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CARE Hospitals

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R. Vasantha Kumar

ACCESS Health International

Centre for Emerging Markets Solutions

Indian School of Business, Hyderabad

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CARE Hospitals (CARE), was founded in 1997 by a group of physicians, chaired by Dr. Soma Raju, who worked at Nizam's Institute of Medical Sciences (NIMS), a public medical school in Hyderabad (India) for approximately ten years.

Annoyed by the bureaucratic systems followed at the public hospitals, these physicians decided to establish the CARE Hospitals and provide world class treatment. The first hospital was started as a 100 bedded facility offering cardiac care in Hyderabad. Today CARE Hospitals has grown to 1720 beds with 12 hospitals spread across India and is emerging as one of the leading healthcare providers in India. It is the fourth largest healthcare provider in India (CRIS-INFAC report, 2006) and is focused on providing quality care at an affordable price for the middle income group.

Though cardiology is the main foray of CARE Hospitals, it also provides other speciality services such as Neurology, Neurosurgery, Urology, Orthopedics, Plastic surgery, Vascular surgery, Medical and Surgical Gastroenterology. The Cardio-Thoracic department at CARE Hospitals is considered one of the centres of excellence. The competence and quality is equal to the best centres in the world. Thousands of open-heart procedures are carried out, which include Adult Cardiac Surgery -- like Coronary Artery Bypass Grafting (on-pump & off-pump), Heart Valve Surgery, and Paediatric and Neonatal Cardiac Surgery.

Introduction

The Need for an Efficient Healthcare System

India is a land of stark contrasts characterised by a heterogeneous health care delivery system catering to the needs of 1.2 billion people exhibiting vast health disparities. This is apparent from the fact that the mortality rate for children aged less than five years in India's lowest wealth quintile is three times that of the highest wealth quintile; and the measles immunization rate is less than half[1]. Similar disparities also exist in the quality of health care services offered by the hospitals in India, especially between the public and the private sectors.

The public health sector in India is not only weak but also under-utilized and inefficient. While India's public hospitals have struggled with their operations, the private health sector has seen an explosion of interest concurrent with the country's economic growth. Today, almost two-thirds of Indian households rely on private medical care. This preference for

private medical care appears to cut across classes to the extent that even rural and paramedic care are dominated by the private sector.

However, even though India's elite institutions now rival top Western hospitals in quality (and have attracted a sizable number of Western patients and thus media attention also), these private systems were designed for and are geared to the health needs of India's middle class—and thus target the Indian middle-class budget—with the public sector serving as a safety-net provider. This is not a system designed for equity, but it is one in which world-class capacity has developed in a short period in the private sector[2].

The innovation

The Concept

CARE Hospitals has been established with the mission of maximizing accessibility and providing high quality care at lower costs. This mission drives all operations at CARE Hospitals. The core philosophy incorporates an uncompromised value system, high ethical standards, and focus on high-quality clinical care (including incorporation of international best practices[3]).

> ***"CARE Hospitals' philosophy revolves around cost control and quality care."***
>
> ***– Dr. N Krishna Reddy, CEO, Care Hospitals***

In keeping with these aspects, CARE Hospitals adopts an evidence-based medical practice and emphasizes on accurate diagnosis to minimize the costs. It has developed its clinical processes to mitigate unnecessary expensive invasive procedures.

