic surgeries, such as cataract surgery.

While the rural poor are underserved, at least they can access the limited number of government-support medical facilities that are available to them. The urban poor fare even worse, because they cannot afford to visit the private facilities that thrive in India’s cities.

Lack of insurance

A widespread lack of health insurance compounds the healthcare challenges that India faces. Although some form of health protection is provided by government and major private employers, the health insurance schemes available to the Indian public are generally basic and inaccessible to most people. Only 11% of the population has any form of health insurance coverage (Technopak –Healthcare Outlook 2007). For the small percentage of Indians who do have some insurance, the main provider is the
government-run General Insurance Company (GIC), along with its four subsidiaries, The New India Assurance Company, Oriental Fire and Insurance Co., National Insurance Co., and The United India Insurance Co. GIC is able to obtain funds for underwriting from other countries, although foreigners are not allowed to own insurance companies. Only 1% of the population was covered by private health insurance in 2004-05. Group insurance accounted for 35% of the total health insurance business during that period.

India’s first medical insurance scheme for the poor was launched in the 1996-97 budget. The “Janarogya Yojana” scheme is marketed by the four subsidiaries of GIC, and covers people between the ages of 5 and 70 for pre- and post-hospitalization expenses, for up to 30 and 60 days, respectively. The insurance coverage costs around $122 per annum.

More than four million policyholders were expected to enroll during the first year of operation, although reports suggest this was not the case. One problem is that the insurance is provided on a reimbursement basis: patients are required to pay for treatment out of their own pockets and then claim reimbursement—a process that can take up to six months, according to local reports.

While public sector health insurance has not fared well, the market for private health plans is expanding in India. In some cases, the government is partnering with the private sector to provide coverage at a low cost. For instance, the Yashaswini Insurance scheme, launched in 2002 in the state of Karnataka by a public–private partnership, provides coverage for major surgical operations, including those pertaining to pre-existing conditions, to Indian farmers who previously had no access to insurance. The premium is only Rs 60 annually (roughly $1.50), which virtually all
workers can afford, and the government contributes an additional Rs30 annually for each policyholder. While the Yashaswini Scheme has been successful, it only provides coverage for approximately 50,000 farmers. Because so little insurance is available to the population of India, out of-pocket payments for medical care amounted to 98.4% of total health expenditures by households, as of the most recent (2001–02) census. Without insurance, the poor must resort to taking on debt or selling assets to meet the costs of hospital care. It is estimated that 20 million people in India fall below the poverty line each year because of indebtedness due to healthcare needs.

Clearly there is an urgent need to expand the health insurance net in India. Among other things, that will require more state governments to pursue micro insurance initiatives, such as the Yashaswini Insurance Scheme in Karnataka, so that most or all of the population can afford to purchase at least a minimum level of coverage. The widespread availability of health insurance would help to drive demand for services and provide additional revenue to improve the quality of care.

Trends in healthcare

The Private Sector Takes the Lead

The delivery capability of India’s healthcare industry has not been able to match up with the increasing population and socio-economic changes. The growth rate of over 13% was witnessed by the healthcare industry in 2006 (Technopak Healthcare Outlook 2007).

Besides the growing population, these include a rise in income levels across all strata of society, the increase in lifestyle diseases, deeper penetration & growing
involvement of health insurance, newer treatment modes and finally the inadequacy of
the public healthcare delivery systems.

Healthcare, which is a US$ 35 billion dollar industry, is expected to reach over US$ 75 billion in the next five years. The private sector today accounts for over 80% of
this spending. With 1.5 beds per thousand population (both private and public
combined), India is at par with some of the less developed countries like Mexico,
Costa Rica & Philippines. An addition of even a single bed per thousand populations
(1.1 million beds in the case of India) will require an investment of around US$ 80
billion. We envisage that most of these will be created in the secondary care format in
Tier II cities where the bed ratio is most adverse. It is estimated that over 90% of the
private healthcare is being serviced by the unorganized sector. This preponderance of
the unorganized sector in healthcare is not because of a preferred choice for such
health practitioners, but by more functional imperatives, namely the absence of
affordable, convenient and quality healthcare delivery systems. This is expected to
undergo a sea change in the coming year. The great opportunities afforded at this
juncture are attracting a large number of established players as well as new entrants
who are eager to capitalize on this exponential growth.
Table (13) Some Corporatism in the Healthcare Sector

Corporate Private Players:

<table>
<thead>
<tr>
<th>Name</th>
<th>No. Of Hospitals</th>
<th>No. Of Beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apollo Hospitals</td>
<td>40</td>
<td>6,000</td>
</tr>
<tr>
<td>Fortis Hospitals</td>
<td>12</td>
<td>1,900</td>
</tr>
<tr>
<td>Wockhardt Hospitals</td>
<td>10</td>
<td>1,500</td>
</tr>
<tr>
<td>Max Healthcare</td>
<td>7</td>
<td>800</td>
</tr>
</tbody>
</table>
New National and International Entrants:

<table>
<thead>
<tr>
<th>National</th>
<th>International</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliance Healthcare</td>
<td>Parkway Group, Singapore</td>
</tr>
<tr>
<td>Artemis health Science</td>
<td>Pacific Healthcare holding, Singapore</td>
</tr>
<tr>
<td>Paras Group</td>
<td>Columbia Asia, Malaysia</td>
</tr>
<tr>
<td></td>
<td>Emaar group, Dubai</td>
</tr>
<tr>
<td></td>
<td>Prexus Healthcare Partners, USA</td>
</tr>
</tbody>
</table>

Standardization

Health processes in advanced countries are well standardized both in the terms of the clinical protocols and actual delivery. This, apart from producing superior outcomes and reducing error probability also provides transparency on the effectiveness of the treatment, which is increasingly critical given the more informed and demanding patients or health “seekers”. A growing number of hospitals in India are turning to accreditation agencies worldwide to both standardize their international quality of health care delivery. Joint Commission International (JCI), the leading healthcare accreditation agency in the United States has accredited five hospitals in India till date. However, most hospitals in India are unlikely to go for JCI accreditation due to the high cost of accreditation and compliance. The NABH (National Accreditation Board for Hospitals and Healthcare Providers) looks at providing accreditation specific to the Indian Healthcare setting, major aspects being the assurance of uniform access, assessment, care of patients and protection of patient’s rights. (Refer table 14). Besides hospitals it would also accredit blood banks, diagnostic centers and ayurvedic hospitals. In the process, it would target over 15,000 healthcare providers nationwide.
Table (14) Source: Joint Commission International & National Accreditation board for Hospitals and Healthcare Providers

<table>
<thead>
<tr>
<th>JCI ACCREDITED HOSPITAL</th>
<th>NABH ACCREDITED HOSPITAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indraprastha Apollo Hospital, New Delhi</td>
<td>B.M. Birla Heart Research Centre, Kolkata</td>
</tr>
<tr>
<td>Apollo Hospital, Chennai</td>
<td>MIMS Hospital, Calicut</td>
</tr>
<tr>
<td>Apollo Hospital, Hyderabad</td>
<td>Max Super- Specialty Hospital, New Delhi</td>
</tr>
<tr>
<td>Wockhardt Hospital, Mumbai</td>
<td>Max Devki Devi Heart and Vascular Institute, New Delhi</td>
</tr>
<tr>
<td>Shroff Eye Hospital, Mumbai</td>
<td>Kerala Institute of Medical Sciences, Thiruvananthapuram</td>
</tr>
</tbody>
</table>

One of the pivotal factors to sustain the projected growth of the healthcare industry in India would be the availability of a trained workforce. Worldwide, the shortage of doctors, nurses and paramedical staff has led to an exodus of such manpower from India in the last three decades. A major challenge for our nation and the healthcare industry would be not only to retain the healthcare workforce but also to develop an environment which would attract those abroad to return. Even if the number of doctors were to increase from 0.6 to 0.8 per 1000 population and number of nurses were to increase from 1.5 to 2 per 1000 population to catch up with best world practices, India needs 0.2 million doctors and 0.5 million nurses right away, besides
need for other paramedical and healthcare management personnel. One of the encouraging trends has been the growing interest of physicians of Indian origin whose number is more than 60,000, working in other nations and willing to return home. (Table no 15) The world class infrastructure which most corporate hospitals offer along with salary levels to facilitate the same living index at par with the west are some of the reasons which are encouraging more top notch doctors to come back. Growing restrictions on licensing and practice within the European Economic Community is also translating into a large number of Indian doctors looking to relocate back from the UK. The expected manpower gap by 2010 is 7, 00,000 in this sector.

**Table (15) Source: Joint Commission International & National Accreditation board for Hospitals and Healthcare Providers**

<table>
<thead>
<tr>
<th>Reasons medical professionals leave India</th>
<th>Reasons medical professionals return to India</th>
</tr>
</thead>
<tbody>
<tr>
<td>Better remuneration</td>
<td>Salaries at par with those abroad</td>
</tr>
<tr>
<td>Better lifestyle</td>
<td>Better growth avenues</td>
</tr>
<tr>
<td>Perceived growth</td>
<td>World class infrastructure</td>
</tr>
<tr>
<td>Access to better technology and training</td>
<td></td>
</tr>
</tbody>
</table>

**Technology**

Technology in the last two decades has revolutionized the way healthcare is delivered worldwide. It has greatly aided patients and providers alike by enhancing the quality of delivery, reduction in turnaround time of workflows (and thus the overall cost), besides bringing in higher accountability into the system. As a typical example, a 100

73
bedded hospital could decrease its time for discharge by 50% to less than 60 minutes leading to an approximate increase in revenue of over 25%, on an average investment of only 2% of its annual revenue by an appropriate hospital information system. The Indian healthcare industry is also trying to reap the full benefits of the IT usage. The total market opportunity stands at around US$ 3 billion for the new healthcare IT infrastructure required in the country. The Indian medical equipment and consumable market which is presently valued at over US$ 2 billion is largely made up of imports which account for over 90% of this share. The whole medical equipment market is witnessing a CAGR of 15%. Medical equipment takes the biggest share. A major development has been the Government of India announcement in 2006 for setting up of Biotech Parks with special sanctions to promote and encourage private players to establish production bases.

Figure (13) Medical Equipment & IT

Source: Grant Thornton India 2008
Public Private Partnership (PPP)

In recent years, the trend in both the developed and developing world has been towards greater private sector investment in health care provision and financing. The public-private partnerships (PPP) model is becoming important in the sector. Reasons for this include insufficient government resources and poor performance on the part of the public sector. There is a growing realization that involving the private sector in health services provision could lead to improved systems efficiency. In India given the extent of private sector dominance in the healthcare system the Government of India has laid various strategies under the National Rural Health Mission 2005 for partnerships with the private sector in meeting national public health goals. Recently the Planning Commission constituted a Working Group on Public Private Partnership to improve health care delivery for the 11th Five-Year Plan (2007-12).

Benefits of PPP

Economies of scale

Improving quality and efficiency

Exchange of skills and expertise between the public and private sector

Optimum utilization of public resources

Equitable healthcare

Broad range of services

Gujarat Government has taken a policy decision to entrust management of 23 district level civil hospitals, with about 4,100 beds, and six medical college associated hospitals to the private sector.
Rajasthan Government has contracted out the installation, operation and maintenance of CT-scan and MRI services to a private agency at SMS Hospital at Jaipur. The agency is paid a monthly rent by the hospital and the agency has to render free services to 20% of the patients belonging to the poor socio-economic categories. Rest of the patients is charged as per pre-agreed tariff which is considerably less than the market.

Medical Value Travel: Hype & Reality

During the last year considerable effort was put in both by the government and the hospital industry federations to project India as the preferred destination for medical value travel. Despite all the hype, the actual number of patients coming to India is only a fraction of what Thailand, Singapore and Malaysia treat individually. A recent News Week article on “Medical Mecca’s” failed to list a single Indian corporate hospital (Source: Technopak Healthcare Outlook 2007). Despite the evident advantage of low cost, world class hospital infrastructure, superior treatment outcomes and some of the best trained medical staff, the flow of foreign patients is still a trickle. Significant improvement would have to be made in public infrastructure, connectivity and reduction of visa formalities. Also, the healthcare and hospitality sector needs to be better integrated to further increase the medical value travel.
Figure (14) Medical Value Travel. Source: Technopak Healthcare Outlook 2007

Special Economic Zones

Special Economic Zones (SEZ) were introduced in India since year 2000 to achieve three-fold objectives of attracting Foreign Direct Investment (FDI), increasing exports and accelerating the economic growth in India. To provide an impetus to economic activities outside the urban areas the Government of India (GOI) is actively promoting SEZs. Proposals for over 531 units have been cleared till 22nd September 2008. The SEZs require hospitals to be set up in these zones. For a sector specific zone a hospital with minimum bed strength of 25 is stipulated and this goes up to 100 beds for a multi product Special Economic Zone. Over 18,000 beds would be required in the next five years necessitating an investment of over US$ 1.26 billion.
Figure (15)  Source: Technopak Healthcare Outlook 2007

Infusion of Private Equity

Emerging healthcare segments like diagnostic chains, pharmacy chains, medical device manufactures as well as hospital chains are increasingly attracting investments from a variety of venture capitalists.

The Healthcare sector attracted US$ 379 million in year 2006 that formed 6.3% of the total private equity investment of US$ 5.93 billion. Clearly, there are strong indicators of promise and returns that are attracting discerning investment professionals and institutions from the world over compared to the West; the healthcare sector in India is poorly developed and nascent. No wonder that prospective healthcare providers and venture capitalists are excited at the very thought of this market. Clearly, some of the most exciting laps of the healthcare race would be run in India in the coming years.
Major Healthcare Deals

George Soros’ fund Quantum and Blue Ridge bought 10% in Fortis Healthcare


Metropolis Health Services Ltd. (Metropolis), India’s leading Corporate Diagnostics Chain raised over US$ 8 million in equity from India Advantage Fund-I managed by ICICI Venture (2007, Source: Technopak Healthcare outlook 2008)

Air ambulance

An air ambulance is an aircraft used for emergency medical assistance in situations where either a traditional ambulance cannot easily or quickly reach the scene or the patient needs to be repositioned at a distance where air transportation is most practical. Air ambulance crews are supplied with equipment that enables them to provide medical treatment to a critically injured or ill patient. Common equipment for air ambulances includes respirators, medication, an ECG and monitoring unit, CPR equipment, and stretchers.

In India the reasons for using air ambulance transport seems very appropriate; namely to provide rapid transport of the patients to specialized centers of tertiary medical care. India being such a large country with nearly 62% of its population living in the rural area, this type of specialized medical service can save many precious lives, only if there was a health insurance plan available to cover this service for a common man. Air Ambulance services must make efforts to provide all emergency critical care to
patients being transported by air of the same level as provided by the ICU ground ambulances. The fact that a patient is being transported by air does not alter his patient status. Our aim should be to provide modern, safe and convenient air transportation to patients, keeping in mind that patients are not cargo, patients are not passengers, and patients are patients.

Table (16)  

List of problems: air ambulance services in India have the following obstacles:

Restrictions by the Airport Authority of India (AAI).

Private road ambulances cannot be taken inside the airport, up-to the aircraft for loading and offloading the casualties.

No priority given to the medical emergency flights

No airport passes for doctors and other staff working for Air Ambulance companies.

Air evacuation of casualties in India at the present is an expensive proposition due to high price of the ATF (Aviation Turbine Fuel) and aircrafts.

Therefore, with the new trends in the sector, the sector has to change making updations and be accommodating so as to gain from these trends.
Opportunities within India’s Healthcare sector

Given the current state of India’s healthcare system, its challenges and its growth prospects, PricewaterhouseCoopers has identified a number of market opportunities for foreign companies that want to participate in the 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 “India medical tourism” turns up more than 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 (see chart). India’s private hospitals excel in fields such as cardiology, joint replacement, orthopedic surgery, gastroenterology, ophthalmology, transplants and urology.

<table>
<thead>
<tr>
<th>Medical Procedure</th>
<th>US (USD)</th>
<th>Thailand (USD)</th>
<th>India (USD)</th>
<th>Cost of US (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiac surgery</td>
<td>50,000</td>
<td>14,250</td>
<td>4,000</td>
<td>12.5</td>
</tr>
<tr>
<td>Bone marrow transplant</td>
<td>62,500</td>
<td>62,500</td>
<td>30,000</td>
<td>13.33</td>
</tr>
<tr>
<td>Liver transplant</td>
<td>500,000</td>
<td>75,000</td>
<td>45,000</td>
<td>11.11</td>
</tr>
<tr>
<td>Orthopaedic surgery</td>
<td>16,000</td>
<td>6,900</td>
<td>4,500</td>
<td>3.56</td>
</tr>
</tbody>
</table>

**Table (17) Cost of Key Healthcare Procedures**

According to a joint study by the Confederation of Indian Industry and McKinsey, Indian medical tourism was estimated at $350 million in 2006 and has the potential to
grow into a $2 billion industry by 2012. An estimated 180,000 medical tourists were treated at Indian facilities in 2004 (up from 10,000 just five years earlier), and the number has been growing at 25-30% annually. India has the potential to attract one million medical tourists each year, which could contribute $5 billion to the economy, according to the Confederation of Indian Industries.

In addition to receiving traditional medical treatments, a growing number of western tourists are traveling to India to pursue alternate medicines such as ayurveda which has blossomed in the state of Kerala, in southwestern India. The number of medical tourists visiting Kerala was close to 15,000 in 2006 and is expected to reach 100,000 by 2010.

To capitalize on medical tourism and build a sustained public-private partnership in the hospital industry, the Indian government is supporting an initiative by well known heart surgeon Dr. Naresh Trehan to build “Medi City” in Gurgaon, on the outskirts of Delhi. The compound will include a 900-bed hospital that supports 17 super specialties, a medical college and paramedical college. The project, on 43 acres of land, will cost an estimated $493 million. The Medi City will integrate allopathic care with alternative treatments, including Unani, Ayurveda and Homeopathic medicine, and it will provide telemedicine services as well.

To encourage the growth of medical tourism, the government also is providing a variety of incentives, including lower import duties and higher depreciation rates on medical equipment, as well as expedited visas for overseas patients seeking medical care in India.
Emerging health insurance market

In recent years, there has been a liberalization of the Indian healthcare sector to allow for a much-needed private insurance market to emerge. Due to liberalization and a growing middle class with increased spending power, there has been an increase in the number of insurance policies issued in the country. In 2001-02, 7.5 million policies were sold. By 2003-4, the number of policies issued had increased by 37%, to 10.3 million.

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.

Removal of tariffs also will result in wider acceptance of individual health coverage. Health insurance will make healthcare more affordable to larger segments of the populace, boosting healthcare expenditures per household and driving the demand for quality care. Finally, the elimination of insurance tariffs will serve as a litmus test for further legislation, such as co-payments and hospital accreditations, which the government plans to implement over the next two to three years.
In the post-liberalization 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 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.

In another effort to improve the insurance prospects for India, the Insurance Regulatory Authority of India (IRDA) is focused on standardizing medical definitions to ensure consistent pricing and products, and is providing incentives for stand-alone insurance companies. (Currently only Star Health exists as a stand-alone health insurance company) In addition, government subsidies and tax incentives for health insurance are expected to attract key players to the industry.

In response to liberalization, a large number of international private insurance companies are moving into India and forming joint ventures. Two prominent examples are Max New York Life, a joint venture between Max India and New York Life, and ICICI Prudential Life Insurance, a joint venture between the ICICI Group and UK-based Prudential plc. Some companies are experimenting with more targeted forms of insurance coverage. For example, ICICI Prudential is offering plans designed specifically for diabetics. We can expect to see more such innovations, as the health insurance market evolves in the coming years.

