

ANATOMY OF A MEDICAL COLOSSUS

Apollo Hospitals Enterprise Limited started with hubs, added a hub and spoke strategy and now is inventing a hub and spoke and wireless model.



On a typical day, 19,000 patients stream into the 43 centres of the Apollo Hospitals Group. In a single day, the group does over 150 MRIs, 300 CT scans, 35-40 cardiac surgeries, 35,000 lab tests. Between them the 7,000 odd doctors employed by the group clock over 50,000 consultant hours a day.

It's hard work being Asia's largest healthcare provider. And, mind you, hospitals are only a tip of what the group does in healthcare. It runs pharmacies, offers medical back office solutions, runs a hospital consultancy firm, has a medical equipment sourcing company, operates a health insurance company, has a string of nursing and hospital management institutes, pioneered telemedicine in the country and has got into clinical research. And if there was anything left out – it is addressing those gaps too, for instance, it has announced plans to run wellness centres.

But what's the most surprising fact is that all these activities and new initiatives are monitored with an eagle eye out of the chairman's office in Chennai. It's 25 years since he

laid the foundation for India's first for-profit private tertiary care hospital, but even today, founder 75-year old Prathap Reddy, is firmly in the saddle. Every business entity that he has created might have separate MDs or CEOs, and his four daughters have been well groomed for succession playing key management roles, but at the end of the day, he is the one overseeing strategy and vision of the group. Nothing demonstrates this better than the fact that for this case study, when we approached various top executives to understand the group's strategy, all the questions were passed on to chairman's office. The buck very much stops there still.

The larger goal for him is to "touch more and more lives". He believes Apollo's integrated model has been and will remain the key strategic differentiator that will help his group achieve this goal.

Tertiary care hubs

Apollo's integrated model was an evolutionary development. It is said that nature abhors a vacuum – and so does Apollo. When it sees a void in the healthcare

Apollo Hospitals Enterprise Ltd Group Business Basics		
Business	Mission	Numbers
Apollo Hospitals (Founded 1983)	Provides tertiary and quaternary care	<ul style="list-style-type: none"> • 43 centres • 10,000 beds • 7,000 doctors • Revenues: 1,150 crore • Growth: 28%
Apollo Global Projects Consultancy**	Does feasibility studies, project management and operation management for hospitals.	<ul style="list-style-type: none"> • Currently managing 17-18 hospitals apart from 10 other projects • Earn royalty of 3-5%
Apollo Pharmacy**	Sells drugs at the retail level	<ul style="list-style-type: none"> • 712 outlets (one outlet added every 23 hours) • Revenue: Approx Rs 600 crore
Apollo Hospitals Education and Research Foundation (Founded 1991)	Offers a Masters degree in Hospital management; trains nurses and medical technicians. Leads Research for Apollo Hospitals Group and involved in Clinical Trials. Research division is first single largest site management organization (SMO) in India	<ul style="list-style-type: none"> • Every year approx 600 nurses and 40 hospital managers graduate. • 160 clinical trials are being conducted in various sites
Apollo Family Health Plan Limited. Subsidiary company - Apollo has 49 per cent stake in it	Acts as Third Party Administrator in health insurance	<ul style="list-style-type: none"> • More than 40 lakh customers
Apollo Health Street Limited (subsidiary company with AHEL holding 43% stake) (Founded 2000)	Provides revenue cycle management solutions to the healthcare industry; back office services; BPO and IT arm.	<ul style="list-style-type: none"> • 100 plus customers • 2,500 employees • Revenue: Rs 480 crore
Apollo Tele-medicine Networking Foundation (Founded 2000)	Provides access to medical care to rural communities without healthcare infrastructure	<ul style="list-style-type: none"> • 100 centres, including neighbouring countries and Africa
Apollo Health and Lifestyle (AHL) (Founded 2002)	Runs network of Apollo clinics, and the newly introduced Apollo Cradle.	<ul style="list-style-type: none"> • 100 Apollo clinics • 2 Apollo Cradle. • Franchise model, royalty of 6-10%
Apollo DKV Insurance Company Limited (Apollo has just 20 per cent stake) (Founded 2006)	Offers insurance; only the second standalone health insurance company in India.	<ul style="list-style-type: none"> • 17,000 policies sold in 2007. • Revenue: Rs 60 crore in 2007-08