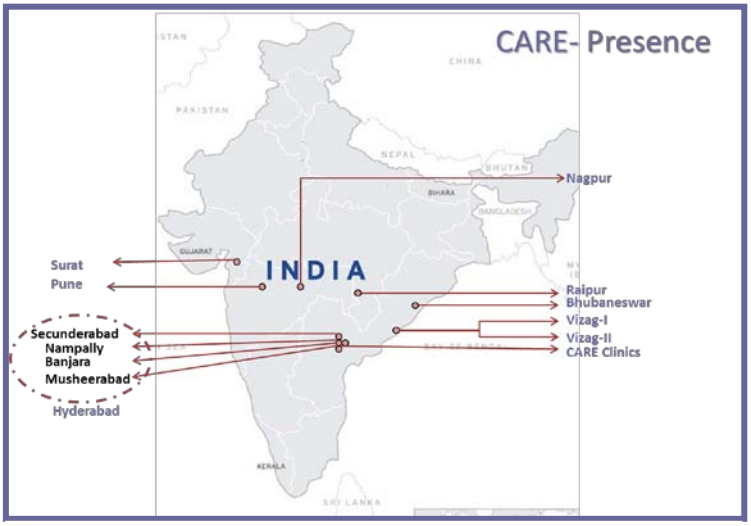

Fig 1: CARE Hospital Branches

This is often reflected in the conversion rate of outpatient consults to invasive diagnostic procedures and invasive diagnostic procedures to invasive treatment procedures. The approach has successfully driven CARE Hospitals from being a 100 bedded facility offering cardiac care in Hyderabad to a group of 12 hospitals across India with 1720 beds.

According to Dr. Krishna Reddy CEO, Care Hospitals, four critical components of the CARE Hospitals model are:

1. Drive for efficiency in supply and equipment's
2. Utilize tiered pricing structures (multi-tariff system) to cater to patients with varying financial means
3. Create an academic atmosphere that provides non-financial rewards for physicians and other staff
4. Employ a team-based model for care delivery (with peer review) to maintain internal standards and promote unique culture

Operating model

The operational model of CARE Hospitals largely revolves around strategic cost control. Through market research, the affordable price point for CABG and related care has been determined as approximately USD 2500. All processes of CARE Hospitals have been developed to meet this price, without compromising on quality, through constant reengineering of the service delivery model.

- **Drive for efficiency**

As fixed costs (equipment cost, manpower cost) form a major share of the overall expenses, CARE Hospitals attempts to reduce the per unit cost by increasing the efficiency of the overall system. For instance, radiology equipment at CARE Hospitals is used continuously to avoid periods of downtime for capital equipment. For this purpose, the outpatient studies are conducted by appointment during the day and inpatient radiology studies are conducted during the night.

Similar emphasis on efficiency is also applied to supply-chain management. The materials management practices constantly undergo intense scrutiny, with the objective of reducing the costs of supplies without compromising on the quality. For instance, CARE Hospitals

actively evaluates non-critical equipment (such as monitors) from lower-price sources (such as China) by carrying out head-to-head, month-long comparisons with more costly global brands; and actively deploys these lower-cost technologies across all of its facilities if they meet internal quality standards.

This relentless drive for efficiency and lower cost of care, has led CARE Hospitals to develop technologies as an offshoot of its health care delivery business and commercialize them. Relisys, a part of the CARE Group (which includes CARE Hospitals and CARE Foundation), is focused on the commercialization of indigenous technology and equipment. Another major aspect of CARE's operational model is its utilization of task shifting among its staff. Under a process which CARE labels as "de-skilling," many functions of higher level personnel are repackaged and assigned to less-trained individuals deemed to be appropriate for the job. With this task shifting, more highly trained staff are allowed to optimize their potential by focusing on higher-skill functions, while more routine or less demanding tasks are carried out by individuals with less education or training. For instance, physician assistants substitute the work of residents and nurse physicians substitute the work of residents in Care Hospitals.

- **Multi-tariff system**

CARE believes that affordability needs to be considered according to the per capita income of the people and varies for each individual. CARE has thus deployed a "multi-tariff system" for the provision of standard services, charging higher fees for higher-income segments. This tiered pricing model is one of the cornerstones of the CARE's business model, allowing the organization to provide the services either with minimal margins or below the full cost (but above variable cost) to approximately 75 percent of its patients. There is explicit focus on limiting fixed costs while maintaining quality, so price discrimination occurs primarily on capital costs and secondarily on technology and services. Patients can thus enjoy more-elegant rooms by paying more, but the technologies used for the procedures are the same for all patients.