While the liberalization of the healthcare sector will increase the penetration of insurance policies, the widespread use of health insurance in India could take many years (please substantiate this with earlier write-ups or reports). One reason is that insurance companies lack the data they need to assess health risks accurately. In
addition, today’s insurance products work on an indemnity basis—that is, they reimburse patients only after they have paid their healthcare bills. Since many people cannot afford such large payments (indicate the figure, and say that given the per capita income of the Indians in the region of Rs. 38,000, it is very difficult to pay the amount), even if they are subsequently reimbursed, they will not choose to purchase medical insurance.

Growth of telemedicine

Only 25% of India’s specialist physicians reside in semi-urban 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.

One solution is telemedicine—the remote diagnosis, monitoring and treatment of patients via videoconferencing or the Internet. Telemedicine is a fast-emerging trend in India, supported by exponential growth in the country’s information and communications technology (ICT) sector, and plummeting telecom costs. Several major private hospitals have adopted telemedicine services, and a number of hospitals have developed public-private partnerships (PPPs), among them Apollo (multi-city), AIIMS (New Delhi), Narayana Hridayalaya, Aravind Hospitals and Sankara Nethralaya (Chennai).

The early successes of telemedicine pioneers have led to increased acceptance and proliferation of telemedicine. Today there are approximately 120 telemedicine centers throughout India. The Asian Heart Institute (AHI) is planning to establish 60 more telemedicine satellite centers across the interiors of Maharashtra.

The government has also made a major commitment to the growth of telemedicine. The Indian Space Research Organization (ISRO) plans to establish 100 telemedicine
centers across the country. ISRO has already connected 25 major hospitals in the mainland and plans to link at least 650 district hospitals by 2008. The government also is reducing import tariffs on infrastructure equipment. And while India has yet to pass legislation on telemedicine related issues, the Ministry of Information Technology has developed “Recommended Guidelines & Standards for Practice of Telemedicine in India,” with the goal of standardizing digital communication in telemedicine. The Medical Council of India has formed committees to explore this and other legal aspects of tele health. There is a growing movement within India to establish a health grid that connects medical institutions and practitioners throughout the country.

This would allow super specialists to exchange case studies, compare experiences, and hold virtual conferences to discuss critical disease patterns and provide treatment. Eventually, telemedicine likely will be practiced in the majority of Indian hospitals, initially in a separate department, and eventually, integrated into medical specialties.

Healthcare infrastructure expansion

An enormous amount of private capital will be required in the coming years to enhance and expand India’s healthcare infrastructure to meet the needs of a growing population and an influx of medical tourists. Currently India has approximately 860 beds per million population. This is only one-fifth of the world average, which is 3,960, according to the World Health Organization. It is estimated that 450,000 additional hospital beds will be required by 2010—an investment estimated at $25.7 billion. The government is expected to contribute only 15-20% of the total, providing an enormous opportunity for private players to fill the gap.
Recently we have seen many new investments in healthcare infrastructure facilities in India. For instance, ICICI Venture, the country’s largest private equity fund, has invested $8.6 million in a chain of diagnostics facilities, along with Metropolis Health Services Ltd. And in 2006, General Electric announced a $250 million investment in infrastructure and healthcare projects in India.

With the advent of private insurance and the emergence of India as a medical tourism destination, there also has been a surge of growth in so-called “super specialty” hospitals, which have teams of specialists, sophisticated equipment, links to other medical centers, and the ability to treat a broad range of ailments.

**Figure (16)** Source: World Health Organization

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### India Health Infrastructure

<table>
<thead>
<tr>
<th></th>
<th>Beds</th>
<th>Physicians</th>
<th>Nurses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Per '000 population, 2001</td>
<td>Per '000 population, 2001</td>
<td>Per '000 population, 2001</td>
</tr>
<tr>
<td><strong>India</strong></td>
<td>1.5</td>
<td>0.5</td>
<td>0.9</td>
</tr>
<tr>
<td>Other low income countries (e.g., sub-Saharan Africa)</td>
<td>1.5</td>
<td>1.0</td>
<td>1.6</td>
</tr>
<tr>
<td>Middle income countries (e.g., China, Brazil Thailand, South Africa, Korea)</td>
<td>4.3</td>
<td>1.8</td>
<td>1.9</td>
</tr>
<tr>
<td>High income countries (e.g., US, Western Europe, Japan)</td>
<td>7.4</td>
<td>1.8</td>
<td>7.5</td>
</tr>
<tr>
<td><strong>World average</strong></td>
<td>3.3</td>
<td>1.5</td>
<td>3.3</td>
</tr>
</tbody>
</table>

Some of these new facilities, such as the Rajiv Gandhi Super Specialty Hospital (see sidebar), are public-private partnerships. Government fiscal constraints are driving the growth of PPPs to help meet India’s growing demand for healthcare infrastructure.
Such partnerships have gained legitimacy worldwide in recent years as a major strategy for health sector development.

In addition to participating in infrastructure PPPs, opportunities are emerging for foreign companies to create super-specialty hospitals in collaboration with Indian corporations. For instance, the Wockhardt Hospitals Group has partnered with the Harvard Medical International to create a chain of super specialty hospitals in India. These two hospitals, in Mumbai and Bangalore, are attracting large volumes of medical tourists from the UK and US.

There also is strong demand for tertiary care hospitals, which emphasize the treatment of lifestyle diseases, focusing on specialties such as neurology, cardiology, oncology and orthopedics. Tertiary hospitals are projected to grow faster than the overall healthcare sector, in response to the growing incidence of lifestyle disease and the accelerating growth of medical tourism.

In addition to a deteriorating physical infrastructure, India faces a huge shortage of trained medical personnel, including doctors, nurses and especially paramedics, who may be more willing than doctors to live in rural areas where access to care is limited. There is an immediate need for medical education and training, which could provide additional opportunities for private sector providers or public-private partnerships.

The communications technology that enables telemedicine could also be used to deliver training courses.

Medical equipment market

The rebuilding of India’s healthcare infrastructure, combined with the emergence of medical tourism and telemedicine, will drive strong demand for medical equipment, such as X-ray machines, CT scanners and electro-cardiograph (ECG) machines.
Leading international companies market most high value medical equipment, while only consumables and disposable equipment are made locally. Many international companies have expanded their operations in the Indian market in recent years and established manufacturing facilities to assemble equipment for the domestic market and export sales. The competition is expected to intensify with the entry of more global firms into the medical equipment marketplace.

The Government of India is encouraging the growth of this market, through policies such as a reduction in import duties on medical equipment, higher depreciation on life-saving medical equipment (40%, up from 25%), and a number of other tax incentives like Tax holiday under section 10A/10B of the income tax act, biotech companies located in biotech parks will be allowed a 5 year time frame to meet the export obligation norms under the SEZ scheme.

Pharmaceutical industry opportunities

Despite widespread poverty and inadequate public healthcare provision, India has much to offer the leading drug makers. An increase in lifestyle diseases resulting from the adoption of unhealthy western diets, combined with a growing middle class that has more disposable income to spend on treatment, will provide new opportunities for global pharmaceutical firms.

Manufacturing

India has emerged as a major supplier of several bulk drugs, producing these at lower prices compared to formulation producers worldwide. The US Food and Drug Administration (FDA) already approved 85 Active Pharmaceutical Ingredient (API) and formulation plants in India, the highest such number outside the US. India is poised to become a major exporter of pharmaceuticals, particularly generic and OTC
drugs, to global markets. By 2010, India could be producing 15% of the world’s bulk pharmaceuticals and drug intermediates. However, achieving that level of growth will require an estimated $1.2 billion investment in production capacity.

Many multinational generics companies have been sourcing products from Indian manufacturers for some years. Some also use Indian contract manufacturers to manufacture the finished product. Contract manufacturing, currently estimated at $350 million, is expected to reach $1 billion by 2010, according to the Indian rating agency CRISIL.

Some companies—encouraged by the relaxation of the rules on foreign ownership and a favorable tax regime—have gone beyond contract manufacturing, setting up their own local manufacturing facilities. The financial incentive is compelling: Goldman Sachs estimates that the cost of setting up and running a new manufacturing facility in India is one-fifth of the cost of doing so in the West.

Pharmaceutical research

Pharmaceutical research is one area that is expected to achieve tremendous growth in the coming decade due to India’s huge and growing population, low per capita drug usage, and increasing incidence of disease. Global pharmaceutical alliances with Indian drug firms are finally beginning to look like a two-way street, with major R&D deals being struck. For instance, Glenmark Pharmaceutical has teamed with Dyax to identify biological entities for its three targets in cancer treatment, and with Merck KGaA for its prospective diabetes molecule GRC 8200. GlaxoSmithKline is working with Ranbaxy Laboratories to identify new targets and has partnered with TCS for data management, through a global drug development support center in Mumbai.

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 (you can quote one or two proved cases, not mere allegations to substantiate the statement). 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 Pharm-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 ideal 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. As a result of these favorable factors, the Indian clinical trials market, currently estimated at $120 million, is expected to reach $1 billion by 2010, according to Infomedia. To achieve that level of growth, India will have to address a lack of skilled workers, high
wage inflation, and inadequate infrastructure. For western companies that can navigate these obstacles, the rewards will be substantial: Clinical trials account for over 40% of the costs of developing a new drug, and Rabo India Finance estimates that a standard drug could be tested in India for as little as $90 million—60% of the cost of testing in the US.

Sector Analysis

Health Insurance

Introduction

Health insurance is a system of assurance to meet the contingencies of health care expenses. Its main aim is to provide protection against financial loss by some unforeseen sickness. It also relieves anxiety, tension, stress and helps meet the cost of good medical care.

Over the last 50 years India has achieved a lot in terms of health improvement. But still India is way behind many fast developing countries such as China, Vietnam and Sri Lanka in health indicators (Satia et al 1999).

Percentage of total health expenditure funded through public/social insurance and direct government revenue:

Table (18)

<table>
<thead>
<tr>
<th>Country</th>
<th>Social Health Insurance</th>
<th>Government Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>37</td>
<td>37</td>
</tr>
<tr>
<td>Bolivia</td>
<td>20</td>
<td>33</td>
</tr>
<tr>
<td>China</td>
<td>31</td>
<td>13</td>
</tr>
<tr>
<td>South Korea</td>
<td>23</td>
<td>10</td>
</tr>
<tr>
<td>Country</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>---------</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Vietnam</td>
<td>2</td>
<td>18</td>
</tr>
</tbody>
</table>

As cited in Naylor et. al. 1999

In case of government-funded healthcare system, the quality and access of services has always remained major concern. A very rapidly growing private health market has developed in India. This private sector bridges most of the gaps between what government offers and what people need. However, with proliferation of various health care technologies and general price rise, the cost of care has also become very expensive and unaffordable to large segment of population. The government and people have started exploring various health financing options to manage problems arising out of growing set of complexities of private sector growth, increasing cost of care and changing epidemiological pattern of diseases.

Health insurance is destined to grow exponentially in the coming years with large and diverse players having entered the fray and enticing consumers with an ever growing array of schemes. There is still a lot of ground to be covered – even today about 64% of the expenditure on healthcare is still being met by consumers “out of pocket” i.e. through direct spending.
The new economic policy and liberalization process followed by the Government of India since 1991 paved the way for privatization of insurance sector in the country. Health insurance, which remained highly underdeveloped and a less significant segment of the product portfolios of the nationalized insurance companies in India, is now poised for a fundamental change in its approach and management. The Insurance Regulatory and Development Authority (IRDA) Act 1999, recently passed in the Indian Parliament, is important beginning of changes having significant implications for the health sector.

The privatization of insurance and constitution IRDA envisage the improvement of the performance of the state insurance sector in the country by increasing benefits from competition in terms of lowered costs and increased level of consumer satisfaction. However, the implications of the entry of private insurance companies in health sector are not very clear. The recent policy changes will have been far reaching and would have major implications for the growth and development of the health sector.
There are several contentious issues pertaining to development in this sector and these need critical examination. These also highlight the critical need for policy formulation and assessment. Unless privatization and development of health insurance is managed well it may have negative impact of health care especially to a large segment of population in the country. If it is well managed then it can improve access to care and health status in the country very rapidly.

Evolution of Health Insurance in India:

1986: Introduction of first Med claim Insurance Scheme by GIC.
1999: Insurance Regulatory and Development Authority (IRDA) Act passed; opening up the insurance sector to private players allowing 26% Foreign Direct Investment in the sector.
2001: IRDA introduced several insurance regulations including provisions for Third Party Administrators (TPA) system to support administration and management of health insurance product offered by Insurance Companies.
2005: IRDA stipulated the regulation on micro-insurance for 5% business in rural sector.
NEW STAND ALONE PLAYERS IN HEALTH INSURANCE
1. Star Health
2. Apollo Hospitals & DKV

Overview of the Health Insurance Sector:

With over a billion people, India is fast becoming a global economic power. With a relatively youthful population (with 53.7% of the total population less than 25 years of age, India will become even more attractive in the global insurance market over the next few decades. The Indian Economy is growing at a pace of 8-9% and likely to become the third largest by 2032. As pace of growth is on higher end it provides a good prospect to Health industry as it remains vastly under-developed in India. Health insurance premium collections in 2004/2005 amounted to Rs 2,000 crore which, in
comparison with the total healthcare spend at around Rs 60,000 crore, pales into insignificance.

**Figure (18) India-Rising Income.** Source: Technopak Healthcare Outlook 2007, Volume 01

The health insurance market is dominated by the four public sector general insurance companies that have launched what is popularly known as the 'medi-claim' policy – an indemnity benefit arrangement covering in hospital expenses. While they hold about
75% of the health insurance market, they face increasing consumer dissatisfaction and serious issues on product profitability.

Figure (19) Market Share of private and public players in the Indian health insurance sector.(Source: Technopak Healthcare Outlook 2007, Volume 01)

The Health Insurance sector comprises of large numbers of public and private players. This sector is lead by New India Assurance among the public player while in private player ICICI Lombard lead the lot. Health insurance continues to be the fastest growing segment of the insurance industry.

ICICI Lombard, which has a 6.9% share in the overall market but a 39% share of the private health insurance market, registered an increase of 257% of its health insurance business over the last year. As a result, while health premium represented not more
than 6% of the company's insurance business in '03-04, it represents over 13% today in the increase size of insurance market which is projected to grow to US $billion by 2010 according to a study by PHD Chamber of Commerce and Industry (Source Grant Thornton India, 2008).

Likewise, Bajaj Allianz, which holds a 23.1% market share of the private health insurance market, has registered a 242.2% increase of its health business in '04-05.

Health premium has increased from 4 to 8% of the company's total non-life business. If the private health insurance sector has registered a spectacular increase with an average growth rate of 148% of premiums, 82% of the total health insurance market remains under control of the public sector. The four public insurance providers' health premium has increased to Rs 1732.2 crore in '04-05 from Rs 1,151.2 crore a year ago.

Furthermore, the market share of is 9.8% in public insurance provider's business, a share increasing steadily every year.

New India Assurance, with an overall market share of 30%, is the leader of the total market, followed by National Insurance, which controls 21% of the market followed by United India and finally Oriental Insurance. However, in spite of a significant growth over the last few years, the market for health insurance in India remains limited. Today, only 85m people in India are covered by health insurance policy and among them only 10.8m are covered by a health insurance provider. The rest are covered under government schemes, company schemes, etc Insurance providers are starting to look at new opportunities. Senior citizens stand out as a promising untapped market and private players are looking at offering complementary insurance to individuals already benefiting from a government or a company scheme.
Yet, lack of data has been and remains a significant stumbling block to the
development of a robust health insurance market in India. Patients' needs vary from
region, city and age group. According to insurance companies, like ICICI Lombard,
Royal Sundaram, without accurate data, designing adapted products and pricing them
efficiently is very difficult. In fact, the health insurance portfolio is not profitable at
the moment. If comparison is made among the emerging and well developed economy
India is still a laggard in health Insurance Business.

Health insurance is very well-established in many countries. But in India it is a new
concept except for the organized sector employees. In India only about 2 per cent of
total health expenditure is funded by public/social health insurance while 18 per cent
is funded by government budget. In many other low and middle income countries
contribution of social health insurance is much higher.

It is estimated that the Indian health care industry is now worth of Rs. 96,000 crore
and expected to surge by Rs. 10,000 crore annually. The share of insurance market in
above figure is insignificant. Out of one billion population of India 315 million people
are estimated to be insurable and have capacity to spend Rs. 1000 as premium per
annum. Many global insurance companies have plans to get into insurance business in
India. Market research, detailed planning and effective insurance marketing is likely
to assume significant importance. Given the health financing and demand scenario,
health insurance has wider scope situations in India. However, it requires careful and
significant effort to tap Indian health insurance market with proper understanding and
training.

Health Cover Packages Available in India
In India Health insurance would normally be ‘an individual or group purchasing health care coverage in advance by paying a fee called premium.’ In its broader sense, it would be any arrangement that helps to defer, delay, reduce or altogether avoid payment for health care incurred by individuals and households. The health insurance market in India is very limited covering about 20% of the total population as shown in the table below:


<table>
<thead>
<tr>
<th>1,000,000,000</th>
<th>Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,000,000</td>
<td>Private Medical (-)</td>
</tr>
<tr>
<td>38,000,000</td>
<td>Employees State Insurance Scheme (-)</td>
</tr>
<tr>
<td>40,000,000</td>
<td>Central Govt. Health Scheme (-)</td>
</tr>
<tr>
<td>7,000,000</td>
<td>Indian Railways (-)</td>
</tr>
<tr>
<td>55,000,000</td>
<td>Public Sector Enterprises (-)</td>
</tr>
<tr>
<td>50,000,000</td>
<td>Community Insurance (-)</td>
</tr>
<tr>
<td>800,000,000</td>
<td>Uninsured Population</td>
</tr>
</tbody>
</table>

The existing schemes can be categorized as below:

Market Based or Voluntary/Private Schemes
ESIS or Social Insurance Scheme
Employer Provided Insurance Schemes
Member Organisation (NGO or Co-operative) or Community based Schemes.

The figure (20) below displays the statistics of the population covered by one of the above schemes:
Let us now discuss each of the above in detail:

**Market-based or Voluntary/Private Schemes:** Market-based systems (voluntary and private) have Mediclaim scheme which covers about 2 million of population. In private insurance, buyers are willing to pay premium to an insurance company that pools people with similar risks and insures them for health expenses. The key distinction is that the premiums are set at a level, which provides a profit to third party and provider institutions. Premiums are based on an assessment of the risk status of the consumer (or of the group of employees) and the level of benefits provided, rather than as a proportion of the consumer’s income. In the public sector, the General Insurance Corporation (GIC) and its four subsidiary companies (National Insurance Corporation, New India Assurance Company, Oriental Insurance Company and United Insurance
Company) and the Life Insurance Corporation (LIC) of India provide voluntary insurance schemes.

There are exclusions and pre-existing disease clauses. Premiums are calculated based on age and the sum insured, which in turn varies from Rs 15 000 to Rs 5 00 000. In 1995/96 about half a million Mediclaim policies were issued with about 1.8 million beneficiaries (Krause Patrick 2000). The coverage for the year 2000-01 was around 7.2 million.