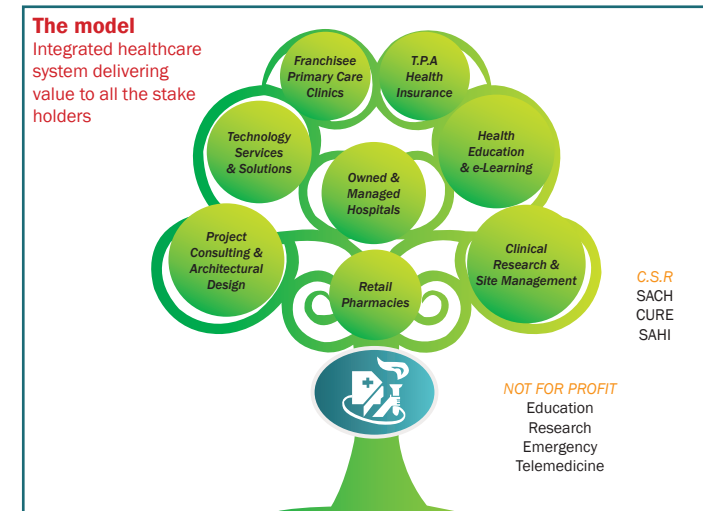
Note:
**Consultancy and pharmacy divisions were started when the first hospital began, but these were part of another group company, Indian Hospital Corporation, which later got merged with AHEL in 1999.

chain, it fills it. Over 25 years then, it has filled a lot of voids by setting up healthcare hubs.

Apollo started in tertiary care. Back in the early 1980s, when Dr Reddy set up his first hub, the Apollo Hospital at Chennai, healthcare in India was largely the responsibility of the government. Whether it was primary care (treatment on an out-patient basis), secondary care (hospitalisation for "non-critical" ailments) or tertiary care (treatment of critical ailments that require high-tech and expensive facilities and equipment), the choices before the Indian public were very few.

Either there were government run hospitals and clinics or there were hospitals run by charitable trusts or missionaries.

In those days for cardiac surgeries, those who could afford it would go abroad or go to hospitals like Christian Medical College, Vellore, a byword in quality, but where there was a long waiting time. This was the milieu to which Dr Reddy, a cardiologist, had just come back to India after a 10-year stint in the US. He had started a cardiology practice but would send those needing serious surgeries abroad. One particular incident – the death of a 37-



THE POT AT THE TOP

The tertiary part of the business and the specialties that go with that turf still generate most of the revenues

Most corporate hospitals in the country have become synonymous with tertiary care and especially with super specialties. It's a conscious strategy. For one, this is where the glaring need gap is; secondly, the high investment requirement is an entry barrier for smaller players; third, there is higher revenue realisation per patient; fourth, less competition from doctor-entrepreneur led facilities and finally, an ability to differentiate product offerings.

Today, even when there are so many tertiary care players in the field, new entrants are still entering the super specialist segment because of an added dimension - they want to attract research. Pharma companies and contract research organisations are always scouting for partners among hospital groups to conduct clinical trials at a hospital, which is an added revenue stream. McKinsey estimates that the Indian clinical research (CR) market will grow to \$1.5 billion in value by 2010.

The explosion in lifestyle diseases in India (today obesity, heart ailments, diabetes and orthopedic complaints) also constitutes a big opportunity. Cancer, obesity, asthma, diabetes and cardiac are five areas that Ernst & Young predicts will contribute to major chunk of Indian hospitals business.

Given the fact that at Apollo, currently, five departments – cardiology, orthopedics and trauma; neurology and neurosurgery, radiology and imaging, oncology - contribute over 75 per cent of its revenues, it makes strategic sense to focus on these.

Business focus	Percentage revenues
Cardiology and Cardiothoracic surgery	27%
Orthopedics and Trauma	20%
Neurology and Neurosurgery	13%
Radiology and imaging	9%
Oncology	7%

With 60 per cent of cardiac patients in the world expected to be from India by next year, not surprisingly, Apollo is one of the earliest movers to beef up its technology in this space – it was the first to get the 64-slice CT scan and, this September, it was the first to upgrade to the newly launched 320-slice CT scan system installing it at the Chennai hospital. At \$4 million, the system does not come cheap. A heart-scan on this system typically costs Rs 19,500.