- **Academic atmosphere**

CARE Hospitals is based on an "academic atmosphere", and lays a lot of emphasis on training, education and continuing medical education. Research is encouraged and the teams of doctors meet regularly to share experiences. This promotes discussion and knowledge transfer. The management recognizes the need for motivated staff to sustain this model, and focuses on non-financial returns such as professional satisfaction.

In 2010-11 CARE has conducted 13 studies and of which 11 are International studies.

- **Team based approach**

CARE follows a team-based approach which is built on specialist groups and promotes ethical practices, peer review, continuity of care and sub-specialization. It has developed physician leadership at each facility and empowers physicians to take decisions. Inputs are actively sought from the doctors in developing various strategies, policies and plans. The participatory environment creates ownership and commitment.

CARE has also developed a participatory budget process that includes the heads of nursing, teams of physicians, medical directors, marketing representative and others. It is a bottom-up and top-down approach.

Reaching out to people

In order to become an integrated health care delivery model, CARE has started primary health centres and urban clinics. It believes that healthcare for the masses cannot be improved solely by reducing the gaps in the bed and doctor ratio. The entire healthcare ecosystem needs to be addressed in order to implement lasting and impactful solutions. It also feels that healthcare will remain a complex unresolved challenge unless aspects such as community participation, public health measures, accurate primary data and appropriate financing solutions evolve. Hence CARE's rural healthcare system has been developed on the basis of four major pillars- training & local capacity building, technology solutions, supply chain management and micro insurance program.

The key components of the rural primary care model of CARE include a focus on empowering non-physician providers by training community workers to become Village Health Champions (VHCs), serving as the interface between the villagers and health care delivery networks. These VHCs are expected to refer the patient to CARE Arogya Kendra, the first referral point. Robust technology platforms are used to provide VHCs with access to health information, guidance on medical evaluation by pre-developed algorithms, and direct access to health care personnel, to offer further consultative services in real time. VHCs also have entrepreneurial opportunities to build sustainable business models to provide health care and additional services within their communities.

CARE's urban clinics are called as "CARE Clinics". Currently there are two CARE clinics operating in Hyderabad. Apart from the advanced wellness-centres, each CARE Clinic is equipped with state of the art diagnostic facilities, pharmacy, out-patient departments. In addition to the routine checks, these clinics offer disease management and wellness Programs. Under the pharmacy component of this model, CARE provides medications at the clinic and also maintains a retail store with a home delivery option. Under the Diagnostics aspect, Care provides radiology services, ECG, TTE, and phlebotomy, with analyses done at a central lab. These clinics will also have telemedicine hook-ups to hospitals as needed. Under the consultation module, physicians (both primary care and specialty) will be available at the clinics, which will accommodate walk-in patients as well as scheduled patients. The wellness component will consist of preventive health care checkups in a friendly, non-hospital environment.

Quality indicators of nursing department are no of sentinel events, no of near misses analyse, percentage of accidental removal of tubes and catheters, Incidence of haematoma at puncture site, percentage of medication error, incidence of adverse drug reaction, incidence of falls, nurse patient ratio, percentage of employees provided pre-exposure prophylaxes, pressure ulcer, surgical site infection, blood stream infection per 'ooo central line days, ventilator associated pneumonial per '000 ventilator days, urinary tract infection, needle stick injury

Quality Management

CARE Hospitals adopts a robust system to ensure quality. The quality control department at CARE maintains standard protocols for all departments. There are four committees - Patient quality assurance committee, Diagnostic quality assurance committee, Administrative quality assurance committee and Hospital infection control committee, to monitor and analyse quality related issues.

Each department is given a set of parameters and is measured against that. Altogether there are 64 parameters against which the hospital performance is measured.

Apart from the committees, it conducts an executive walk each week around the campus to identify safety related issues in the Hospital and provide corrective & preventive measures. CARE Hospitals is in the process of getting NABH (National Accreditation Board for Hospitals & Healthcare Providers) accreditation.