ESIS or Social Insurance Scheme: Government or state-based systems include Central Government Health Scheme (CGHS) and Employees State Insurance Scheme (ESIS). It is estimated that employer managed systems cover about 20-30 million of population. The schemes run by member-based organizations cover about 5 per cent of population in various ways. Let us now discuss ESIS in detail:

Under the ESI Act, 1948 ESI Scheme provides protection to employees against loss of wages due to inability to work due to sickness, maternity, disability and death due to employment injury. It also provides medical care to employees and their family members without! fee for service. When implemented for the first time in India at two centers namely Delhi and Kanpur simultaneously in February 1952, it covered about 1.2 lakh employees. Presently the scheme is spread over 22 states and Union territories across India covering 91 lakh employees and more than 350 lakh beneficiaries. The Act compulsorily covers: (a) all power using non-seasonal factories employing 10 or more persons; (b) all non-power using factories employing 20 or more employees and (c) service establishments like shops, hotels restaurants, cinema, road transport and news
papers are covered. ESIC is a corporate semi-government body headed by Union
Minister of Labor as Chairman and the Director General as chief executive. Its
members are representatives of central and state governments, employers, employees,
medical profession and parliament.

The financing of the scheme is done by Employees State Insurance Corporation
(ESIC) which is made up of contributions from: (a) employees who contribute at the
rate 1.75 per cent of their wages (if daily wage is Rs.25 or less, his contribution is
waived); (b) employers who contribute at the rate of 4.75 per cent of total wage bills
of their employees to contribution on behalf and for employees having daily wage of
Rs. 25 or less; and (c) State Governments contributes 12.5 per cent of total shareable
expenditure worked out by prescribed ceiling on expenditure which is Rs. 600 per
insured person per annum and expenditure incurred outside/over and above the
prescribed limit.

The State Governments run the medical services of this scheme of social insurance
meant for employees covered under the ESI Act 1948. This scheme - compulsory and
contributory in nature - provide uniform package of medical and cash benefits to
insured persons is implemented through special ESI hospitals and diagnostic centers,
dispensaries and panel doctors. The existing facilities under the ESIS are provided in
table below.

Table (20) Facilities under ESIS: Source ESIS

<table>
<thead>
<tr>
<th>Particulars</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Centers</td>
<td>632</td>
</tr>
<tr>
<td>No. of Insured Persons/Family Units</td>
<td>84,45,000</td>
</tr>
<tr>
<td>ESIS Hospitals</td>
<td>125</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Number of ESIS Hospital Beds</td>
<td>23,334</td>
</tr>
<tr>
<td>ESIS Dispensaries</td>
<td>1,443</td>
</tr>
<tr>
<td>Insurance Medical Officers</td>
<td>6,220</td>
</tr>
<tr>
<td>Insurance Medical Practitioners</td>
<td>2,900</td>
</tr>
</tbody>
</table>

The delivery of medical care is through service (direct) system and/or panel (indirect) system. It provides allopathic medical care, but medical care by other systems like ayurvedic and homeopathy in the states is also provided as per the state government decision. The medical care consists of preventive, promotive, curative and rehabilitative types of services are provided by the scheme through its own network or through arrangements with reputed government or private institutions by concept of proper referral system and regionalization.

**Employer-Provided Insurance Schemes:** Employers in both the public and private sector offers employer-based insurance schemes through their own employer-managed facilities by way of lump sum payments, reimbursement of employee’s health expenditure for outpatient care and hospitalization, fixed medical allowance, monthly or annual irrespective of actual expenses, or covering them under the group health insurance policy. The railways, defence and security forces, plantations sector and mining sector provide medical services and/or benefits to its own employees. The population coverage under these schemes is minimal, about 30-50 million people.

**Member Organisation (NGO or Co-operative) or Community-based Scheme**

Community-based funds refer to schemes where members prepay a set amount each year for specified services. The premium are usually flat rate (not
income-related) and therefore not progressive. Making profit is not the purpose of these funds, but rather improving access to services. Often there is a problem with adverse selection because of a large number of high-risk members, since premiums are not based on assessment of individual risk status. Exemptions may be adopted as a means of assisting the poor, but this will also have adverse effect on the ability of the insurance fund to meet the cost of benefits. Community-based schemes are typically targeted at poorer populations living in communities, in which they are involved in defining contribution level and collecting mechanisms, defining the content of the benefit package, and / or allocating the schemes, financial resources. A few examples of community based schemes are given in the table Non-Profit Social Insurance Schemes in India below:
Table (21) Non-Profit Social Insurance Schemes in India:

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Members</th>
<th>Type of insurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ACCORD/ ASHWINI Health Insurance Scheme</td>
<td>Tamil Nadu (Gudalur)</td>
<td>7,356 (1997)</td>
<td>Health Insurance (with NIA)</td>
</tr>
<tr>
<td>2. Aga Khan Health Services</td>
<td>Gujarat (Sidhpur)</td>
<td>40,000 (1997)</td>
<td>Health insurance</td>
</tr>
<tr>
<td>3. Apollo Hospital Association (AHA)</td>
<td>Tamil Nadu (Madras)</td>
<td>10,000 (1995)</td>
<td>Health Insurance (with GIC)</td>
</tr>
<tr>
<td>4. ASSEFA (Association of Sarva Sewa Farms)</td>
<td>Tamil Nadu (Madurai)</td>
<td>N.N.</td>
<td>Cattle Insurance, Health Insurance</td>
</tr>
<tr>
<td>5. Cooperative Development Federation (CDF)</td>
<td>Andhra Pradesh (Hyderabad)</td>
<td>26,000</td>
<td>Death Relief Fund (Life Insurance)</td>
</tr>
<tr>
<td>6. Goalpara Cooperative Health Society</td>
<td>West Bengal (Shantiniketan)</td>
<td>1,247 (1997)</td>
<td>Health Insurance</td>
</tr>
<tr>
<td>7. Kottar Social Service Society (KSSS)</td>
<td>Tamil Nadu (Kanyakumari)</td>
<td>34,000</td>
<td>Health Insurance</td>
</tr>
<tr>
<td>8. Mallur Health Cooperative</td>
<td>Karnataka</td>
<td>7,000 Health Insurance</td>
<td></td>
</tr>
<tr>
<td>9. Mathadi Hospital Trust</td>
<td>Maharashtra (Bombay/Mumbai)</td>
<td>150,000</td>
<td>Health Insurance</td>
</tr>
<tr>
<td>10. Medinova Health Card Scheme</td>
<td>West Bengal (Calcutta)</td>
<td>35,000</td>
<td>Health Insurance</td>
</tr>
<tr>
<td>11. Navsarajan Trust</td>
<td>Gujarat</td>
<td>10,000</td>
<td>Health Insurance (with NIA), Accidental Insurance (with LIC), Nutrition, Legal Aid, Drugs, Fight Against Corruption</td>
</tr>
<tr>
<td>12. New Life</td>
<td>Tamil Nadu</td>
<td>N.N.</td>
<td>Health Insurance</td>
</tr>
<tr>
<td>13. Organization for Development of People (ODP)</td>
<td>Tamil Nadu (Mysore)</td>
<td>1,137</td>
<td>Health Insurance, Accidental Insurance (with NIC)</td>
</tr>
</tbody>
</table>

Emerging Opportunities and Challenges in the Health insurance Sector

Growth Potential

Let us start by looking at the business statistics of Oriental Insurance Company Ltd.

Over the period of six years, from the year 2001 to 2006:
<table>
<thead>
<tr>
<th>Year</th>
<th>Premium (Rs. Crores)</th>
<th>Claims Ratio %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001 – 2002</td>
<td>176.15</td>
<td>96.20</td>
</tr>
<tr>
<td>2002 – 2003</td>
<td>230.05</td>
<td>78.24</td>
</tr>
<tr>
<td>2003 – 2004</td>
<td>248.53</td>
<td>98.10</td>
</tr>
<tr>
<td>2004 – 2005</td>
<td>274.63</td>
<td>114.35</td>
</tr>
<tr>
<td>2005 - 2006</td>
<td>360.11</td>
<td>118.13</td>
</tr>
</tbody>
</table>

Table (22) Business Statistics, Source: Oriental Insurance Company Ltd

From the above we can clearly see that there is a tremendous potential in the health care sector, and this growth will continue. In fact the potential of the health insurance industry is estimated to be close to Rs. 15000 crore in the next five years. Currently Star health is the only exclusive health insurance company, however as seen from above there is a good scope for other exclusive health cover providers. Another area which is likely to grow as a direct result of the growth in health insurance is that of Third Party Administrators (T.P.A.).

Trends Witnessed

With an increase in the per capita income, increased awareness of diseases and access to better but also more expensive health care facilities, more and more Indians are opting for health cover. Thus the need for health insurance grows hand in hand with the growth in health care facilities. It is for these very reasons that there has been a growing demand for health insurance in the urban areas, as opposed to the rural areas, where the demand is still nascent; however several companies are coming up with new products to exploit this market and address their needs.
India is witnessing a technological revolution in the field of health care, an increase in the requirement of sophisticated cutting edge medical equipment. The increase in health care costs has lead to an increase in the need to fix responsibility, this leads to a potential for indemnity insurance for doctors for professional negligence, liability covers for hospitals, doctors, nurses, surgeons etc.

Opportunities

India shows a huge growth potential for health insurance, partly due to the fact that in India only about 2% of the total health expenditure is funded by public/social health insurance while the government budget provides for only about 18%. There is now a greater health consciousness amongst the people result in the demand for various health cover packages and products.

India is now being increasingly recognized worldwide as a centre for inexpensive world class medical treatment, with the result that the number of international citizens visiting it for medical tourism is increasing with every passing year, hence there is potential for the existing health cover providers to collaborate with their international counterparts to provide medical cover to such medical tourists.

Lastly the with the government trying to play a more proactive role in the provision of primary health care, there is great potential for health insurance companies to fill in the void between the amount spent by the government and the balance amount.

Challenges

Some challenges faced by India in terms of health care is the lack of public health infrastructure, especially in the rural or semi-rural areas. Even in the urban areas, there is a shortage of affordable medical facilities (though it appears to be correct prima facie, the same needs to be substantiated with the help of credible data).
The next challenge facing India is that of an aging population, with better health care leading to an increase in the life expectancy of the population, also causing an increase in the average age and also the potential spending on health care in the future.

Another challenge facing the companies is uneconomical premium rates for people above the age of 55 years as the risk required to be covered with advancing age increases which in turn imposes a higher premium on the insured.

Distribution

Let us now look at Insurance distribution, which is very different from the distribution of other services. In the business of Insurance, the company sells a paper of assurance & buys the confidence of the public, hence until and unless the public perceives that the product would be beneficial to them they will not buy the product, therefore winning the confidence of the public involves much more than selling insurance.

Distribution Challenges

In India, life insurance today is sold primarily through agents on a commission basis with the development officer responsible for the supervision. In other words, life insurance is a “push” product rather than a “pull” product.

Penetrating into the rural areas has been a major challenge, requiring specialized products and packages, compounded by an acute lack of awareness. This challenge is also faced in the semi-urban areas, with all the three urban, semi-urban and rural areas requiring special different products tailored as per their specific needs.

India has a huge unorganized sector and bringing this under the umbrella of organized medical/ health cover has been another challenge. Some views and comments from experts in this sector are very relevant.
Dr Panda a leading cardiac surgeon and expert in the healthcare field as also a
director of Contemporary Healthcare Pvt Ltd has the following comments “moreover
,as  is well known ,the government is stretched to the limit and is not in a position to
provide adequate healthcare facilities to the entire country’s population .The social
angle of our enterprise ,therefore has to be taken into consideration and incentives
provided”…….

Health insurance –also known as mediclaim- is not just another insurance product.
You have to choose the right cover, as per your need. From a minimum sum insured
of Rs 15,000, the maximum sum goes up till Rs 12 lakh for providing cover for
chronic diseases.”These plans can be taken on a standalone basis or can complement
any of the existing health policies”, says Shreeraj Deshpande, head, health and travel
insurance, Bajaj Allianz General Insurance

In India, however, there is no or very little government initiatives.Often there is a
delay in going in for a mediclaim policy, believing that it is not the need of hour.
Experts feel that a person who is more than 35 years of age should start considering a
critical illness policy.” These policies help the insured in defraying the cost of
treatment by providing a corpus if the insured is diagnosed with any of the critical
illness covered in the policy,” says Rahul Agarwal, CEO, Optima Risk Management.
Figure (21) The Informal sector split

The spread of health insurance has been lopsided, being widespread in urban areas and decreasing as we move towards the rural areas, ironically these being the ones needing it the most. We also observe that the claims are predominantly from the urban areas and not the rural areas, it is seen that while the urban subscribers fully utilize the health cover purchased the rural folks feel left out. This also results in the unintentional subsidization of premium of the urban clients by the rural clients.

Another problem observed in the rural areas is the lack of intermediaries, to provide service, which is a major deterrent to the sale health insurance products. This also leads to cynicism amongst the people as to whether the company really settles their claims.
There is also a problem of the people filing false claims, that of health care professionals and providers colluding with the patients and issuing them inflated bills, people thus try and cheat the insurance companies, with more people buying health insurance, the potential of people trying to cheat is increasing.

Solutions

Having looked at the various problems facing the health insurance sector, let us now look at some possible solutions.

The government urgently requires taking measures to make insurance compulsory for all employees by the employer in rural and semi-urban areas. This would lead to dual benefits, not only would insurance be promoted in these areas but also these very employers could act as the intermediaries for a commission from insurance companies and hence address the infrastructure-related issues, further incentives might be provided in the form of deductions and rebates from taxes, service tax or income tax for the employer, especially for the rural covers.

In order to prevent people from cheating the insurance companies an independent body similar to the Insurance Regulatory and Development Authority should be set up for the health sector, this again could have the dual functions of preventing malpractices by the doctors and hospitals or health service providers in over charging where health covers exist, this same body could also rate the services of doctors/clinics/hospitals etc. for the benefit of the public and the insurers. The hospitals should also be encouraged to participate in the equity of the insurance companies; this pecuniary interest would also discourage malpractices.

Sections 14 and 26 of the Insurance Regulatory and Development Authority Act, 1999 (41 of 1999)(d)”Health Services” means all the services to be rendered by a TPA
under an agreement with an insurance company in connection with "health insurance business" or ‘health cover’ as defined in regulation 2(f) of the IRDA (Registration of Indian Insurance Companies) Regulations, 2000, but does not include the business of an insurance company or the soliciting, directly or through an insurance intermediary including an insurance agent, of insurance business.

Lastly the government needs to loosen the regulations further and allow 100% F.D.I. in the insurance companies so that international best practices may be adopted here.

The Indian Pharmaceuticals Industry

Introduction

The Indian pharmaceutical industry has been a successful player in global markets over the last couple of decades based on the global market share. Along with sectors like software and auto auxiliaries, it has spearheaded India’s progress in “knowledge intensive and technologically sophisticated markets” (Ramachandran et. al, 2006). It contributes to 8% of world production by volume and 1.5% by value (Aggarwal, 2004). It is a highly fragmented industry with more than 20,000 registered units. It is becoming a major force in outsourced clinical research and has almost 74 U.S. FDA approved manufacturing facilities, the most for any country outside the US.

Market Overview: The first Indian pharmaceutical Bengal Chemicals and Pharmaceutical Works, which still exists today as one of the 5 government-owned drug manufacturers, appeared in the erstwhile Calcutta (now renames as Kolkata) in 1930. For the next 60 years, most of the drugs in India were imported by multinationals either in fully-formulated or bulk form. The government started to encourage the growth of drug manufacturing by Indian companies in the early 1960s, and with the Patents Act in 1970, enabled the industry to become what it is today.
This patent act removed composition patents from food and drugs, and though it kept process patents, these were shortened to a period of five to seven years. The lack of patent protection made the Indian market undesirable to the multinational companies that had dominated the market, and while they streamed out, Indian companies started to take their places. They carved a niche in both the Indian and world markets with their expertise in reverse-engineering new processes for manufacturing drugs at low costs. Although some of the larger companies have taken baby steps towards drug innovation, the industry as a whole has been following this business model until the present.

The Indian Pharmaceutical Industry today is in the front rank of India’s science-based industries with wide ranging capabilities in the complex field of drug manufacture and technology. A highly organized sector, the Indian pharmaceuticals Industry is estimated to be worth $ 4.5 billion, growing at about 8 to 9 percent annually (source). It ranks very high in the third. Health care, is the prevention, treatment, and management of illness and the preservation of mental and physical well being through the services offered by the medical, nursing, and allied health professions. . A study commissioned by ICRIER on employees clearly 1 d, in terms of technology, quality and range of medicines manufactured. From simple headache pills to sophisticated antibiotics and complex cardiac compounds, almost every type of medicine is now made indigenously. Playing a key role in promoting and sustaining development in the vital field of medicines, the Indian Pharmaceutical Industry boasts of quality producers and many units approved by regulatory authorities in USA and UK. International companies associated with this sector have stimulated, assisted and spearheaded this dynamic development in the past 53 years and helped to put
Indian healthcare industry on the pharmaceutical map of the whole world.

The Indian Pharmaceutical sector is highly fragmented with more than 20,000 registered units. It has expanded drastically in the last two decades. The leading 250 pharmaceutical companies control 70% of the market with market leader holding nearly 7% of the market share. It is an extremely fragmented market with severe price competition and government price control. The pharmaceutical industry in India meets around 70% of the country's demand for bulk drugs, drug intermediates, pharmaceutical formulations, chemicals, tablets, capsules, orals and injectables. There are about 250 large units and about 8000 Small Scale Units, which form the core of the pharmaceutical industry in India (including 5 Central Public Sector Units). These units produce the complete range of pharmaceutical formulations, i.e., medicines ready for consumption by patients and about 350 bulk drugs, i.e., chemicals having therapeutic value and used for production of pharmaceuticals.

Following the de-licensing of the pharmaceutical industry, industrial licensing for most of the drugs and pharmaceutical products has been done away with. Manufacturers are free to produce any drug duly approved by the Drug Control Authority. Technologically strong and totally self-reliant, the pharmaceutical industry in India has low costs of production, low R&D costs, innovative scientific manpower, strength of national laboratories and an increasing balance of trade. The Pharmaceutical Industry, with its rich scientific talents and research capabilities, supported by Intellectual Property Protection regime is well set to take on the international market.
Figure (22) Drug Master Filings

Therapeutic segments in domestic retail formulations market (2002)
Advantage India

**Competent workforce:** India has a pool of personnel with high managerial and technical competence as also skilled workforce. It has an educated work force and English is commonly used in the Industry. Professional services are easily available throughout the country, more so in the metropolitan or urban areas.

**Cost-effective chemical synthesis:** Its track record of development, particularly in the area of improved cost-beneficial chemical synthesis for various drug molecules is excellent. It provides a wide variety of bulk drugs and exports sophisticated bulk drugs.

**Legal & Financial Framework:** India has a 53 year old democracy and hence has a solid legal framework and strong financial markets. There is already an established international industry and business community.

**Information & Technology:** It has a good network of world-class educational institutions and established strengths in Information Technology.

**Globalization:** The country is committed to a free market economy and globalization. (Please refer Chapter 7). Above all, it has a 270 million middle class market, which is continuously growing.

**Consolidation:** For the first time in many years, the international pharmaceutical industry is finding great opportunities in India. The process of consolidation, which has become a generalized phenomenon in the world pharmaceutical industry, has started.