Cardiology has always been a core area – last year, when Apollo managed to get star cardiac surgeon Dr Naresh Trehan, founder of Escorts Heart Institute, to join its Delhi hospital, bed occupancy surged to unprecedented levels. On several days, Indraprastha Apollo hospital touched peak bed occupancy of 524 beds out of 529 beds, ascribed in good part to Trehan's celebrity presence since his patients migrated to Apollo.

Now, Apollo, like other rivals Wockhardt and Max, is getting into the quaternary care centres space. This means super superspecialised centres, for example, a joint and hip replacement surgery centre, a neuro-surgery centre, where revenues are the highest. ■

year old patient who needed a coronary bypass surgery urgently but could not afford the high fees of US\$ 30,000 at Texas Heart Institute in the US, where Reddy was sending him, spurred his decision to start an international standard hospital in India.

He based it on the models he had seen in the US – a professionally managed corporate hospital, which could keep costs low by maintaining strict operational efficiencies. When he worked in the US, Dr Reddy had seen and been inspired by how the trust hospitals and private hospitals were working side by side and each had their own target patient/ consumers. Around that time, he met Thomas Frist, Chairman, Hospital Corporation of America, the largest private hospital in the US, and this influenced him. India would get its first private hospital and he would follow the HCA model. Only those who could pay would go to Apollo.

Apollo's initial focus was on tertiary care because that was where the glaring need gap was. To start Apollo Hospital, a 250-bed housed in a modest 5-storey building on a narrow lane in Chennai, Dr Reddy had to use his own financial resources as well as raise money from the public (he went to the market with a primary issue as early as 1983, following it up with a rights issue in 1984). At that time the financial regulations were such

that he could not borrow money from international banks or foreign sources.

The other health care hubs

In a sense, it was the environment in which Apollo began its journey that has helped make it as integrated a player as it is today. When Apollo Hospitals started, the requirements of the hospital were many and since there was no existing player in India to meet them, Apollo's promoters kept getting into different allied businesses to meet its needs.

For example, Apollo's main rivals today – Wockhardt Hospital, Max Healthcare and Fortis Hospitals – all had the luxury of hiring a hospital consultant when they were setting up. But when Apollo began, there was no one and it filled the void by setting up a hospital consultancy company, Indian Hospital Corporation, to manage all the hospitals it planned to open. Over the years, the consultancy company would go on to bring in revenues for the group by undertaking outside projects – and in 1999, IHC was merged with its parent.

Similarly, Apollo got into medical education because there were no hospital administrators in the country. Doctors doubled as administrators in those days. So, Apollo's started the hospital management academy in Hyderabad. To address the huge shortage of nurses, it started a

WE DON'T WANT YOU TO STAY

Well-run hospitals aim for a low average length of stay. Hospitals need to turn over beds the way restaurants turn over tables

If you look at the balance sheet of the big corporate hospitals in India, almost all of them have a column on average length of stay (ALOS) of patients. In hospital administration this is a big issue. A low ALOS shows effective administration.

Internal studies by hospitals have revealed that the first four days of patient stay at hospital are the most revenue intensive for a hospital thanks to scans, tests, surgeries. Beyond that when the patient is recuperating, it is akin to hotel stay (and that too a 5-star hotel stay), with the patient just paying the room rent at a very subsidised rate. So, now efforts are on to cut average stay down by a fifth – this could be equivalent to adding another 100 beds.

Achieving low ALOS would also free up beds and address the shortage issue plaguing the country.

Technology is the way that Apollo Hospitals is going about trying to reduce stay. Introducing more and more non-invasive methods of scans and tests and minimally invasive surgeries can speed up recovery time. Today, the 320-slice CT scan is an out-patient procedure, whereas the conventional catheter angiography means hospitalisation. Patients can usually walk out four days after a minimally invasive surgery whereas in open surgeries it takes much longer.