**The Growth Scenario**

India's US$ 4.5 billion pharmaceutical industry is growing at the rate of 14 percent per year. It is one of the largest and most advanced among the developing countries.
Over 20,000 registered pharmaceutical manufacturers exist in the country. The domestic pharmaceuticals industry output is expected to exceed Rs260 billion in the financial year 2002, which accounts for merely 1.3% of the global pharmaceutical sector. Of this, bulk drugs will account for Rs 54 billion (21%) and formulations, the remaining Rs 210 bn (79%). In financial year 2001, imports were Rs 20 bn while exports were Rs87 bn.

**Steps to strengthen the industry**

Indian companies need to attain the right product-mix for sustained future growth. Core competencies will play an important role in determining the future of many Indian pharmaceutical companies in the post product-patent regime after 2005. Indian companies, in an effort to consolidate their position, will have to increasingly look at merger and acquisition options of either companies or products. This would help them to offset loss of new product options, improve their R&D efforts and improve distribution to penetrate the Indian markets and the pharmaceutical sector. Research and development has always taken the back seat amongst Indian pharmaceutical companies. In order to stay competitive in the future, Indian companies will have to refocus and invest heavily in R&D.

The Indian pharmaceutical industry also needs to take advantage of the recent advances in biotechnology and information technology. The future of the industry will be determined by how well it markets its products to several regions and distributes risks, its forward and backward integration capabilities, its R&D, its consolidation through mergers and acquisitions, co-marketing and licensing agreements. The Indian pharmaceutical industry is highly regulated. The Government controls prices of a
large number of bulk drugs and formulations. Profit margins of players vary widely in both domestic and export sales due to many factors.

Domestic Trade

More than 85% of the formulations produced in the country are sold in the domestic market. India is largely self-sufficient in case of formulations. Some life-saving, new generation under-patent formulations continue to be imported, especially by MNCs, which then market them in India. Overall, the size of the domestic formulations market is around Rs160bn in year 2002, and it is growing at 10% p.a.

Exports

Over 60% of India’s bulk drug production is exported. The balance is sold locally to other formulators. India’s pharmaceutical exports are to the tune of Rs 87 billion of which formulations contribute nearly 55% and the rest 45% comes from bulk drugs. In financial year 200, exports grew by 21%. India’s pharmaceuticals imports were to the tune of Rs20.3bn in FY2001. Imports have registered a CAGR of only 2% in the past 5 years. Import of bulk drugs have slowed down in the recent years. The exports of Pharmaceuticals during the year 1998-97 were Rs 49780 million. From a meager Rs 46 crores worth of Pharmaceuticals, Drugs and Fine Chemicals exports in 1980-81, pharmaceutical exports has risen to approximately Rs 6152 Crores (Prov.1998-99), a rise of 11.91% against the last year exports. Amongst the total exports of India, the percentage share of Drugs, Pharmaceuticals and Fine Chemicals during April-October (2000-2001) was 4.1%, an increase of 7%.
Research & Development is the key to the future of pharmaceutical industry. The pharmaceutical advances for considerable improvement in life expectancy and health all over the world are the result of a steadily increasing investment in research. There is considerable scope for collaborative R & D in India. India can offer several strengths to the international R & D community. These strengths relate to availability of excellent scientific talents who can develop combinatorial chemistry, new synthetic molecules and plant derived candidate drugs. R & D in the pharmaceutical industry in India is critical to find answers for some of the diseases peculiar to a tropical country like India and also for finding solutions for unmet medical needs. Industrial R & D groups can carry out limited primary screening to identify lead molecules or even candidate drugs for further in vivo screening, pre-clinical pharmacology, toxicology, animal and human pharmacokinetics and metabolic studies before taking them up for human trials. In such collaborations, harmonized standards of screening can be assured following established good laboratory practices. The R & D expenditure by the Indian pharmaceutical industry is around 1.9% of the industry’s turnover. This obviously, is very low when compared to the investment on R & D by foreign research-based pharmaceutical companies. They spend 10 - 16% of the turnover on R & D. However, now that India is entering into the patent protection area, many companies are spending relatively more on R & D. When it comes to clinical evaluation at the time of multi-center trials, India would provide a strong base considering the real availability of clinical materials in diverse therapeutic areas. Such active collaboration will be mutually beneficial to both partners. According to a survey by the Pharmaceutical Outsourcing Management Association and Bio/Pharmaceutical Outsourcing Report, pharmaceutical companies are utilizing
substantially the services of Contract Research Organizations (CROs). Indian Pharmaceutical Industry, with its rich scientific talents, provides cost-effective clinical trial research. It has an excellent record of development of improved, costbeneficial chemical syntheses for various drug molecules. Some MNCs are already sourcing these services from their Indian affiliates. The Pharmaceutical and Biotechnology Industry is eligible for weight deduction for R&D expense up to 150%. These R&D companies will also enjoy tax holiday for 10 years. A promotional research and development fund of Rs.150 crores is set up by the Government to promote research and development in the pharmaceuticals sector.

Distinct Features of Pharmaceutical Industries

Industry competition

Pharmaceutical industry is one of the most competitive industries in the country with as many as 10,000 different players fighting for the same pie. The rivalry in the industry can be gauged from the fact that the top player in the country has only 6% market share, and the top five players together have about 18% market share. Thus, the concentration ratio for this industry is very low. High growth prospects make it attractive for new players to enter in the industry.

Another major factor that adds to the industry rivalry is the fact that the entry barriers to pharmaceutical industry are very low. The fixed cost requirement is low but the need for working capital is high.

The fixed asset turnover, which is one of the gauges of fixed cost requirements, tells us that in bigger companies this ratio is in the range of 3.5 to 4 times. For smaller companies, it would be even higher.
Many smaller players that are focused on a particular region have a better hang of the distribution channel, making it easier to succeed, albeit in a limited way.

An important fact is that pharmaceutical industry is a stable market and its growth rate generally tracks the economic growth of the country with some multiple (1.2 times average in India)

Figure (24) The Pharma Industry growth breakup Source: CII

Though volume growth has been consistent over a period of time, value growth has not followed in tandem.

The product differentiation is one key factor, which gives competitive advantage to the firms in any industry. However, in pharmaceutical industry product differentiation is not possible since India has followed process patents till date, with laws favoring imitators. Consequently, product differentiation is not the driver, cost competitiveness is. However, companies like Pfizer and Glaxo have created big brands in over the
years, which act as product differentiation tools. (What is the scenario now i.e. three years later?)

Bargaining power of buyers

The unique feature of pharmaceutical industry is that the end user of the product is different from the influencer (read doctor). The consumer has no choice but to buy what doctor says. However, when we look at the buyer's power, we look at the influence they have on the prices of the product. In pharmaceutical industry, the buyers are scattered and they as such does not wield much power in the pricing of the products. However, government with its policies plays an important role in regulating pricing through the NPPA (National Pharmaceutical Pricing Authority).

Bargaining power of suppliers

The pharmaceutical industry depends upon several organic chemicals. The chemical industry is again very competitive and fragmented. The chemicals used in the pharmaceutical industry are largely a commodity. The suppliers have very low bargaining power and the companies in the pharmaceutical industry can switch from their suppliers without incurring a very high cost. However, what can happen is that the supplier can go for forward integration to become a pharmaceutical company. Companies like Orchid Chemicals and Sashun Chemicals were basically chemical companies, who turned themselves into pharmaceutical companies.

Barriers to entry

Pharmaceutical industry is one of the most easily accessible industries for an entrepreneur in India. The capital requirement for the industry is very low; creating a regional distribution network therefore is easy, since the point of sales is restricted in this industry in India. However, creating brand awareness and franchisee amongst
doctors is the key for long-term survival. Also, quality regulations by the government may put some hindrance for establishing new manufacturing operations. Going forward, the impending new patent regime will raise the barriers to entry. But it is unlikely to discourage new entrants, as market for generics will be as huge.

Threat of substitutes

This is one of the great advantages of the pharmaceutical industry. Irrespective of economic conditions, demand for pharmaceutical products continues and the industry thrives both during a recover or boon as well as during a recession or depression. One of the key reasons for high competitiveness in the industry is that as an ongoing concern, pharmaceutical industry seems to have an infinite future. However, in recent times, the advances made in the field of biotechnology, can prove to be a threat to the synthetic pharmaceutical industry.

Implications

This discussion gives a fair idea about the industry in which a company operates and the various external forces that influence it. However, it must be noted that any industry is not static in nature. It's dynamic and over a period of time the model, which have used to analyze the pharmaceutical industry may itself evolve. Going forward, there will be increasing competition in the industry but the form of competition will be different. It will be between large players (with economies of scale) and it may be possible that some kind of oligopoly or cartels come into play. This is owing to the fact that the industry will move towards consolidation. The larger players in the industry will survive with their proprietary products and strong franchisee. In the Indian context, companies like Cipla, Ranbaxy and Glaxo are likely to be key players.
Though consolidation within the current big names is not ruled out, smaller fringe players, who have no differentiating strengths, are likely to either be acquired or cease to exist. The barriers to entry will increase going forward. The change in the patent regime will see new proprietary products coming up, making imitation difficult. The players with huge capacity will be able to influence substantial power on the fringe players by their aggressive pricing which will create hindrance for the smaller players. Economies of scale will play an important part too. Last but not the least, in a vast country of India's size, government too will have bigger role to play.

**Demand – Supply Analysis**

The following *figure (25)* shows the demand figures for the past years as well predictions for the future:
Forecasting the growth of the Indian pharmaceutical industry is no easy task given the degree of fragmentation on both supply and demand side. Overall performance of the industry is influenced by a complex mix of socioeconomic factors. Some important factors are shown in the following table.
Table (23) The Supply and Demand factors (Source: Data monitor)

<table>
<thead>
<tr>
<th>Demand Factors</th>
<th>Supply factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary care physicians</td>
<td>Drug manufacturers</td>
</tr>
<tr>
<td>Specialist prescribers</td>
<td>Biotechnology companies</td>
</tr>
<tr>
<td>Group purchasing organizations</td>
<td>Drug discovery specialists</td>
</tr>
<tr>
<td>Government purchases</td>
<td>API suppliers</td>
</tr>
<tr>
<td>Private insurers</td>
<td>Drug delivery specialists</td>
</tr>
<tr>
<td>Lobby groups</td>
<td></td>
</tr>
<tr>
<td>Patients</td>
<td></td>
</tr>
<tr>
<td>Income levels</td>
<td></td>
</tr>
</tbody>
</table>

The already global Indian pharmaceutical industry will get even more globalized thanks to introduction of product patents in 2005. Structure of demand will also change with higher incidence of lifestyle diseases. The growth of Indian market will prove irresistible to multinationals. Indian companies which have dominated the domestic market so far should brace for intense competition from multinationals. A wide product portfolio, marketing infrastructure in domestic markets and export-driven revenues will provide Indian companies the strength to stave off competition in the short run. In the long run, Indian companies need to focus their resources in terms of geographies, therapeutic segments, products and research.

Market Forecast and Outlook
Table (24) Indian Pharmaceuticals Market Value Forecast

<table>
<thead>
<tr>
<th>Year</th>
<th>$ million</th>
<th>INR million</th>
<th>% Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>7,178.7</td>
<td>316,689.1</td>
<td>8.40%</td>
</tr>
<tr>
<td>2007</td>
<td>7,747.9</td>
<td>341,800.0</td>
<td>7.90%</td>
</tr>
<tr>
<td>2008</td>
<td>8,319.7</td>
<td>367,028.3</td>
<td>7.40%</td>
</tr>
<tr>
<td>2009</td>
<td>8,912.3</td>
<td>393,171.0</td>
<td>7.10%</td>
</tr>
<tr>
<td>2010</td>
<td>9,534.2</td>
<td>420,604.1</td>
<td>7.00%</td>
</tr>
<tr>
<td>2011</td>
<td>10,186.7</td>
<td>449,391.9</td>
<td>6.80%</td>
</tr>
</tbody>
</table>

CAGR, 2006-2011: 7.3%

Source: Datamonitor

The pharmaceutical industry is expected to (since year 2007 is already over) reach a market size of US$9.5 billion by 2010, surpassing the growth trends of 9.5% recorded over the last 5 years. The progressive trend in this sector is expected to continue, due to increased integration with global trade which began with the signing of the General Agreement on Tariffs and Trade (GATT) in January 2005. India started to recognize global patents and the growing significance of the country in terms of contract research and clinical trials. According to the Economic Survey 2006-07 (Government of India, Ministry of Finance), the pharmaceutical industry is predicted to double its turnover to Rs1,00,000m by 2010 as well as the National Pharmaceutical Policy will be implemented. Contract Research and Manufacturing Services (CRAMS) will be the major business attraction in industry.
Rapid growth in industry is expected on the back of high improvement in exports and output.

Patents

As it expands its core business, the industry is being forced to adapt its business model to recent changes in the operating environment. The first and most significant change was the January 1, 2005 enactment of an amendment to India's patent law that reinstated product patents for the first time since 1972. The legislation took effect on the deadline set by the WTO's Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement, which mandated patent protection on both products and processes for a period of 20 years. Under this new law, India will be forced to recognize not only new patents but also any patents filed after January 1, 1995. Indian companies achieved their status in the domestic market by breaking these product patents, and it is estimated that within the next few years, they will lose $650 million of the local generics market to rightful patent-holders.

In the domestic market, this new patent legislation has resulted in fairly clear segmentation. The multinationals narrowed their focus onto high-end patients who make up only 12% of the market, taking advantage of their newly-bestowed patent protection. Meanwhile, Indian firms have chosen to take their existing product portfolios and target semi-urban and rural populations.

The new patent regime to have taken effect at a time when Indian companies had recently started to aggressively pursue global opportunities, so it is not clear whether the flurry of international activity surrounding the enactment date is a result of the change in legislation. Mergers, acquisitions and alliances have been taking place on an unprecedented scale, most notably with companies in the U.S. and Europe. As
stated in The Hindu Business Line dated July 22, 2005, “In the last 10-odd months, the Indian pharma industry has possibly seen the single largest number of global transactions in its 50-year history.” These transactions provide Indian companies with access to foreign markets and facilitate the process of seeking regulatory approval for new products, which can be quite daunting for a company that only has operations on Indian soil.

Post 2005 Scenario

By issuing the patent ordinance, India met a WTO commitment to recognize foreign product patents from January 1, 2005, the culmination of a 10-year process. In this new scenario, the Indian pharmaceutical manufacturers won’t be able to manufacture patented drugs.

To adapt to this new patent regime, the industry is exploring business models, different from the existing traditional ones.

New Business Models include:

Contract research (drug discovery and clinical trials)

Contract manufacturing

Co-marketing alliances
Figure (26) Emerging Business Models

The focus of the Indian pharmaceuticals companies is also shifting from process improvisation to drug discovery and R&D. The Indian companies are setting up their own R&D setups and are also collaborating with the research laboratories like CDRI, IICT etc. refer table (25) below.
Table (25) A shift from process improvisation to drug discovery and R&D, Source: FICCI

Government Run Research Organizations: Industry Collaborations

<table>
<thead>
<tr>
<th>CDRI (Lucknow)</th>
<th>IICT (Hyderabad)</th>
<th>CCMB (Hyderabad)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Novo Nordisk, Denmark</td>
<td>Dr. Reddy’s Laboratories, Hyderabad</td>
<td>Shantha Biotechnics Pvt. Ltd., Hyderabad</td>
</tr>
<tr>
<td>Krebs Biochemicals Ltd., Hyderabad</td>
<td>Lupin Laboratories Ltd., Mumbai</td>
<td>Dr. Reddy’s Research Foundation, Hyderabad</td>
</tr>
<tr>
<td>Avon Organics Ltd., Hyderabad</td>
<td>Cadila Laboratories Ltd., Ahmedabad</td>
<td>Bangalore Genei Pvt. Ltd., Bangalore</td>
</tr>
<tr>
<td>Cipla Ltd., Mumbai</td>
<td>SOL Pharmaceuticals Ltd., Hyderabad</td>
<td>Dabur Research Foundation, Sahibabad</td>
</tr>
<tr>
<td>Dabur India Ltd., Ghaziabad</td>
<td>Neuland Laboratories, Hyderabad</td>
<td>Biological Evans Ltd., Hyderabad</td>
</tr>
<tr>
<td>Duphar Interferan Ltd., Mumbai</td>
<td>Sun Pharmaceuticals Ltd., Mumbai</td>
<td></td>
</tr>
<tr>
<td>Hindustan Latex Ltd., Thiruvananthapuram</td>
<td>Cipla Ltd., Mumbai</td>
<td></td>
</tr>
<tr>
<td>IPCA Labs Ltd., Mumbai</td>
<td>Nectar Laboratories Ltd., Hyderabad</td>
<td></td>
</tr>
<tr>
<td>Lupin Laboratories Ltd., Mumbai</td>
<td>Orchid Chemicals, Chennai</td>
<td></td>
</tr>
<tr>
<td>Malladi Drugs and Pharmaceuticals, Chennai</td>
<td>Trident Labs Pvt. Ltd., Hyderabad</td>
<td></td>
</tr>
<tr>
<td>Nicholas Piramal India Ltd., Mumbai</td>
<td>Unichem Laboratories Ltd., Mumbai</td>
<td></td>
</tr>
<tr>
<td>Lumen Marketing Co., Chennai</td>
<td>Armour Chemicals Ltd., Mumbai</td>
<td></td>
</tr>
<tr>
<td>Ranbaxy Laboratories Ltd., New Delhi</td>
<td>Bombay Drug House, Mumbai</td>
<td></td>
</tr>
<tr>
<td>Themis Medicare Ltd., Mumbai</td>
<td>Cheminor Drugs Pvt. Ltd., Hyderabad</td>
<td></td>
</tr>
<tr>
<td>Torrent Pharmaceuticals Ltd., Ahmedabad</td>
<td>Torrent Pharmaceuticals Ltd., Ahmedabad</td>
<td></td>
</tr>
<tr>
<td>Unichem Laboratories Ltd., Mumbai</td>
<td>Coromandal Pharma, Hyderabad</td>
<td></td>
</tr>
<tr>
<td>Wockhardt Ltd., Aurangabad</td>
<td>IDPIL, New Delhi</td>
<td></td>
</tr>
</tbody>
</table>

Contract Research

In 2002, the industry for clinical trials in India was $70 million. This market has been growing at a rate of 20% per annum. According to Technopak Healthcare Outlook industry trends, it will be an industry worth anywhere between $500 million to $1.5
billion by 2010. The global R&D spend is to the tune of $60 billion, of which the non-clinical segment accounts for $21bn and the clinical segment accounts for $39bn. In terms of Indian prices, this translates into $7bn (at 1/3rd of US/EU costs) and $7.8bn (at 1/5th of US/EU costs) respectively. This constitutes a total potential of $14.8bn for the Indian pharmaceuticals companies.

Contract manufacturing

Many global pharmaceutical majors GSK, Pfizer etc. are looking to outsource manufacturing to Indian companies, which enjoy much lower costs (both capital and recurring) than their western counterparts. Many Indian companies have made their plants GMP (Good Manufacturing Practice) compliant and India is also having the largest number of USFDA-approved plants outside USA.

The pharmaceuticals companies are going for compliance with International regulatory agencies like USFDA, MCC etc. for their manufacturing facilities.

![Figure](image)

Figure (27) % Outsourced as overall pharmaceutical manufacturing. Source: FICCI
SWOT Analysis

Strengths

Cost Competitiveness

Well Developed Industry with Strong Manufacturing Base

Access to pool of highly trained scientists, both in India and abroad.

Strong marketing and distribution network

Rich Biodiversity

Competencies in Chemistry and process development

Weaknesses

Low investments in innovative R&D and lack of resources to compete with MNCs for New Drug Discovery Research and to commercialize molecules on a worldwide basis

Lack of strong linkages between industry and academia.

Low medical expenditure and healthcare spend in the country

Production of spurious and low quality drugs tarnishes the image of industry at home and abroad.

Shortage of medicines containing psychotropic substances. There are 4000 such brands of medicines that fall under the Narcotics Drugs and Psychotropic Substances (NDPS) Act, 1985. Under a clause of this Act, the retailer has to sign the consignment note provided by the stockiest. The police check this note regularly to prevent these medicines getting diverted to the drug mafia and they can arrest the retailer if the signatures are under suspect. To protest against this clause, the retailers have stopped stocking these medicines, some of which is life saving.

Opportunities

134
Significant export potential.

Licensing deals with MNCs for NCEs and NDDS.

Marketing alliances to sell MNC products in domestic market.

Contract manufacturing arrangements with MNCs

Potential for developing India as a centre for international clinical trials

Niche player in global pharmaceutical R&D.

Supply of generic drugs to developed markets.

Threats

Product patent regime poses serious challenge to domestic industry unless it invests in research and development

R&D efforts of Indian pharmaceutical companies hampered by lack of enabling regulatory requirement. For instance, restrictions on animal testing outdated patent office.

Drug Price Control Order puts unrealistic ceilings on product prices and profitability and prevents pharmaceutical companies from generating investable surplus.

Lowering of tariff protection

The new MRP based excise duty regime threatens the existence of many small scale pharmaceutical units, especially in the states of Andhra Pradesh and Maharashtra that are involved in the contract manufacturing for larger concerns.

Companies’ Overview

Abbott India Limited: Founded in 1888 by a young Chicago physician, Dr Wallace Calvin Abbott, Abbott Laboratories has evolved into a diversified health care company that discovers, develops, manufactures and markets innovative products and
services that help customers Pain Management, Gastroenterology, Thyroid, Obesity, and Diabetes etc. The company has over 1000 employees and a state-of-the-art formulation plant at Verna in Goa and in-house development and medical teams. Abbott is a public limited company but majority of shares (65%) are held by foreign promoters i.e. Abbott Capital India Limited.

Alembic: Alembic started in 1907 & now it has manufacturing and R&D facilities in Baroda and Baddi, India. The company stands in top five pharmaceutical companies of India. Alembic is the largest companies among the companies that we have studied. Alembic is a certified ISO-9002, ISO-14001 and ISO 27001 company that serves the customers in 75 countries around the world. Their strong focus on quality makes them one of the fastest growing pharmaceutical firms.

JB Chemicals: JBPCCL was incorporated in 1976 and went public in 1985. This is internationally known as Unique Pharmaceutical Laboratories. It is headquartered at Mumbai and has offices in Moscow and Kiev. Manufacturing units are in four locations of Ankleshwar, Belapur, Daman and Panoji. It manufactures and markets pharmaceutical products, herbal remedies, bulk drugs, intermediates and radio-diagnostics. The company features in the Forbes Global list of best under $1 billion in Asia-pacific. This is due to its increasing sales during last five years as we have noticed in our study also. More than half of the revenues come from exports.

Novartis: Novartis is the product of the largest merger of its times when two Swiss companies Ciba-Geigy and Sandoz Laboratories merged in 1996. It is amongst the world’s leading pharmaceutical and consumer health companies. In India, it has around 1,000 employees. Company is in the business of Pharmaceuticals, Generics, over-the-counter segment and Animal Health. Novartis products deal with
hypertension, anti-inflammatory, gynecology and anti-TB. Leveraging its global strong hold, the company is growing in India at a faster pace now.

**Unichem:** Unichem is headquartered in Mumbai with five manufacturing locations in Roha, Goa, Ghaziabad, Pithampur and Baddi. The Company's facilities enjoy credible certifications. The Company has received ISO 9001:2000 and ISO 14001:2004 for all its plants and corporate office. Unichem has its Research and Development facility in Jogeshwari (Mumbai) to spearhead research in Novel Drug Delivery Systems (NDDS) and develop non-infringing routes for the manufacture of products directed at the regulated markets. Company has more than 2500 employees. The Company deals gastro-intestinal, cardiovascular, diabetes, psychiatry, neurology, anti-bacterial, anti-infective and pain management.

**Cost Analysis of Firms**

Figure (28) Revenue trend. Source: Cygnus Business Consulting & Research Pvt Ltd

![Revenue Trend Chart](chart.png)

All the pharmaceutical companies are showing an upward trend for last five years. Five years back, all the five firms under discussion had different market share with Alembic on the top and JB Chemicals with the least sales. Now, Alembic is clearly ahead of all the firms but rest four firms have converged to nearly same market
shares. Overall size of pharmaceutical industry has also increased that is evident from the figure (29) below from Rs 21 billion to Rs 30 billion in the last five years which indirectly translates to more opportunities in pharmaceutical manufacturing which is a very important component of the healthcare segment.

**Figure (29) Growth in the Pharmaceutical Industry** Source: Cygnus Business Consulting & Research Pvt Ltd

![Graph showing growth in the pharmaceutical industry](image)

**Figure (30) Total Expenditure Trend** Source: Cygnus Business Consulting & Research Pvt Ltd

![Graph showing total expenditure trend](image)

From the graph of the five companies we can see that the general trend over the last five years has been an increase in the total expenditure of the companies.
Pharmaceutical companies have been increasing their research and development expenditure over the years to succeed and sustain the competitive market. We can see from the trend that the Indian companies have increased their R&D substantially after 2005 because the product patent law was passed in India in 2005. After that the Indian companies can no longer get away by plundering the intellectual property of the multinationals. Alembic has always been way ahead of the rest in their expenditure while the others have more or less converged to a single point during the period shown above. This is because Alembic’s Personnel cost and Other Expenses are higher than the other companies which it needs to reduce. This analysis would serve both as learning as well as a warning signal for the Indian healthcare system to get organized particularly with the implementation of the product patent law which would channelize funds into research which in turn could transform to employment opportunities.

Figure (31) Operating Expenses Trend Source: Cygnus Business Consulting & Research Pvt Ltd

![Operating Expenses Trend Chart]

As we can see from the graph above, operating expenses have increased for all the companies over the last five years due to the increased cost of personnel and the raw
materials. Among the companies Alembic has the highest operating expenses which it needs to cut down to increase its profits. J.B. Chemicals has the lowest expenses which have grown over the years. Abbott’s expenses have increased the fastest to touch Alembic’s value over the five years period. And Novartis has maintained steady operating expenses over the time period with no major fluctuations.

Figure (32) PAT Trend Source Cygnus Business Consulting & Research Pvt Ltd

For most of the companies, PAT has been growing over the years we have analyzed the pharmaceutical industry. Alembic, Unichem and J.B. Chemicals have shown steady increase in their profits over the years. Unichem has risen the most during these five years where it rose from the company having lowest Pat to one having the highest PAT. Novartis has shown fluctuations in its PAT over the years analyzed. This is not because of any expenses fluctuations but their fluctuating revenues. Their expenditure has remained almost constant over the years as can be seen from the graph above. Abbott India Ltd has shown a major dip in its PAT in 2005 and has remained steady there the next year. This is because Abbott’s income decreased in the year 2005 and in the year 2006 both its income and expenditure rose. In the overall
pharmaceutical industry there was a fall in PAT in 2005 due to the introduction of product patent law in India.

**Figure (33) PAT as % of Operating Income Trend Source Cygnus Business Consulting & Research Pvt Ltd**

From the above graph, we can see that Alembic and Unichem have steadily increased their (PAT/Operating income) ratio showing their efficiency over the last five years. Meanwhile, J.B. Chemicals ratio has decreased over the years in spite of their PAT increasing in the given years. This is because their operating expenses have grown more in proportion than their PAT. In case of Novartis the ratio trend is similar to the PAT trend shown earlier. Their (PAT/Operating income) ratio follows the same trend because their expenses have been more or less constant and their revenues have fluctuated leading to fluctuations in PAT and thereby in the ratio. Since Abbott India Ltd has also witnessed lower PAT in 2005 and 2006, their (PAT/Operating income) have also taken a beating in these years as compared to the previous years.

**Contribution Trend**

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Contribution has increased consistently for all the firms except for Abbott India Ltd. This can be attributed to less operating leverage for the firm as this has invested less on its fixed cost what all the other firms have done (though Novartis to a lesser extent). Unichem and JB Chemicals have consistently spent on fixed cost for enhancing their operating leverage. That has helped these firms in increasing their contribution in the fast growing overall market.

Figure (34) Contribution Trend

Despite the fact that contribution for all the firms have grown over time, contribution margin ratio has not grown so fast and have even dropped for couple of firms. This is
due to low improvement in contribution against sales. Higher growth in revenues for JB Chemicals did not result in higher profits. Perhaps there is a need to adopt better and improved productivity methods and techniques which translates into upgrading skills requirement of men and machines.

**Figure (36) Margin of Safety Trend.** Source Cygnus Business Consulting & Research Pvt Ltd

Margin of safety for the firms have also shown an incremental trend but this is always due to growing sales. Higher margin of safety in case of Abbott is largely due to their very low fixed cost involvement that has led to lower operating leverage.

**Figure (37) Break Even Sales Trend** Source Cygnus Business Consulting & Research Pvt Lt
Break even sales is always high for the company that involves highest fixed cost for the production and that is Alembic among the companies studied. Break even sales for every company is quite different from each other and not varying much without showing any trend other than for JB Chemicals, which is increasing its operating leverage continuously.

**Figure (38) Receivables Turnover ratio Trend Source Cygnus Business Consulting & Research Pvt Ltd**

Receivables turnover ratio for all the firms is clearly distinct. While Abbott gives just 15 days to its customers to repay their debts, while other firms give one month to even six months. And, we can clearly see that the firms which give more time to its customers to pay their debts are increasing their customer base more rapidly. JB
Chemicals have grown the fastest in last five years followed by Unichem and Alembic which is exactly the order of the time they give their customer to pay their debts.

**Figure (39) Inventory Turnover ratio Trend** Source Cygnus Business Consulting & Research Pvt Ltd

![Inventory Turnover ratio Trend Graph](image)

The inventory turnover ratio for all the companies has increased during last five years. That means companies are now more efficient and turning their inventories into cash fast. This may be due to lower inventory levels also, which is achieved through high technological advancements.

**Figure (40) Current ratio Trend** .Source Cygnus Business Consulting & Research Pvt Ltd

![Current ratio Trend Graph](image)
From the above graph we can deduce that Alembic has maintained a steady constant current ratio of close to 1.5 over the last five years. Alembic has very huge current liabilities as compared to others thereby having a low current ratio. Abbott's current liabilities increased in 2003 leading to a reduced current ratio. In 2004 its current assets rose and later on its current liabilities has decreased leading to growing current ratio. In case of J.B. chemicals, since 2004 the corresponding increase in liabilities is more than the asset's increase leading to a reducing current ratio. Novartis's current liabilities are also high but lower than Alembic. Novartis's current ratio has been falling after an initial rise in 2003. Unichem saw a huge rise in its current ratio in 2005 because assets increased and liabilities decreased simultaneously in 2005.

Figures 28 to 40 offer an overview of the performance of a mix of both Indian as well as multinational pharmaceutical firms and what is pertinent here is that while individual organizations have improved their market share they have also grown the overall pharmaceutical market through enhanced productivity, cost control and by increasing research and development spends. Year on year there is an obvious enhancement in the benchmarking of overall performance and all this would require not just more manpower but a constant upgradation and training of them to remain competitive.

Medical Tourism

Medical tourism (also called medical travel or health tourism) is a term initially coined by travel agencies and the mass media to describe the rapidly-growing practice of traveling to another country to obtain health care. More recently, the phrases global healthcare and medical journeys have emerged as synonyms.
Such services typically include elective procedures as well as complex specialized surgeries such as joint replacement (hip, cardiac surgery, dental surgery, and cosmetic surgeries). The provider and customer use informal channels of communication—connection—contract, with less regulatory or legal oversight to assure quality and less formal recourse to reimbursement or redress, if needed. Leisure aspects typically associated with travel and tourism may be included on such medical travel trips.

Introduction

According to the General Agreement of Trade in Services (GATS) definition,

Trade in health services occurs via four modes of supply,

Cross-border delivery of trade,
Consumption of health services abroad,
Commercial presence
Movement of health personnel.

Medical Tourism falls under the category of consumption of health services abroad. As the name suggests it is an amalgamation of two services namely, Healthcare and Tourism.

The medical tourism market in India is worth US$ 333 million, growing at 30 percent per annum. It is expected to touch US$ 2 billion a year business opportunity by 2012 (www.researchandmarkets.com). India is seeing a surge of patients from developed countries as well as from countries in Africa and South and West Asia that lack adequate healthcare infrastructure.

The emergence of low-cost, high value specialist medical care territories in India has been noteworthy. For instance, New Delhi has emerged as a prime destination for
cardiac care, as has Gujarat. Similarly, Chennai has established a niche for quality eye care, while Kerala and Karnataka have emerged as hubs for state-of-the-art ayurvedic healing. These "medical hotspots" are beginning to witness an influx of health tourists from non-traditional geographies. Among others, foreign health travelers to India comprise a large number of Non Resident Indians (NRIs).

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 (see chart). India’s private hospitals excel in fields such as cardiology, joint replacement, orthopedic surgery, gastroenterology, ophthalmology, transplants and urology.
Table no (26) Cost of Key Healthcare Procedures

<table>
<thead>
<tr>
<th>Procedure</th>
<th>USD</th>
<th>Thailand</th>
<th>India</th>
<th>US/India</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiac surgery</td>
<td>50,000</td>
<td>14,250</td>
<td>4,000</td>
<td>12.5</td>
</tr>
<tr>
<td>Bone marrow</td>
<td>62,500</td>
<td>62,500</td>
<td>30,000</td>
<td>13.33</td>
</tr>
<tr>
<td>Liver transplant</td>
<td>500,000</td>
<td>75,000</td>
<td>45,000</td>
<td>11.11</td>
</tr>
<tr>
<td>Orthopedic surgery</td>
<td>16,000</td>
<td>6,900</td>
<td>4,500</td>
<td>3.56</td>
</tr>
</tbody>
</table>

Source: India Brand Foundation Report, IBEF Research
Figure (41) India’s share in world Dental Tourism

Due to the emergence of this industry in India, massive tasks lay ahead to synergies the resources of the two sectors. However there are issues and challenges that need to be addressed to overcome the roadblocks to facilitate the growth of this industry in India.

The issues that need attention are:

1. up gradation of basic amenities and hospital infrastructure
2. Co-ordination between the healthcare and tourism sectors
3. Creating a resource pool of highly skilled and cordial manpower
4. Standardization of services and accreditation of hospitals
5. Increasing visibility of India on the world map
6. The impact on domestic healthcare services

Up gradation of Basic Amenities and Hospital Infrastructure

Basic amenities in India are not up to international standards, especially air
connectivity, road links, conveyance services and Internet at remote areas. This gives
a poor image of the country to health travelers, and also raises doubts about the
quality of healthcare facilities. The state of basic amenities in a country has a
considerable impact on the choice of destination for health travelers.

Travel visa is another critical issue which the Indian government plans to address by
introducing special medical visas for foreign tourists coming to India for specialized
treatment. This visa will allow the patient to bring along two attendants and will also
enable him to access the finest medical care. The existing infrastructure facilities in
private hospitals in India are considered to be on par with those in the UK and the US.
However, with an annual growth rate of 30 percent, there exists a huge opportunity to
expand the hospital infrastructure. Recognizing this, the government of India through
various measures is encouraging private sector investment in the sector.

Co-ordination between the Healthcare and Tourism Sectors

Co-coordinating the resources and services of two unrelated sectors—healthcare and
tourism—is challenging. Strategic co-ordination essential between these two sectors
can be done through facilitation by the government. The Indian Healthcare
Federation, Medical Tourism Council of Maharashtra, FICCI, -Government of India
and respective state governments are coordinating to promote this industry. When the
patient finalizes the hospital from where he/she wishes to avail of the healthcare
services, the coordination between both the sectors is required. Arrangement for
passports, visas, airline tickets and conveyance has to be made. The availability of
doctor, date of surgery, days to be spent in the hospital and recuperation services have to be confirmed. All this requires co-operation from both the hospital and the tour operator. Thus there is a need to train the people of these two sectors to meet the requirements of this special segment of tourists creating a resource pool of highly skilled and cordial manpower.

Indian doctors are well-known abroad for their qualifications and skills. This is a big advantage for hospitals in India in attracting more medical tourists. India has the advantage of having advanced life saving healthcare services like organ transplants, cardio-vascular surgery, eye treatment, hip replacement and in-vitro fertilization. The educated and skilled human pool can help to meet the increasing demand for healthcare services in India. In addition to hiring and retaining skilled manpower, service expectations of medical tourists have made it imperative for hospitals to create an ambience of well-being and cordiality so that their clients feel comfortable and well-attended while on treatment. Corporate hospitals are investing in furnishing their facilities and in training and development of personnel through seminars and short-term courses to gear them up to meet the requirement.

A major concern here is about trained medical professionals who go abroad thus diminishing the service capabilities of hospitals in the country. But however with the economic conditions and opportunities growing in India we are watching the phenomena of ‘reverse brain drain’. The human pool has to be trained in adapting to the requirements of various patients from around the world, understanding their culture, eating habits, language barriers, beliefs and attitudes etc

Standardization in Pricing and Accreditation of Hospitals
Standardization in pricing of various surgeries and healthcare services is required as vast price differences exist across hospitals. The Indian Healthcare Federation (IHF) has brought in the concept of ‘price banding’ to bring some consistency in the prices of different therapies and procedures, along with the move to accredit hospitals. Currently the ‘price banding’ concept is in the consensus stage. Once approved, it will be legalized through the government. Accreditation will be used to negotiate with overseas health insurance companies to extend their cover to include treatment in India. Both standardization in pricing and accreditation will help Indian hospitals in attracting more medical tourists.

According to YP Bhatia head of the CII task force on hospital accreditation, ‘the effort is to develop a comprehensive package for overseas nationals, who will help healthcare do what IT did to the country’. The CII-IHF combine is also drafting a code of ethics on the relationship among healthcare professionals and institutions. The rating agencies CRISIL and ICRA have rated hospitals like the Escorts Heart Institute and Research Centre and the Apollo -Group. The requirement now is for a standard accreditation system. A quality accreditation institution called The National Accreditation Board for Hospital and Healthcare Service Providers (NABH) is likely to be constituted under the aegis of the Quality Council of India. The proposed system will assess hospitals based on organizational and clinical governance, operational management, and focus on patients, clinical services and human resources.

**Increasing Visibility of India on the World Map**

India’s healthcare offers same services at lower costs compared to even other South Asian counterparts like Thailand, Singapore and many other healthcare destinations.
But it is the poor visibility on the world healthcare tourism map and poor image of the country in terms of poverty and basic amenities that deter people from coming to India. Thailand and Singapore are promoting their healthcare services aggressively which has turned their countries into healthcare hubs.

Steps taken to promote medical tourism abroad.