For Dr Reddy, a big strategic insight over the years, has been to try and offer a lower cost treatment while improving access, quality, efficiency and outcomes. To bring down costs, it has fought hard to do four things – decrease cost of consumables, drugs (thanks to high volumes of purchase, its procurement company drives a hard bargain and passes benefits to customers – for instance, cancer patients at Apollo undergoing six chemo cycles can get drugs for the last one free), procedure time and length of stay. Deng Xiao Ping focused on the four modernisations, Dr. Reddy focuses on the four reductions.

COMPARISON BETWEEN US HOSPITAL AND INDIAN HOSPITAL

COUNTRY	CAPITAL COST PER BED	AREA PER BED	REVENUE PER BED DAY	EBIDTA MARGIN
US	\$600,000–\$1 million	2,000 – 2,800 sq ft	\$2,800	9-12%
India	\$120,000–\$160,000	750 - 1,000 sq ft	\$350	25-35%

nursing college (migration of nurses from India to the US is very high and attrition rate of nurses even today is 35 per cent in most hospitals). It started a medical equipment company so that it could negotiate good prices for medical equipment and medicines that it needed for the hospitals. (Medicines were the single biggest expenditure for the group's hospitals in the early days using up almost 49 per cent of the operating income.)

The obvious next step was to start pharmacies in the hospitals. Later it spun this off as another business and stand-alone Apollo pharmacies were set up. Today, Apollo's pharmacies business has become so profitable that there are reports that the group is planning to hive it off, go in for acquisitions and ramp it up further. (The domestic pharma retail market is today valued at close to Rs 50,000 crore and expected to double in the next five years thanks to sudden action taking place in this sector – among others Religare Wellness (a Fortis group venture), Manipal Health Systems and now Reliance group are foraying in this segment with ambitious rollouts.)

In fact, look closely at the operations of Apollo Hospitals and every link in the supply or services chain appears to be at some point or the other have been started by a group company. For instance, for even something like the front office,

the laundry services, catering and travel arrangements, there was Sindhoori Hotels, a family-owned chain to do the needful.

1999 marked something of a turning point. At the advice of ICICI securities, Dr Reddy merged the different entities he had formed – IHC, Sindhoori Hotels, Deccan Hospitals, etc, into one entity. The integrated model had become explicit. This spurred the group's dramatic expansion from this year on.

For example, by 1999, the group's flagship hospital in Chennai had managed to earn such a formidable reputation for itself that it was turning away 30 odd patients everyday because of lack of availability of beds. Thanks to the merger with Sindhoori Hotels, it acquired the hotel next door on Greams Road and converted it into a hospital, ramping up all the facilities. Today, Apollo Hospital Chennai has over 1,000 beds and is consistently ranked as one of the best hospitals in the country (Week Magazine-IMRB annual Hospitals survey).

The latest addition to coverage of the healthcare chain is insurance. In 2006, only 30 million Indians had premium based health insurance. About 80 per cent Indians pay for their healthcare from their own pockets and as every consulting firm from McKinsey to E&Y has pointed out increased health insurance coverage will raise footfalls in corporate

WHAT GLASS WALL?

Dr. Reddy has been grooming his daughters to play a major role in the business



The Apollo Hospitals group remains very much a family owned and managed enterprise. Reddy and his four daughters – Preetha Reddy (group MD), Sunitha Reddy (executive director, finance), Shobhana Kamineni (executive director, projects and new initiatives and procurement) and Sangitha Reddy (executive director, operations, HR and IT) - are the key decision makers of the group. Every hospital and allied business has an individual CEO or MD, but all the strategic decisions are taken by the family with Reddy clearly holding the management reins.

No proposal is acted upon without Dr Reddy's nod – eldest daughter Preetha who is the group managing director openly says that although they work as a team, the father is the key decision maker. To be fair, insiders say, Dr Reddy gives a patient hearing to every fresh idea or proposal that is thrown up and once he commits support, backs it all the way.

He and his extended family (daughters, son-in-law, etc) own controlling interest of the hospitals group. Within that, some businesses are owned completely by the family. Other investors are public, financial institutions and VC Apax Partners.