Road shows in some countries

Participating in international trade shows and exhibitions

Placing advertisements in various media abroad

Through tour operators for eg: Kuoni has tied-up with the Apollo group and Cox & Kings with Dr. Batra’s, Vedic India and Omkar Trust have packages specifically designed for the healthcare

Tourists are being aggressively promoted by these tour operators

Some hospitals now have their own Marketing and Public Relations departments

Websites have also been set up for easy availability of information and immediate contact.

Promoting ayurvedic tourism as a USP

The Impact on Domestic Healthcare Services

India is one of the most economical healthcare tourism hubs in the world especially for advanced life-saving surgeries. The inflow of medical tourists is on the rise in India, and private hospitals are ever ready to serve this special segment. However, concerns are being raised about the far-reaching impact of medical tourism on the public healthcare system that serves a larger section of the Indian society. Although healthcare services provided by private hospitals in India to foreign patients are cheap for them, these are still exorbitant for many Indians.
Private hospitals will need more medical professionals to meet the increasing demand, and the lucrative offers and the work environment they offer will attract many. His will deepen the rift between the rural and urban divide of doctors. If more subsidies are given to private hospitals and changes in regulation made to suit them, their concentration in the sector will increase. The public healthcare system will remain neglected. Thus, there is apprehension about the benefits of medical tourism to the Indian public.

India’s private healthcare sector braces up to the medical tourism opportunity. Due to the surge in medical tourism, some of the major corporate hospital groups in India such as Apollo, Fortis, Max, Wockhardt and Manipal have made significant investments in setting up state-of-the-art hospitals in major Indian cities. Fresh healthcare capacities that are coming up will help sustain the trend. For example, Dr. Trehan, one of India’s ace cardiac surgeons who established a MediCity in 2007 in Gurgaon on the outskirts of Delhi with the single objective of promoting medical tourism. The US$ 250 million project proposes to integrate super specialties such as cardiology, neuro-sciences and oncology under one roof with 2,000 beds.

Artemis Healthcare Supported by a team of well-reputed professional from the healthcare industry aims to harness the immense business potential in Indian healthcare. The initial foray of Artemis would be to develop a tertiary care, 500-bed, multi-specialty hospital in Gurgaon, close to New Delhi’s international airport. The hospital has operational since August 2007.

The hospital focuses on Cardiology, Cardio-Thoracic and Vascular Surgery, Orthopedics and Oncology, besides state-of-the-art Diagnostic Services, Ambulatory Care services and support of all specialties.
Simultaneously, Artemis is setting up a clinical research organization with ultra-modern laboratory facilities. Artemis Healthcare is planning to set up a Medical & Nursing College on the outskirts of New Delhi. Further, hospital chains are offering special packages, which include airport pickups, visa assistance and boarding and lodging. Apollo Group of hospitals for instance has a full fledged international patients department, which offers assistance to patients from the time they land in India to the time they depart. Apollo has about 14 healthcare facilitators, besides tie ups with two travel agents. Similarly, Escorts Hospital (now a part of the Fortis Group) has an in-house hospitality department that provides all pre and post-treatment assistance, including receiving patients at the airport, arranging accommodation and travel packages to various tourist destinations in the country.

Tie-ups and alliances are taking interesting forms. Kasturba Medical College and Hospital, Manipal has tie-ups with the governments of Tanzania and Mauritius. The health expenses of Tanzanians and Mauritians in Kasturba Hospital, Manipal are covered by the respective governments.

Therefore with better marketing and promotional efforts India’s share in world medical tourism is rising fast.

**Comparison – Facts & Figures**

Estimates of the value of medical tourism to India go as high as $2 billion a year by 2012. In 2003, Indian finance minister Jaswant Singh called for India to become a “global health destination”. The biggest stumbling block preventing the rapid growth of India as a healthcare destination is its poor infrastructure and lack of quality hotels. However, the Indian government is taking steps to address these issues.
According to statistics at the website, www.Indian-medical-tourism.com, until January (2008), 3.3 million travelers had already visited India, spending close to $5 billion. Domestic travel is also witnessing rapid growth. Some 368 million Indians are venturing out of their homes, based on rising incomes, lower aviation costs, and more leisure time. The World Travel and Tourism Council have forecast that tourism will grow at a rapid rate of 8.8% per year for the next ten years, the highest in the world.

The industry is projected to attract a capital investment of $21 billion by 2014, up from about $10.2 billion estimated in 2004, according to a WTTC survey. Indian corporate hospitals excel in cardiology and cardiothoracic surgery, joint replacement, orthopedic surgery, gastroenterology, ophthalmology, transplants and urology to name a few. The various specialties covered are Neurology, Neurosurgery, Oncology, Ophthalmology, Rheumatology, Endocrinology, ENT, Pediatrics, Pediatric Surgery, Pediatric Neurology, Urology, Nephrology, Dermatology, Dentistry, Plastic Surgery, Gynecology, Pulmonology, Psychiatry, General Medicine & General Surgery.

The medical tourism market in India has been pegged to grow to around Rs 11,000 for the next couple of years till 2012-13.

Cost of key health care treatment is lower by 30% in India. Medical tourism in India could emerge as a huge money spinner. Reasons for pushing medical travel include lower healthcare costs as well as the search for medical expertise, quality of care, safety, and waiting period. In Canada, the number of procedures in 2005 for which people were waiting was 782,936. Further, in that same year, Canada recorded the highest level of health spending in its history.
Similarly, a metal-free dental bridge worth $5,500 in the U.S. costs $500 in India or Bolivia and only $200 in the Philippines, a knee replacement in Thailand with six days of physical therapy costs about one-fifth of what it would in the States, and Lasik eye surgery worth $3,700 in the U.S. is available in many other countries for only $730. Cosmetic surgery savings are even greater: A full facelift that would cost $20,000 in the U.S. runs about $2,700 in the Philippines or $2,500 in South Africa or $2,300 in Bolivia. This clearly amplifies the prospects of India becoming a market for medical tourism.

What is E-Medicine?

E-Medicine is the use of telecommunication to provide medical information and services. It may be as simple as two health professionals discussing a case over the telephone, or as sophisticated as using satellite technology to broadcast a consultation between providers at two distant locations, using videoconferencing equipment.

In a broad way E-Medicine is that which uses multimedia technology (voice, video and data) to deliver medical services. The lower cost of bandwidth and improvement in video and data compression standards have increased the number and types of medical services that can be delivered from a distance to include virtually every specialty.

Being an application it uses a hybrid technology incorporating elements of television, telecommunication, computers, engineering and medicine. Services can be delivered on a combination of technologies with a variety of equipment.

E-Medicine performs a number of functions:

1. Making high quality healthcare available to traditionally under privileged population.
2. Saves time wasted by both, providers and patients in travelling from one geographic location to another to avail services.

3. Reduce costs of medical care and the incidental expenses related to patient care, i.e. the cost associated with factors other than the actual medial care such as travel, accommodation for relatives, food etc.

Envisaged barriers to E-Medicine:

Perspective of medical practitioners who do not have knowledge or belief in the power of e-medicine

Patients fear, unfamiliarity and lack of confidence in the method

Financial resources for implementation

Lack of basic amenities

Literacy rate and diversity in languages

Technical constraints like various types of hardware and

Quality aspect: No governing body to form guidelines

Government Support is limited.

The importance of right strategy planning and the opportunities it provides.

A specific approach for each case, remote / urban is depicted below.

For Remote Areas

Figure (42) A model for remote areas
Provide basic facilities—like Transportation, Electricity, Primary health care centers (PHC) etc.

Integrate E-Medicine with other daily facilities—like Education, Health, Banking services etc.

Training——it is essential to train the literate people from rural areas.

Good and Effective advertising campaigns—by video or by audio, which can be understood by rural people.

Model for urban areas

Figure (43) A model for urban areas

Build a Healthy computer literate environment—by providing good knowledge to learners

Hospital Information System—In big hospitals, we can adopt the HIS strategy to promote E-Medicine

Mobile E-Medicine services—mobile vans fully equipped with all the equipments of E-medicine can take frequent rounds in urban areas to spread awareness

Governmental support to leading cyber-café’s, for the spread of knowledge on health issues amongst laymen.

PEST Analysis of e- medicine

Environment
User-friendly technology like Graphical User Interface.
Flexibility and adaptability in terms of technology.
Involving the user from the beginning of project.
Quality control and proper standardizations.
Making expert systems to help users as well as patients.

Social and Political
Active participation of society.
Strong political will.
Involve NGO volunteers with these activities.

Educational
Providing continuous Medical Education (CME) for users like doctors.
Training programs for health care professionals, patients and other persons.

Financial
The government has limitations and so does the private sector. A combined effort from both is needed. In private sector- software, hardware companies, computer education institutes and corporate hospitals can play a major role in this venture.
To witness a successful revolution in E-medicine, we need to bring this array of activities together. If these experiments work in India over the next decade, the vast population living in developing countries will be winners and bear the fruit of our success.
Perhaps the slogan “Health for all by 2000” which was forgotten towards the end of last century can still be achieved by the year 2020 by making “The E-Medicine Revolution” happen in India. Yet another opportunity in the healthcare arena.
Global Healthcare

Health systems all over the world are under scrutiny for they affect every individual. This is due to the rising needs and aspirations of the community on one end and the increasing costs of delivery on the other end. Failure of policy makers and health managers to strike a balance between the socio-political commitments and ground realities of interplay of demand and supply sparks a public outcry to meet them. Needless to mention, the whole scenario gets torn between the debate on what is needed as basic health services and what falls in the category of wish list. The overall impact of the entire situation has forced the policy makers and the health managers to look for alternatives to meet the people’s demand, thereby, necessitating a focus on reforms in health sector.

Just as a coin has two sides, the flip side reflects the practice of kickbacks (recent survey pointed health sector to be the biggest culprit for corrupt practices) unnecessary procedures, differentiated pricing of services (cross subsidization of pricing is used to cater to the different sections of the society because of affordability constraints).

In view of the above backdrop, it is quite evident that the sector draws attention of every constituent. While the need and aspirations of every community vary, yet it is seen that adequate provision for basic health needs including the public health measures always remain in focus. It is also seen that the economic status of the society plays an important role in its desire to look for quality assurance of the services. What might appear to be a desirable scenario in a context where the provision of basic health services is lacking, it could be termed as essential need to be met on routine basis in another community.
The scenario of the developed economies presents a picture that is different from the developing economies. Singapore and Hong Kong having similar looking objectives rely heavily on personal contribution and federal provisions respectively for financing their health systems. The shortcomings in the systems are therefore directly related to the basic structure. While Singapore grapples with the economic constrains faced by the individuals and their families who suffer from chronic and life style diseases on one end and growing imbalance between the demand and supply situation on the other end. Hong Kong, on the other hand has problems that are quite similar to ones faced in UK. There is an increasing shift towards utilization of private healthcare services by those who can afford to pay.

The consequent fall out is expected to be the withdrawal of contribution towards health system needs from these individuals. Similarly, Republic of Korea, Brazil and Argentina, the nations that have shown a tremendous amount of commitment towards health sector reforms have successfully met some of the challenges faced by the matured health systems in the developed economies. However, they still need to go a long way to achieve the larger objectives of their own socio-political commitments and become a force in the global context.

Indian Scenario

Indian health system, today, is at cross roads. While it suffers from inadequacy of quantum and quality of service delivery yet it has levers that if managed effectively can catapult the sector to glorious heights. The system will not only become capable of meeting specific needs & aspirations of domestic constituents but also attract population from the region for specialized services to become a regional hub for healthcare services. This is, however, easier said than done. A concerted effort is
needed to kick start this process. The starting point “will have to be a firm commitment to quality assurance programs - accreditation of health facilities, credentialing of health manpower, adoption of best practices along with conformance to international standards & benchmarks for the processes & service delivery and simultaneously measuring up to the aspirations of the major constituents i.e. the users”.

This effort will have to be supplemented by a fair amount of education & training programs in the sector while disseminating information and knowledge leading to an awareness campaign for the community. The overall impact of these major activities will be a strong regulatory environment represented by the government on one end and patient advocacy groups on the other end, to ensure the protection of the users. A strong regulatory environment is the biggest catalyst for growth of the sector. The resultant growth will have a direct impact on the economic indices through increased contribution to the GDP of the nation. This will be due to the increased employment offered by the sector and enhanced productivity - as a result of the contribution from the sector itself and the impact on productivity of individuals through improvement of health status. Hence, it is clearly evident that health sector reforms are a necessary evil, provided we move with the times and enjoy the beneficial outcomes for a better health and productivity.

Unacceptable practices exist in India- whether among the rural areas, or surprisingly even in some urban areas, where working is not just an option, but a necessity for mothers, and in the wake of nuclear families- whether out of choice or compulsion, care of the young, is seriously neglected. Are we planning anything on that front?
Indian healthcare functions to a great balance between public-private partnership. It is an opportunity for both to wake up to some ground realities. Yes, we do have state of art tertiary care centers a very large percentage of which comes from the private sector as we have a new mission in the form of National Rural Health Mission (NRHM). But is healthcare in our country really equitable?

*In many developed economies healthcare system is a government effort intended to extend health care coverage to all citizens and sometimes permanent residents of a governmental region. Universally health care programs vary widely in their structure and funding mechanisms, particularly the degree to which they are publicly funded.* Typically, most health care costs are met by the population via compulsory health insurance or taxation or a combination of both.

It requires government involvement, typically in the forms of enacting legislation, mandates and regulation. In some cases, government involvement also includes directly managing the health care system, but many countries use mixed public-private systems to deliver universal health care.

In the 1880s, most citizens in Germany became covered under the mandatory health care system championed by Otto von Bismarck. The National Health Service (NHS), established in the United Kingdom in 1948, was the world’s first universal health care system provided by government. Universal health care is provided in most developed countries and in many developing countries. According to the Institute of Medicine of the National Academy of Sciences, the United States is the only wealthy, industrialized nation that does not provide universal health care.

India has partial universal health care system run by the local governments. The "government hospitals", some of which are among the best hospitals in India, provide
treatment at taxpayer cost. Selected drugs are offered free of charge in some hospitals. In 1946 a Health Survey and Development Committee in India put forward a plan for a universal health care system. According to India today, the country has not lived up to their outlined plan. As per the data given in the Internet-based encyclopedia “Wikipedia”, as of 2007, the hospitals contain only a tenth of the recommended ratio of hospital beds; there are only 70 beds for every 100,000 people. According to the WHO, India's health care system is 83% privately funded, with 17% of health care expenditure coming from the government as of 2004.

The Difference

Whereas in India around 60 per cent share of healthcare provision comes from the private sector, healthcare in the UK is primarily from the government and is a major political issue. General Taxation (almost akin to social insurance) provides the resources for the provision of healthcare.

In India, not only can social insurance not work because only 10 per cent of the labor is in the organized sector, but sadly private insurance advertises and caters only to those people, who might not need it. Rural India has never heard of this concept and as research has proved, more often than not, after dowry- healthcare is the next major burden and can lead to further poverty.

In the UK, the ‘Department of Health’ regulates the spending and provision. There are some other agencies too, like ‘National Institute of Clinical Excellence’- which sets clinical standards for providing treatment, and the ‘Healthcare Commission’, which inspects the NHS trust hospitals against the various standards.

The service provision is set in various tiers. About 28 ‘Strategic Health Authorities’ all over the country have some ‘Primary Health Care Trusts’, and some, ‘Trust
Hospitals' working within their area. The interesting thing is that rather than these being accountable to the Government; the Government is accountable to the public through service provision by these units.

Of the hospitals, some are district hospitals, some are large teaching hospitals, some are specialty hospitals and some are dedicated to 'mental health' among other specialties.

The Primary Health Care Trusts have a two-fold activity. They commission services from the hospital for their individual catchment area (the community) to provide community healthcare. The second key role is to improve the health of the general population through each Trust's own customized public health initiative. (Some areas might be rural, with worrisome healthcare statistics/prone to patterns of particular diseases etc.)

The prices of all kinds of hospital activity are set on a national weighted average scheme. Then as per the different range of activities done by a particular organization, funding is provided by the Government. Various charitable trusts help support their local NHS Trusts too.

Healthcare is free at the point of delivery, and therefore is equitable. This is a brilliant concept since it does not differentiate upon the paying capacity of people to render care.

However, the dynamics have changed over time. Litigation and risk management issues have caused immense paper work, owing to pending waiting lists. Although service provision needs to be reviewed over time, but here is a classic case of constant review, constant changes and growing personnel requirements, amounting to a very
management heavy NHS- another resource crunch on the patient money, (although it is reported that overall management costs are lower than in most private companies). The staff, whether they are doctors, nurses, or other allied professionals like the physiotherapists, occupational therapists, ambulance, paramedical staff members, has the privilege of working on their own initiatives- given that the targets come from the top management. It is rare to find the drudgery of routine. Creativity exists in most areas, and most people work as team-players. Little wonder that decentralization is successful, and every little department of a hospital as big as 2000 beds is able to work on its own initiative. The target of course come from top-down, but brainstorming to achieve them and implement the job profile lies to great extent with the staff. The actual technique of treatment between doctors of the two countries is very similar. Indian doctors are working with path-breaking technologies, and providing state-of-the-art treatment and this can be comparable to any of the high-tech hospitals of dist 1280. However, a major difference in the two scenarios is the professional status of the nursing community. In UK, they hold a very important role in healthcare, and work tremendously for achieving better patient care. Freedom of work is a mega booster. The doctors and nurses work in tandem to achieve patient goals. The patient is never just a medical record number. He is treated in entirety. The piecemeal approach of Indian healthcare towards its patients can learn something from the holistic and personal approach of NHS. With healthcare getting organized this would be another issue which would require serious inward thinking and reorienting their training. Elderly care is on the priority list of NHS. The latest approach is to treat the elderly in their own home- environment. The reasons are twofold- entries to the hospital entails
various problems—higher chances of cross infection since this is a susceptible population, the burden of transport for the elderly, lack/shortage of care takers.

The second reason is more administrative in nature. There is a dearth of hospital beds and if a patient can be treated at his own home, not only are the chances of patient attitude towards his healthcare better, but it can also save the hospital bed for an emergency admission.

There is a range of professionally competent elderly healthcare staff supervised by the district nurses, and chaired by elderly care consultants to cater to the needs of this population. The patient care activities involve taking care of the preventive and curative aspects, and include, among other things, home environment assessment, state grants/provisions for relevant helpful equipment for home care and even social care needs.

Lessons for India

The UK government has a national mandate on ‘elderly care’ and takes it as its personal responsibility. It is a lesson which India can learn. The question is not whether it is right or wrong for the family members to leave their responsibility on external factors, but the fact that this situation exists and something needs to be done about it.

Another thing, we need to learn is bettering our child care support system.

Government provides partial funding support for childcare organizations. Various perks exist for working mothers, like flexible working system, wherein the working hours maybe adopted at the convenience of the employee. Funded ‘after school care’ exists for bigger children. Unfortunately in our country, a big chunk of GDP is being allowed to go waste because workforce cannot function willingly. Private agencies in
urban settings, and/or the government in rural India need to come forward and step into the ‘care taker’ shoes. It is a mere window to another system. However, every glimpse has something to teach, provided we are willing to learn and practice. In terms of employment opportunity this could be a huge one.

**Table (27) Cost comparison** Source: India Brand Foundation Report, IBEF Research

The Comparative Costs between India and other developed countries like US, UK, and Singapore - Approximate Figures In US Dollars.

<table>
<thead>
<tr>
<th>Service</th>
<th>US</th>
<th>UK (Private)</th>
<th>SINGAPORE</th>
<th>INDIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bone Marrow Transplant</td>
<td>upto 200,000</td>
<td>upto 200,000</td>
<td>-</td>
<td>upto 25,000</td>
</tr>
<tr>
<td>Bypass Surgery</td>
<td>35,000</td>
<td>25,000</td>
<td>-</td>
<td>6,000</td>
</tr>
<tr>
<td>Breast Lump Removal</td>
<td>-</td>
<td>3,200</td>
<td>1,000</td>
<td>700</td>
</tr>
<tr>
<td>Haemorrhoidectomy</td>
<td>-</td>
<td>3,800</td>
<td>1,500</td>
<td>1000</td>
</tr>
<tr>
<td>Knee Joint Replacement</td>
<td>-</td>
<td>15,000</td>
<td>7,000</td>
<td>5,000</td>
</tr>
<tr>
<td>Lasik Surgery</td>
<td>4,000</td>
<td>2,800</td>
<td>1,600</td>
<td>700</td>
</tr>
<tr>
<td>No Stitch Cataract Surgery</td>
<td>4,500</td>
<td>2,600</td>
<td>-</td>
<td>700</td>
</tr>
<tr>
<td>In-vitro fertilization (IVF) cycle</td>
<td>15,000</td>
<td>-</td>
<td>-</td>
<td>1,800</td>
</tr>
<tr>
<td>Hernia Correction</td>
<td>2,800</td>
<td>2,700</td>
<td>2,500</td>
<td>1,000</td>
</tr>
<tr>
<td>Dental Implants</td>
<td>3500</td>
<td>2800</td>
<td>1600</td>
<td>800</td>
</tr>
</tbody>
</table>

These rates are indicative of approximate costs. The actual rates will vary.

The reasons are many. Lower labor costs, favorable government regulations for low cost healthcare, lower equipment costs, low instance of lawsuits, low malpractice cover costs are a few reasons for low costs. However, it must be stressed that, world over, quality of healthcare provision is not compromised upon. It is a combination of the other factors which lead to low costs.

In the earlier days, it was only the western world that had well developed healthcare systems, and the rich used to travel long distances to receive the best treatment abroad.

With improvements in technology worldwide, other quality healthcare systems evolved even in the eastern economies. Simultaneously, a few problems like high costs and long waiting periods crept into the western systems. Today, there are an
estimated 2 million people who travel abroad for treatment each year from different parts of the world.

Medical tourists today come from all walks of life. They could be the well to do business community from the Middle East, the typical middle class from the developed economies who look for quality of treatment but are operating on a budget. In common, they have a desire for high quality, affordable care or surgery.

The basic ingredients which go into making a popular medical tourism destination are world-class healthcare facilities and unmatched hospitality.

India is a forerunner in this industry, with its high specialty hospitals, qualified doctors and famed hospitality. Hospitals which cater to international patients pride themselves on being representative of the nations that they operate in. Hence, they take utmost care to maintain world-class facilities in terms of qualified personnel and infrastructure. Many hospitals are also accredited by international agencies like the JCI (in the USA) as part of the measures to ensure quality healthcare. At UniAxess, we have set stringent parameters for hospital selection, and only the “best of the breed” are on our network. There is exhaustive information available on this portal regarding the facilities and doctors at each hospital. One can use these resources to make a fully informed choice. In case you have a specific query regarding any hospital on the network you can get in touch and get the desired information. In general, the qualifications of medical personnel are comparable world-wide.

Healthcare is one of the most vital functions of any economy, and hence, stringent norms are set for qualification.

How Indian Corporate Can Tap Emerging Global Healthcare Market
We looked at the 'SWOT' analysis of the health sector earlier in this chapter (which is followed by a SWOT of the medical sector later in this chapter) and gauged the underlying opportunities, thereby capitalizing on India's current proficiencies and future efficacies. The changing scenario in the health sector was gauged, and we analyzed government policies, inter-industry competition and economic structural and environmental factors. This enabled us to understand how this sector could be equipped to cope with future change. We have, thus, proposed certain measures with the use of which India can make great advancements in the healthcare field. The 'Brand Prism' is kaleidoscope that provides us with the correct perspective to analyze the health sector's offering in the view of a complete product. The brand prism helps us to identify and then suggest measures for certain pressing problems that have been plaguing the Indian health sector, the knowledge of which will help identify the key areas of improvement and further development.

The areas identified were the product, its attributes, the availability and the awareness, the services provided and the comparison between the public and private players. We sought to analyze what determines the demand of the product that is the healthcare sector as a whole and give solutions to the demand and supply problems and the problems of the shortage of certain services and the standardization of certain procedures.

Introduction

Hubs
'Hubs' are tertiary healthcare providers that deliver specialized healthcare services including same-day surgery, endoscopy, dialysis, chemotherapy, pulmonary functions, ultrasound, radiology, mammography, CT scan, specialist consulting suites, diagnostic service, pre-admission and post-discharge services. These services require high technology and specialist doctors.

Objectives

reduce the average number of days of in-patient stay

reduce number of beds required

maximize patient turn-over for specialist services

With a GDP growth of 7.8%, India is one of the fastest growing economies in the world and the perfect health-hub of the world. The fastest growing industries are: -

Business Process Outsourcing

Software Services

Insurance

Healthcare

The healthcare sector has been growing at a great pace in the past few years. The windfall began ever since the developed world discovered that it could get quality service for lower price.
Need of the Hour

Injecting new life into the Medical Sector

Embrace the role of IPRs in kick-starting innovation

Develop and strengthen the base of scientists through training them in world-class
drug discovery skills

Increase interaction between industry and academia

Pay attention to quality and leverage the global recognition earned for IT skills

Take the path of collaborative growth through global partnerships and alliances

Changing patent and other policies like data exclusivity help in changing scenario

SWOT Analysis

Strengths

Expertise in reverse technology

Support at the state government level

Emergence of bio-tech parks

Incentives to develop business

Natural competitive advantages of language
Low costs and ever-expanding educated workforce

Weakness

The rising cost of healthcare delivery

Limited access to life saving drugs

Majority of private hospitals expensive for a normal middle class family

Government is responsible to improve primary healthcare infrastructure

Opportunities

Greater incentive for original drug discovery will create opportunities for Indian companies to develop new competencies through collaborative research and global alliances

Big pharmaceuticals and biotech companies to choose India as the preferred hub for their global R&D and manufacturing operations

Threats

Increasing cost of drug discovery & development and the increasing time to market

Declining R&D productivity (high attrition rates and cost of failures)

Increasing regulatory demands of the USFDA for drug

Challenges Ahead
Complexion of the Health Science industry to alter significantly post 2005

Global competitiveness will be the key to growth and survival under the new IPR regime

Changing Scenario in the Indian Healthcare Sector

Structural Change

The increase in the population share of the elderly is also causing a change in the pattern of demand for healthcare services. Such change is opening up both preventive and curative care opportunities, which the existing and new players are exploiting. For instance, in-patient capacity in cardiac care is close to the point of reaching excess supply in certain cities.

Hospitals would organize their resources and manpower within structures that had evolved rather than been designed. The processes would be structured to ensure multiple points of control rather than patient convenience. Information capture would be rudimentary and information rarely integrated beyond that required for reporting purposes, because of which any data-based quality control would not be possible.

Main Players

1. Major corporate players like the Tatas, Apollo Group, Fortis, Max, Wockhardt, Piramal, Duncan, Ispat and Escorts have made significant investments in setting up state-of-the-art private hospitals in cities like Mumbai, New Delhi, Chennai and Hyderabad.
2. Using the latest technical equipment and the services of highly-skilled medical personnel, these hospitals are in a position to provide a variety of general as well as specialist services.

3. These services are available at extremely competitive prices, encouraging patients not only from developing countries but even from a number of developed ones to come to India for specialized treatment.

4. In the next 10 years, tertiary care in India is likely to be predominantly private healthcare and extensive public & private partnerships. The secondary care would be private & public healthcare and selective public & private partnerships. The primary care would be predominantly public, especially in the rural areas.

Economic Factors

The current picture of the economy and the latent need gap provides for a huge healthcare market opportunity.

Since healthcare is dependent on the people served, India's huge population of a billion people represents a big opportunity.

Today, people are spending more on healthcare and preferring private services to government ones.

Hospitals in India are running at 80-90% occupancy. With the demand for healthcare far exceeding supply, India's healthcare industry is expected to grow by around 15% a year for the next six years.
Hospitals in India conduct the latest surgeries at a very low cost.

Corporate entities entering the healthcare sector, introducing managerial practices and tools are showing a marked preference for professionals, leading to the expansion of the hospital management education industry.

The shortage of qualified and trained nursing staff is a factor that is affecting hospitals across the country. ICRA notes that many hospitals have been responding by operating at below-norm nurse to patient ratios, stretching nursing staff working hours, and even recruiting partly-skilled nursing personnel.

Government Factors

To encourage R&D, Government extended tax holiday to R&D companies. Restriction of full exemption being limited to only 1% of last year's export, turnover is also lifted for R&D units.

The benefit of full customs duty exemption for specified equipment will be available for their manufacturing activity to the extent of 25% of the previous year's export turnover. This will help the research based companies like Ranbaxy, Cipla, DRL, etc.

All drugs and materials imported or produced domestically for clinical trials will be exempted from customs and excise duties. This will encourage foreign companies to produce drugs in India.

Patentability
The Act (Section 2 (1) (j) defines "invention" as a new product or process involving an inventive step and capable of industrial application. The section enumerates 15 such non-patentable inventions which can be used as a ground in opposing a patent before its grant or in revocations proceedings after the grant.

The issue of patentability assumes importance as it limits the scope of inventions for which a patent can be claimed.

Road Ahead

The industry should look at the flexibilities provided within the patent system and the WTO and devise ingenious ways to apply and interpret them. By doing so, it would be conforming its practices to the Doha Declaration on Public Health which allows a Member Country to interpret and implement TRIPS Agreement in a manner supportive of its right to protect public health and to promote access to medicines for all.

Comparative Costs Advantage for India

A huge number of International patients are traveling to India to seek quality healthcare at a fraction of the cost back home. They are admitted at private hospitals with state-of-the-art equipment and medical practitioners trained abroad, these 'five-star' hospitals now attract a new breed of international traveler - the 'medical tourist'.

In the last couple of years, much hype has surrounded the corporatization of health sector with mushrooming super-specialty hospital projects commissioned in various parts of the country.
An Important Question? While the primary care market offers a viable model the tertiary apparently does not...Perhaps enough awareness build up or marketing efforts to attract this “medical tourist” segment which actually offers a huge opportunity is required? Are these hi-tech tertiary care hospitals paying off? From an investor point of view, they aren't - according to recent CII-McKinsey Report on the healthcare industry. The report titled "The Road Ahead" says -The net present value (NPV) of the primary care market is a positive of Rs. One Crore. While the NPV for tertiary care market is negative.

In other words, NPV is the matrix to assess the viability of a business model and a positive NPV means a viable business opportunity. Conclusively, there is enough scope for primary healthcare players to make profits.

Figure (44) Indian healthcare a world brand –a modified model
Acceptable Product

Raw Materials Perspective

Today, many of the medicinal plants available in the market place are adulterated and are microbial contaminated. This is due to absence of raw-material certification requirements for the industry by the FDA, and absence of suitable post-harvest technologies, especially related to drying of medicinal plants. It is absolutely essential that ISM (Indian System & Medicines) Department sponsors and promotes regional certification facilities to set gold standards for raw drugs.

An Agmark or ISO-9000 like standard for medicinal plants can be immediately promoted by the ISM Department, to encourage quality awareness in industry and amongst consumers.

The ISM Department can also support consumer research and education organization to undertake consumer awareness campaign based on quality assessment of raw materials and finished products used by the herbal industry.

2. Relevance to Customers

Some contend that the prevailing primary care model such as GPs’ clinics is not yet saturated because a lot of people still go directly to tertiary care centers for treatment. Experts believe that there is still a large number of urban rich who visit tertiary care hospitals for "quality" and "the best care".

3. Returns to Customers
This demand for "quality" and McKinney's estimate of a "market" corroborates opportunity for growth. But will it actually work in favor of the investors? Some industry observers feel that there is a gap in the primary care segment, the family physician concept may be a deterrent, and thus, the returns to customer must be maximized.

High cost of investment and low volumes are other barriers to primary care centers, feel some. While the pioneer of "branded primary care" Max India has not set a very favorable example for other players to enter healthcare beginning with primary care, experts feel it is too early to comment on its success.

4. Increasing Accessibility

Pharmacy chains

* Pharmacy chains are appearing in S. E. Asia especially in India.

* The advantage of pharmacy chains is primarily the increased accessibility to new markets

Hospitals on Wheels


* Computerized lab and three channels ECG machine available on road equipped to impart health education through audio visual facilities.

5. Comparative Advantages
**Open-Heart Surgery** - Open-Heart Surgery in the UK can cost more than $20,000 and double that in the United States. In India, leading hospitals can perform that surgery for less than $5,000. With a greater percentage of success, competitive advantage would go to firms that best control clinical trial costs, which alone account for a third of the total cost of drug development and almost half the time taken. Most Indian pharma majors are meeting this challenge by conducting clinical trials for their drugs indigenously.

6. Response Generation through Promotion

FMRAI has been consistent in its approach towards ethical sales promotion and come out with a model sales promotion policy to be followed by every pharmaceutical company of India. FMRAI members were the first to point out the illegal clinical trials carried out by Sun Pharmaceuticals for their Letrozole brand and personnel attached to Sun Pharma were thrown out of their jobs.

7. Availability of the Product

Drug stores chains offering services like

Home delivery

Assured availability of uncommon drugs

Assurance on the genuineness of the drugs

24 X 7 service hours are increasingly becoming a necessity
These stores could also look into offering certain other products of daily use through their outlets. Their key proposition could be lower drug prices compared to the neighborhood pharmacist, which would result from bulk buying discounts that the chain would command and would partly pass on to the consumer.

8. Awareness among Customers

Value-added Services

Growing awareness levels on health conditions, urban lifestyles, higher paying power of the population and the emergence of concentrated posh neighborhoods of the upwardly mobile population in most top cities of the country offer scope for a standardized, quality offering in the form of fitness centers.

These could typically include certain indoor sports like squash and badminton, running tracks (could be indoor), and gymnasium and other facilities like aerobics, yoga and meditation. Various forms of health counseling including nutrition advice, exercising, and non-medicinal cure to certain diseases would also form revenue streams for such setups.

Hence the key findings are:

The healthcare industry is worth US$34 billion and is growing at a rate of 13% annually

Healthcare spending is about 5.2% of Gross Domestic Product (GDP)
Out of the total healthcare spending, 15% is government funded, 4% is from social insurance, 1% is from private insurance and the remaining 80% is out of pocket expenditure.

Healthcare spending is estimated to reach about 5.5% of GDP, or US$61.1 billion, by 2009. The challenges the Indian healthcare sector faces are substantial, from the need to improve physical infrastructure to the necessity of providing health insurance and ensuring the availability of trained medical personnel.

But the opportunities are equally compelling, from developing new infrastructure and providing medical equipment to delivering telemedicine solutions and conducting cost-effective clinical trials. For companies that view the Indian healthcare sector as a glass half full, the potential is enormous.

The Indian Retail Industry

The retail industry in India is one of the sunrise sectors in the developing economies. The total Indian retail market is estimated to be around US $218.75 billion in 2004-05 and has grown by 8.5 per cent from US $200.16 billion in 2003-04 (KPMG-FICCI – Indian Retail: On the fast track, Bridging the Capability Gaps.) The organized and corporate owned retail business is estimated to be about US $8.75 billion in 2004-05 and has grown by 30 per cent from US $6.73 billion. India has over 12 million retail entities with more than 75% belonging to small family businesses dealing in basic necessities, especially food related items. Strong fundamental changes including the changing lifestyles of Indian people, rising incomes, knowledge seeking habits etc have fuelled the growth of modern retailing and has attracted investment in this sector. India’s prominent business houses like Reliance industries, Tata, Wadia, Godrej, Hero, Malhotras have entered the retail sector directly and also with foreign
partners. With the government involved in the process of determining the level of FDI in retail, a number of foreign players including Wal-Mart Stores, the world’s largest retail chain have evinced interest for entering India in a big way. Indian retail organizations expansion plans and joint ventures have been increasing their stock prices each month. Stock prices of Pantaloons Retail, Prologue India, Trent, Pyramid Retail, and Shoppers Stop have all increased in the past few quarters. Investment in the retail sector will hold well in the long run. The sector is all set to attract fresh investments in the next few years. Retail in India has grown beyond mere retailing and now encompasses sectors such as telecom, automobiles, healthcare and finance despite the fact that retail has still not been formally accorded the status of “industry”.

Healthcare retail sector in India

The pharmaceutical retail market in India is currently dominated by the unorganized sector which is estimated at US $5 million. With the impending entry of major industry houses like Reliance Retail, Pantaloons and Fortis in the organized pharmacy trade, local drug stores are trying to organize themselves to face the competition. As a first step, the All India Organization of Chemists and Druggists with 600,000 members is registering itself as a company.

Retail pharmacies or Chemist’s form a major portion of this unorganized healthcare retail sector, and as such dominate this sector. The sector has done phenomenally well in India due to the emotional relationship that exists between the shopkeeper and his customer. On the average the number of customers visiting these pharmacies range
from 25 to approximately 500 per day depending on the location, and proximity to medical care centers and hospitals.

In India the unorganized sector caters to a number of needs of the customer other than medicines which include medical accessories, toiletries, daily use supplies, food and nutritional products. In fact, a few pharmacies cater to patient’s needs like dressing and injections. This contributes to a monthly turnover of rupees 5 to 10 lakhs for the pharmaceutical shop on the average.

The unorganized sector has dominated the retail sector due to the emotional and trustworthy relationship that exists between the retailer and his customer. But this cannot overlook the organized sector with the entry of huge names into the business which is threatening to uproot the existence of the unorganized sector. An in-depth study has revealed a number of flaws in the existent system, ranging from unqualified personal running the pharmacy to poor in store infrastructure and drawbacks with training. Many of the shopkeepers have not undergone any medical training before opening their shops and neither are they aware of any medical training institutes. Often a pharmacist serves the legal requirements of a number of pharmacies which is clearly against the legal requirements. Storage of pharmaceuticals and other medical products leaves a lot to be desired besides a number of other issues.

These shortcomings in the system have led to a threat to this unorganized sector from the organized sector with a number of shopkeepers admitting to the threat from the organized sector in the future if not immediately today.
Over the last decade more specifically from the late 90’s we have seen a number of Indian corporate entries into organized pharmacy retailing. Big industrial houses like Ranbaxy, Reliance Retail, ADAG, Future Group, along with other regional players like Subhiksha, Apollo pharmacy, Medicine Shoppe, Dial for Health, Planet Health, Life Spring, Health & Glow, Life Ken, 98.4, Body Shop, Guardian Pharmacy have already entered this sector though they collectively contribute only 4% of to the retail pharmacy sales.

Let us take a look at retail plans of some of the existing/local players, not counting the likes of Wal-Mart, which does formidable drug retail business in the US.

Apollo is ramping up its present network of over 120 pharmacies to 1,000 pharmacies by 2009. Subhiksha’s tally of over 500 now is set to increase to 1,200 within a year. Fortis, healthcare services arm of the pharmacy giant Ranbaxy Group, which has set aside Rs. 800 crore will roll out 1,000 pharmacies in 400 towns, within a couple of years. 250 of these will go on stream during the current year, itself.