Interestingly, Preetha his eldest daughter and MD of the group was the last to enter the family business, a good ten years after Apollo Chennai began. Third daughter Shobhana was the first among the siblings and in fact employee number three of the organisation. She oversees the pharma retailing business and has spearheaded the health insurance venture. As director new initiatives, it's her job to scout for new opportunities. Youngest daughter Sangitha Reddy, the dynamic head of Apollo Health Street, based in Hyderabad, wanted to be a doctor but in an interesting echo of the past, was dissuaded by her father and brought into the family business. Years ago, Dr Reddy's father didn't want his son to become a doctor but get into business!

Apollo is an appealing exception in the world of large MNCs – family-run or if GO is allowed a neologism in honor of Dr. Reddy's daughters, womanagered. ■

hospitals. Although Apollo had at various times in the past tried to play a pro-active role in raising coverage among Indians (through its Family Health Plan, and various initiatives with Mediclaim), it knew that only

through a stand alone health insurance company could it really double or triple coverage among Indians. In 2007, it set up a joint venture partnership with DKV, a European insurance major. With a sales network of 5,000 agents,

Timeline

1983	1984	1985	1986	1987	1988	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Inauguration of Apollo Hospitals, Chennai by Shri Giani Zail Singh (President of India)	Apollo Hospitals, Commercial operations begin on 1st Feb 1984	Cardiac Surgery Programme completes 100 surgeries with 98% success rate	Medical Insurance scheme introduced in collaboration with United India Insurance Company Limited.	Apollo Hospitals declares maiden dividend of 10%	Apollo Hospitals inaugurated in Hyderabad	Dr. Prathap C Reddy and Chief Nephrologist, Dr. M. K. Mani both awarded with the Padma Bhushan Award, in respective fields.	Apollo Hospitals introduces Coronary Artery Stenting for the first time in India	Apollo Hospitals launches 24 hours ambulance service with wireless facility	Apollo Speciality Hospital Inaugurated	First bone marrow transplantation performed on a patient from Sri Lanka.	Apollo Indraprastha Hospitals inaugurated in New Delhi	Nursing School is enhanced into a college and commences degree programme with affiliation to the Dr. MGR Medical University	Apollo Hospital Chennai awarded the ISO 9002 Certification	Orthopaedic Centre opens at Apollo Speciality Hospitals.	First telemedicine facility in the country inaugurated at Aragonda by Bill Clinton	The hub and spoke model -Apollo Hospitals inaugurated in Bilaspur and Mysore	Dr. Prathap C Reddy receives the Ernst & Young Entrepreneur of the Year Award	American Heart Association/ (AHA) appoints Apollo Hospitals as International Training Organization	Apollo rated the "Best Private Sector Hospital" in India by The Week magazine	Apollo Hospitals, New Delhi becomes the first hospital in India to receive accreditation from JCI, USA	Apollo Hospitals is nominated as "Consumer Healthcare Super brand" in an independent survey conducted by the Superbrand Council in association with AC-Nielson	First Health City in Asia launched on June 15, 2007	Dr. Manmohan Singh, Hon'ble Prime Minister of India inaugurates The Apollo Reach Hospitals

Apollo DKV is aggressively selling policies. Now other rivals like Max (which has just inked a JV with UK insurer, Bupa and Fortis Healthcare's owners Shivinder Singh and Malvinder Singh through their Religare Enterprises) are all getting into the space.

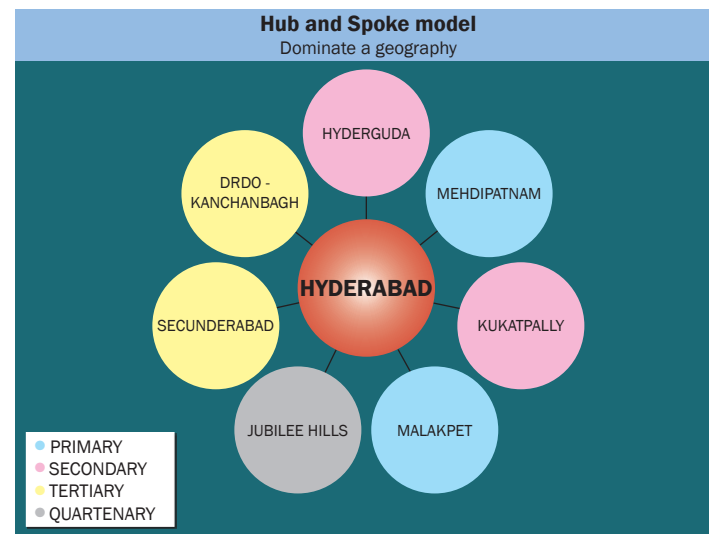
The integrated model thus actually came about through a combination of serendipity and momentum, or you could call it lack of choice. But it proved so effective and led to so many operational efficiencies that the group decided to actively pursue this model. The strategy has certainly more than paid off - hospital consultancy generates revenues, the diversification into primary care helps drive volumes into the main hospital, and the presence in all the key areas have contributed to operational efficiencies.