Ambani brothers are also gung-ho on the pharmacy business. While, Anil Ambani owned Reliance Health Venture has set aside Rs. 1,200 crore for investment in pharmacy retailing, elder brother Mukesh Ambani is on the verge of buying a generic drug manufacturing company to meet the requirement of pharmacies to be set up within Reliance Retail outlets.

To understand the frantic pace at which even regional healthcare players are planning their moves in this sector, one will have to just look at the expansion plans of some of these players.

Bangalore based Life Ken, owned by Lifetime Healthcare Private Ltd, which now has over 60 stores in Chennai and Bangalore has plans to ramp up the tally to 200 stores
within a year and to 700 stores in the next three years. On the other hand North based
Global Health line owned “98.4,” which set up its first shop in Gurgaon in 2003, is
investing Rs. 100 crore to set up 300 shops by 2011. It will follow ‘concentric circles’
expansion strategy, initially concentrating on the northern region. Ahmadabad based,
Planet Health, wants to expand its network
International class deluxe pharmacies from 14 to 150 within a couple of years.
Another North India based retailer Guardian Pharmacy, Guardian Life care Pvt. Ltd,
has over 50 shops is also looking at expanding its network. Medicine Shoppe, a
master franchisee of the $75 billion Cardinal Health Inc., is planning to have 700
franchisee shops by 2010.

STUDY OF PHARMACY RETAIL CHAINS IN INDIA

The key pharmacy retail chains are in Chennai, Delhi, and Mumbai. These are the
major towns where the organized retailing of medicines began to appear in India.
Chennai can truly take credit for successfully pioneering the culture of chains of drug
store in the country. Apollo (a large chain started by the Apollo group of hospitals)—
a family-owned chain; Muthu Pharma; two multi-product chains—Health & Glow
and Subhiksha; and another chain—TRUVALUE — are situated in Chennai. In
Delhi, the Model Pharmacy Project at Hamdard University, the pharmacy outlet at
Indraprastha Apollo Hospital, and Lifespring are among the
major chains. In Mumbai and Vadodara, is Medicine Shoppe, a franchise based retail
drug store chain promoted by Cardinal Healthcare Inc., USA. The US chain operates
1,400 stores in ten countries (USA, Canada, Mexico, Taiwan, Philippines, Indonesia,
Thailand, Malaysia, and Australia).
Following are the different formats of the pharmacies, their strategies and operations, and broad results and prospects. Each of the stores differs in its business models. Most of them sell cosmetics and toiletries while Subhiksha mostly sells groceries. Also, many of them operate through franchisees. Some, especially Apollo, practices central purchasing while Medicine Shoppe has authorized its franchisees to source locally. Lifespring in Delhi, promoted by an Indian from Australia, is also planning to attach a gymnasium and a spa to the store. Other stores sell products similar to the current pharmacies.

Apollo Hospital Pharmacy Chain

Apollo Hospital, Chennai has set up a chain of 60 pharmacies under the following categories:

*Hospital pharmacies*: These are pharmacy stores attached to the Apollo Hospital. They are presently operating at Chennai, Hyderabad, and Delhi. The Chennai hospital pharmacy (admeasuring 250/300 square feet) records a daily sale of Rs. 0.3 million (Rs 110 million/annum). The pharmacy stocks around 6,000 prescription brands/presentations. Almost the entire business comes from prescription products. The consumption of other hospital products is not included in this turnover. The pharmacies at Hyderabad and Delhi have achieved daily sales of Rs. 0.1 million and Rs. 0.15 million respectively. During the current year, additional hospital pharmacies were planned to be set up at Apollo’s upcoming and new hospital projects at Coimbatore, Madurai, and Chennai.

*Clinic pharmacies*: These are pharmacy stores attached to an Apollo Clinic. The Clinic pharmacies are attached to Apollo Clinics at Chennai, Hyderabad, and Vishakhapatnam. The pharmacy attached to Apollo Clinic, T. Nagar, and Chennai has
a daily sale of Rs. 60,000. Depending on the location and flow of visitors to the attached clinics, other clinic pharmacies are registering daily sales of between Rs. 15,000 and Rs. 40,000. The interior of each pharmacy changes from place to place depending on the availability of space although one common feature that the furniture is made of white cedar wood finish. All clinic pharmacies are open round the clock, seven days week. IOC pharmacies: Apollo has entered into an agreement with IOC, the country’s largest petroleum retail company, to set up around 100 pharmacy stores at their petrol pumps. About 20 such stores have been set up in Chennai, Delhi, Hyderabad, Ahmedabad, and Gandhinagar. Under the present arrangement, the Apollo Hospital is required to pay to the IOC a lump sum amount of annual lease rent based on the location of the respective petrol pump and 4 per cent royalty on the sale of its products.

Stand-alone Day and Night Pharmacies: Apollo operates around 45 stand-alone day-and-night pharmacy stores. The size of these stand-alone stores, depending on the location and its residential/commercial potential, could vary from 150 to 350 sq. ft. Most of the stores in this category, however, are close to 150 sq. ft in size. The standalone locations could include high traffic areas like the airport. All these stores operate on 24x7 formats. Apollo has plans to start standalone pharmacies in all district headquarters of Tamil Nadu and couple of stores in New Delhi soon. The total sales of the stand-alone day-and-night pharmacy stores in Chennai are estimated to be between Rs. 0.4 - 0.45 million per day (average daily sale: Rs. 20,000 per store). These pharmacies record higher sales (55 – 60%) in the night shift. The sale of prescription products (approximately 6,000 brands/presentations) accounts for 80 per
cent of total sales by value. The non-prescription products account for the balance 20
per cent of total sales by value.

**Purchasing:** Apollo has centralized all its procurement operations of pharmacy
products by obtaining stockiest ship of 160 pharmacy companies in the respective
states through its group company, Keimed, headquartered in Hyderabad. OTC and
FMCG products are procured through local stockiest of the respective companies.
Apollo places a lot of emphasis on direct procurement of prescription products as they
offer the highest contribution of around 34 per cent comprising 20 per cent retailer’s
margin, 10 percent stockiest margin, and 4 per cent discount against cash payments.
Against this, while the contribution on OTC products varies from 10 to 20 per cent, it
varies between 8 and 12 per cent on FMCG products. For this reason, Apollo is not
too keen on promoting the sale of non-prescription items.

**Storage and Distribution:** Apollo’s central storage and distribution units are located
in Chennai, Hyderabad, and Bangalore which service the requirements of stores
located in respective territories. The distribution of prescription and non-prescription
items to pharmacies in Chennai is centralized through a centralized distribution cell.
Some ayurvedic and OTC is also stocked.

**Health & Glow**

‘Health & Glow’ is a pharmacy retail chain promoted by RPG Guardian Ltd. (an RPG
Group company) in a 50:50 joint venture with Dairy Farm International (DFI) and is
modeled on the famous ‘Guardian’ chain stores of Singapore. DFI is a large
international retailer based in Hong Kong with over 2,500 outlets spread over
Singapore, Hong Kong, Malaysia, Australia, and New Zealand and has a turnover of
US$ 12.8 billion. Health and Glow launched its first store in February 1997 in Anna Nagar, Chennai. In a year's time, more stores were started in other areas of Chennai. The stores stock over 4,500 products consisting of a wide range of medicines, cosmetics, skin care products, hair care products, medical care products, health foods/drinks, special diet products, fitness products, music cassettes and CDs, and many more items of personal use. The stores are aesthetically designed and offer a very pleasing environment although the materials used for making display shelves is of average quality. The prescription section includes multinational style stands out as the franchiser company's Hong Kong outfit has provided the décor. Currently, the chain operates about ten pharmacy outlets in Chennai and three retail outlets in Bangalore. The retail outlets range from 400 to 800 square feet in size and register a daily sale of Rs. 20,000 to Rs. 40,000. All the outlets are operated on company ownership basis with premises on lease rent. The company has approximately 100 employees to manage their retail outlets in Chennai. Health & Glow believes in encouraging bulk purchases by its customers. It offers 10 per cent discount on single Rx purchase of over Rs. 1,000/-.

Muthu Pharmacy

Muthu Pharmacy operates a chain of 14 pharmacy stores in Chennai. The main pharmacy located in Pursawalkam area of Chennai has a daily turnover of Rs. 65,000 (70% prescription items and 30% non-prescription items). This outlet is considered to be the largest-sized pharmacy outlet in South India. The company stocks approximately 8,000 pharmaceutical (prescription plus OTC) items. The pharmacy offers counseling and door delivery facilities to its customers. It proposes to start quick delivery service with two independent telephone lines to book telephonic orders
from its customers. It does not believe in offering discounts to its customers as it feels that the customers are most interested in timely availability of genuine products and quick delivery of required items at the customer’s doorstep.

Tru Value

Tru Value is a pharmacy chain promoted by TDPL (Tamil Nadu Dadha Products Ltd., a company taken over by Sun Pharma Ltd., Mumbai). The chain operates around 15 pharmacy outlets in Chennai. The outlets used to offer Rx products at an across-the-board discount of 10 percent and hence ran into trouble with the local trade (distributors & retailers). The trade association stopped supplies through its members and the chain was forced to close down its business.

Subhiksha

Subhiksha, meaning excellent health in Sanskrit, is a chain of pharmacy and grocery stores in Chennai. The chain operates about 80 stores in Chennai and 20 stores in the rest of Tamil Nadu with an average daily sale of Rs. 40,000 per outlet. Subhiksha’s main emphasis is on items of grocery and provisions which account for 90 per cent of its total sales. Rx products account for the remaining 10 per cent. Most of the private medical stores look cleaner and well presented than Subhiksha.

Model Pharmacy Project, New Delhi

M/S Apothecaries Ltd., New Delhi, has set up a ‘Model Pharmacy’ at Hamdard University. The pharmacy was commissioned in April 2000 and operates on a 24 X 7 basis. The daily sale has grown from Rs.15,000 on the first day to Rs. 26,000 in May 2001. The store occupies an area of 600sq.ft with an additional area of 100 sq. ft. for counseling. The average inventory level is Rs. 1 to 1.2 million (equivalent to 40/45 days sales). The stores employ a total of 14 pharmacists (ten regular employees and
four trainees). The medicine sales (prescription + OTC products) account for almost 85 per cent of total sale. Cosmetics and other FMCG products contribute the balance 15 per cent of total sales. The sale of prescription products is around 60 per cent of medicine sales. The OTC products contribute 35 per cent of total sales. The peak sale hours are from 8 am to 2 pm as 60 per cent of daily sale happens during this period. The night shift (8 pm to 8 am) accounts for only 10 percent of daily sale. The location of the outlet within the hospital premises (especially OPD timings) governs the peak sale period. The pharmacy caters to the needs of Hamdard University campus population (1,000 families) and residential population of surrounding areas like Alaknanda. The pharmacy does not dispense the medicine without prescription and dispensed prescriptions are marked as ‘Dispensed’. However, at times, dispensing without prescription is undertaken (a) to a known patient suffering from chronic ailments and known to be consuming the medicine on a regular basis or (b) to a patient appearing genuine. The dispensed medicines are marked with patient useful instructions and are packed in a paper envelope/box or plastic bag displaying the Model Pharmacy catch line ‘Rx Pharm Assist’ in bold. The supply of medicines is invoiced using custom software and every dispensing is invoiced. The small value supplies (where the customer does not care to have invoice) are invoiced through an ‘open bill’ for the shift/day. The pharmacy does not undertake ‘substitution’ without consulting the doctor and substituted supplies are marked as “Please refer to your doctor.” The pharmacy does cut strips and stocks the balance quantity in packets. The inventory is maintained using an alphabetical classification system and all brands containing the same AI are kept in a common box. The procurement/purchase of medicines is done through the local distributors and hence the store has to work on
'retailer's margin' basis. The average margins are: 9-10 per cent for well-advertised FMCG goods/cosmetics, 12-13 per cent for other FMCG products, 18-20 per cent for Rx products, above 20 percent for generic prescription products, 100 per cent for surgical products, and 15-45 per cent for OTC and proprietary products. The pharmacy store has obtained licenses for wholesale as well as retailing of all categories of medicines. The pharmacy occasionally runs promotion programs (screening sessions, disease workshop, counseling sessions, etc.) in the community area. Sometimes, during these programs, a discount coupon (worth Rs.10) is given to attract the customers. The pharmacy does not seem to make any other promotional effort in a serious manner. It has so far not been able to expand to multi-locations (except for a very small outlet in Delhi with a daily sale of Rs. 6,000) in spite of willingness to offer franchising free of cost. The lack of strong marketing and commercial capabilities appears to be the key reason for absence of growth.

All India Chemist and National Medical Store

The All India Chemist and National Medical Stores has two stores located in the subway connecting AIIMS (All India Institute of Medical Sciences) Hospital and Safdarjung Hospital. Both the stores operate from very small premises (barely 150 square feet. each) and occupy a part of subway width to conduct business. The daily combined sale of both the stores is estimated to be Rs. 0.4-0.45 million.

Medicine Shoppe

'Medicine Shoppe' is a franchisee-based retail drug store chain promoted by Cardinal Healthcare Inc., USA. It operates 1,400 stores in ten countries (USA, Canada, Mexico, Taiwan, Philippines, Indonesia, Thailand, Malaysia, and Australia). In India, it operates through a franchisee, Melrose Trading Company Ltd., Mumbai, a company
promoted by Dolphin Laboratories and CI Gandhi family of Calcutta. It started its operations in 1998. The company has set up 11 ‘Medicine Shoppe’ drug stores. It has planned to set up 65 franchisee outlets in Western India during the year 2001-2002. The company has an ambitious plan to set up a chain of 500 ‘Medicine Shoppe’ stores by 2010. It lays great emphasis on the opening day sale of its new outlets. Melrose set up the first ‘Medicine Shoppe’ drug store at Lokhandwala complex, Andheri, Mumbai in February 1999. Initially, the company operated this store for nine months to gain retailing experience and develop franchising plans for the Indian market. The average opening day sale is reported to be Rs. 16,000. Its marketing efforts are focused towards increasing retail outlet memberships. Generally, a membership of 500 is achieved on or before the opening day. The merchandising department negotiates special discounts with non-pharmacy suppliers for supply of such goods to franchisee outlets. These discounts are then passed on to the outlet members. Generally, 4/5 products are offered under special discount schemes every month.

‘Medicine Shoppe’ outlets offer a set of marketing programs such as:

• Loyal customer program (5% discount to members whose purchases exceed Rs. 600 within a period of two consecutive months).

• Referral program (Rs. 10/ Rs. 20 discount offered to members for referring a new member)

• Display shelves hire scheme

• Promotion schemes.

• Free checkups/screening on specified dates at the outlet

• Free counseling sessions on specified dates at the outlet.
The franchisee outlets obtain their prescription drug supplied directly from the approved local distributors. Melrose assists in negotiating the terms of supply with these distributors. It permits the franchisee outlets to sell drugs (26 categories), customer products (13 categories) and surgical products (not specified). It proposes to undertake centralized purchase of the prescription drugs in the long run. During the initial period, the franchisee is advised to maintain the stocks/inventory equivalent to two months’ sales. It is required to target reduction in stocks/inventory to one month’s sales level after period of one year. Melrose provides a ‘start-up list’ and initial order quantities of medicines to ‘Medicine Shoppe.’ The ‘Medicine Shoppe’ outlet at Calcutta has entered into a corporate tie-up with ITC to supply medicines at a special rate to its employees at a nearby Calcutta office. Melrose provides five days’ training to the owner and pharmacist of the ‘Medicine Shoppe’ franchisee, outlet prior to opening of the outlet. The outlet employs two pharmacists, two assistants, and one helper supervised by an outlet manager who is also responsible for accounts and inventory management. The stores are run for 14 hours from 8am to 10 pm and employees work in two shifts.

A SWOT OF THE TRADITIONAL HEALTHSTORE RETAIL

Earlier in this chapter we have had a SWOT analysis of the Contract manufacturing sector, Medical sector and a PEST analysis of the E-Medicine segment. All of them being subsets of the healthcare system. To make a meaningful contribution to the objectives of this research it would be in order to conduct a SWOT of the existing healthcare retailer which would clearly indicate the disconnect of this particular subset with the system.
STRENGTHS:
Low operating costs- Perhaps one of the greatest advantages which the traditional pharmacy has over the organized ones due to the fact he keeps his overheads like salaries, operating costs etc to the bare minimum.
Intense involvement as normally family run- As the owner he is directly involved in running the stores and extracts returns for every activity.
Informal but strong localized customer support- As normally he is on first name basis with many of his local customer’s. This is possible because the base may not be large.
Immediate decisions as only unit operations involved- Being directly involved and operating on a small scale he is able to take spot decisions.

WEAKNESSES
Lack of system- As normally he is not involved in operating professionally he does not maintain records except for his accounting purpose. He may not have any customer programs, formal inventory control etc.
High density of chemists in local area-will often lead to unhealthy competition since such pharmacies are concentrated within a particular radius of area. They will be eating into each others share.
Lack of qualifications and knowledge- hence will not be able to play the role of a health counselor excepting for very commonly used drugs. Often this could be a dangerous proposition particularly with children and aged people.
Questionable standards and practices including legal issues- Very often will not follow even storage conditions, not dispense against a prescription, will not give a receipt etc.
Limited buying power—He buys in small quantities hence will not be able to leverage extra discounts or credit terms etc.

Limited resources—Bank finance could be a problem for him as an individual

Militant attitude—Always under threat from intense competition and the enforcement agencies he exhibits a sense of militancy even at the slightest provocation.

OPPORTUNITIES

To become professional—by getting organized and leveraging the benefits

—Could be part of a chain and get its benefits

Rapidly garner market share in a growing market—Can service extended areas

Build or become part of a brand—By being part of a chain or group his image will go up.

Become part of a healthcare system and enhance reach and make it big—could become preferred service provider, cater to insurance cases etc

THREATS

Made to forcibly upgrade or get phased out—with increasing competition and practically no differentiation it is only a question of time before external forces act

Entrance of chain pharmacies—with our country offering excellent growth opportunities and with FDI being liberalized their entrance is inevitable

It is a fact that the unorganized sector has a stranglehold at present in the healthcare retail segment. The organized sector with the various advantages it has over the unorganized sector in the form of value addition and skilled personnel is slowly but surely making a foothold in the healthcare retail sector. The players in the
unorganized sector are not ignorant of this risk from the organized sector. With the introduction of FDI in the retail sector in the near future, there is a potential threat posed to the retailers in the unorganized sector. Even though the government has so far not permitted introduction of FDI in retail except for partial permission for single brand retail with a view to protect the rights of the domestic unorganized players, the entry of foreign direct investors is a sure possibility in the near future particularly with the gains which could accrue to the consumer as well as the government.

The challenges the sector faces are substantial, from the need to improve physical infrastructure to the necessity of providing health insurance and ensuring the availability of trained medical personnel.

But the opportunities are equally compelling, from developing new infrastructure and providing medical equipment to delivering telemedicine solutions and conducting cost-effective clinical trials. For companies that view the Indian healthcare sector as a glass half full, the potential is enormous. While the traditional retailer has his strengths his weaknesses and opportunities are glaring and far outweigh his strengths while the threats are imminent. More so with the other subsets of the healthcare system getting organized. If he would like to play an active and productive role as per the flow chart (Figure 4) in the Healthcare link he has to make himself employable/professional.