Monika Sood, a vice president at the consulting firm Feedback Ventures, puts it this way, "The integrated model leads to a lot of operational efficiencies. For instance, Apollo's procurement company (both for pharma as well as equipment) procures for the entire group at a central level,

and due to the volumes they are able to negotiate better prices. Similarly, the clinics help because you drive in patients to your high end hospitals and at the same time can manage patients after they have received treatment. Follow up visits for treatment at a clinic are most cost efficient for the patient as well as the hospital."

Even the corporate social responsibility initiatives of the group such as the SACH (save a child's heart) project, as well as not-for profit initiatives like Health Education, Telemedicine, Research, are expected to be eventually beneficial to the hospitals business. Telemedicine which brings the hope of specialist support to remote hamlets, where often even a basic healthcare giver is hard to come by, has already generated tremendous goodwill.

In addition, telemedicine, Dr Reddy thinks will eventually play a crucial role in Apollo's international marketing strategy. Africa is a growth market for Apollo both through medical travel and through telemedicine (Apollo already has a presence in Nigeria), preliminary diagnosis



etc can be done. Today, Apollo has telemedicine connectivity with 100 centres. According to Dr Reddy, soon 52 African countries would benefit from the services provided by five to six hospitals from India.

The hub and spoke model

In India, most people go to the nearest medical practitioner for basic medical care - and this usually is the local GP's clinic. By situating small clinics in neighbourhoods at the same prices as the GP, a corporate hospital not only builds familiarity with the brand, but offers additional benefits since they can drive in patients needing specialised care to their high end hospitals and provide follow up care.

Apollo's clinics started with this intention. But before he got into primary care, Dr Reddy had already moved into secondary care through the First Med hospitals. The model he wanted to adopt was to create a large tertiary care hospital, situate a secondary centre in the area and create a network of primary clinics (See chart).

The hub and spoke model has provided Apollo with a competitive advantage over players like Max. Monika Sood comments, "Apollo had set up tertiary care centres at first and then came the secondary and primary care centres. So, if they had to send a referral from a primary care centre for a expensive procedure, they could do so to an own hospital. Max first set up spokes and then hub. They found that patients who needed to be referred to a tertiary had to be sent to a non Max hospital and would perhaps not come back."

Through Apollo Reach, a new initiative started this year, the group is spreading the spokes further, moving them to Tier II and Tier III cities. Given that a high number of patients coming to Apollo's big tertiary hospitals are from smaller cities (e.g. the Delhi hospital gets patients from Bhopal, Lucknow, Kanpur, etc), it makes sense to spread the presence.

Other hospitals have adopted this model too. Given that urban centres are soon expected to get saturated (Columbia Asia,

Reliance, Emaar Properties, Global Health, Paras Hospitals all getting into the space), it's a logical move to get into Tier II and III towns - besides this March, the government declared a five-year tax holiday under Section 80-1B for new hospitals investing in Tier II towns, an added incentive.

Global strategy - dollar ambitions

In 2005, Apollo Hospitals, Delhi became the first hospital in the country to become accredited by Joint Commission International. Now, six of the group hospitals

million people) to come to India for treatment. But, with recession looming large and several employers in talks with insurance companies to opt for cheaper premium packages, suddenly a new market is opening up. "Today the market is more like 65 million Americans," says Pradeep Thukral.

That's just the US. Then there are the UK and Canada markets where Indian hospitals hope to get patients who are impatient with the long waiting list for non-emergency procedures like joint and hip replacement surgeries.

International patients spell higher revenues per bed for

into Bangkok, every day, there are just around 15 flights in to Chennai Airport, where Apollo's largest hospital is. And unlike Bangkok, where a large majority of medical tourists are for cosmetic procedures, in Indian hospitals, people come for high end procedures like cardiology, oncology etc, where uncomfortable travel could be a deterrent.

Recognising this infrastructure void, Apollo is now setting up its own infrastructure at airports to smoothen out immigration and customs hurdles, facilitate and assist

pat on this subject. As he points out, even if India earns one per cent of the global healthcare industry, which is an almost \$3 trillion industry, then that translates into a direct income of \$30 billion for Indian healthcare companies.

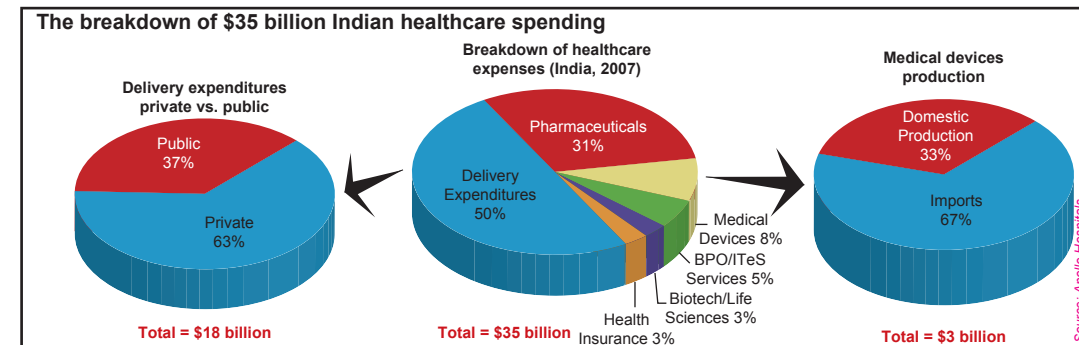
Future strategy

Coming back to his goal of a billion patients, Dr Reddy feels that technology is the key: "Today we have treated about seventeen million patients. How can I touch a billion? Is it by placing five hundred thousand doctors all over the country or by establishing hundred thousand hospitals across the country? I have to think of some other innovation," he says.

That innovation is wireless technology. This June, Apollo group tied up with Ericsson to use wireless technology to provide medical care. With telemedicine facilities available already at 100 centres, Dr Reddy hopes to touch through wireless.

It's early days yet, but the health super highway that he is building in partnership with IBM and Ericsson should bring healthcare closer to rural Indians.

Looking back over the 25 years Apollo started with hubs and then added a hub and spoke strategy. Now it is working on phase 3, a hub and spoke and wireless model. What the government through its vast network of PHCs (Primary Health care centres) has not been able to do, provide access to healthcare for every Indian, can Apollo do it? ■



have become JCI accredited. It spent a lot of time, money and effort to get this accreditation (the fee is about 2.5 crore for the inspection and accreditation and the accreditation lasts only for 3 years).

But the explanation offered by Dr Reddy was simple - the accreditation puts the hospital on a quality level at par with hospitals like Mayo Clinic and the Cleveland Clinic. It also makes it easier for patients with medical insurance in the US, the UK and Canada to opt for a surgery at an Apollo Hospitals and get reimbursed.

Currently, Indian hospitals are looking at the uninsured US market (which number about 45

Apollo Hospitals as top end beds are given to them and allied services - translation, special menus etc - add to revenues.

Currently 10 per cent of Apollo's total revenues come from medical tourism. Looking at the infrastructure that Apollo has been creating (translation desks, reserved top end beds for international patients at its Health city, tying up with medical travel companies etc), it is clearly aggressively trying to grow the segment.

Studying the obstacles to medical tourism, the group has identified airport infrastructure as a major one. Compared to Thailand, which has 260 international flights flying

patients at airports. In Delhi, it is even set to run a clinic at the international airport.

Apart from targeting international patients, Dr Reddy also talks about exporting healthcare services, which he feels could spell even bigger revenues. The first step in exporting services is the medical BPO business, second is a healthcare staffing business where nurses are being trained to work in hospitals in the west (Max too has got into this space). The third opportunity is managing hospitals and the fourth is the consulting business, from feasibility studies to setting up the hospital.

Dr Reddy has his mathematics



**NEXT ISSUE:
CONSTRUCTION**