Human resource management

CARE Hospitals understands the importance of human resources in effective performance of the hospital. Learning, individual growth and job-satisfaction are three elements that CARE Hospitals aims to provide to each staff working with it. It follows a rigorous selection process to select the right person and offers him/her necessary training once they are put on their job *(Annexure 1 contains the training calendar).* CARE Hospitals develops a sense of ownership in each staff member by making him/her participate in the key decision making process. The participatory budget approach is the best example for this process.

In order to have a regular flow of staff, CARE offers various education programs. The programs consist of Post Graduate Diploma Programme in Community Cardiology (PGDPCC), Physician Assistant, MSc in Hospital Administration for Nursing Graduates, Post-Graduate Diploma Course in Cardiovascular Nursing and Clinical Research Training. Among the total workforce, 50 percent are nursing staff and still CARE has tied up with many other colleges to ensure a sufficient supply of staff. CARE has defined the career path for all cadres. Each

staff member can grow up from an entry level to a senior management position, if s/he performs well. CARE adopts an effective performance appraisal system where each cadre has defined key results areas (KRA) against which their performance is measured every year.

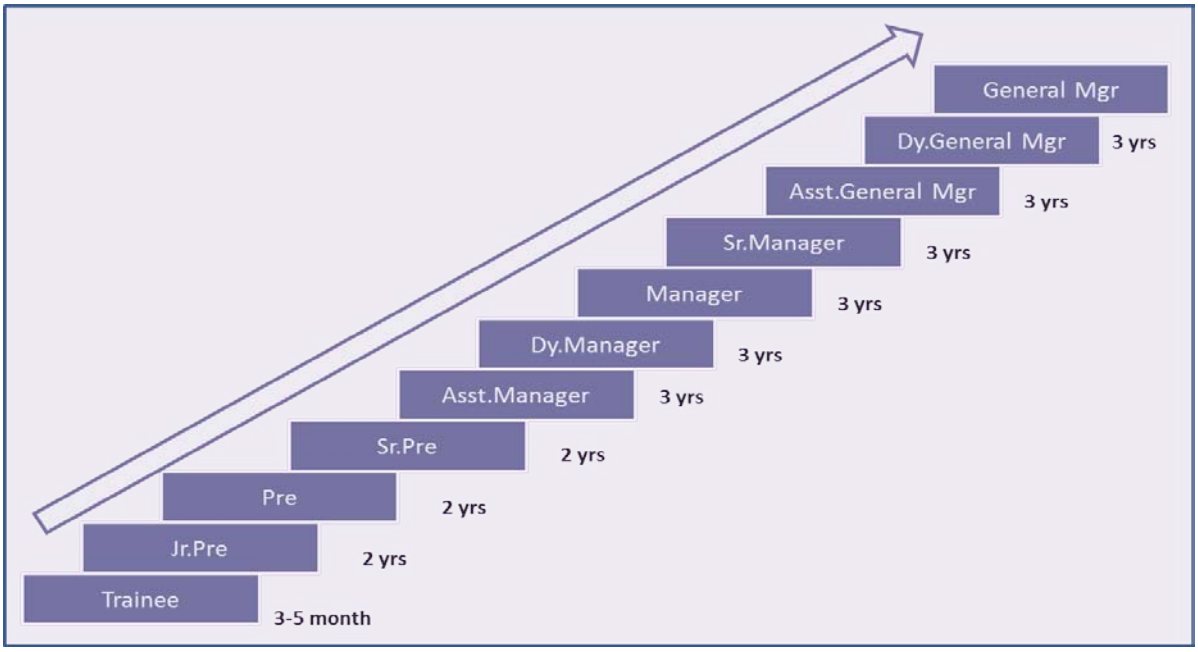

Fig 2: Career Path at CARE Hospitals- Management Cadre

With increasing demand for health care workforce in India, retention of staff is a major worry for CARE Hospitals. The attrition rate is 20 percent. To overcome this, it adopts various strategies. One of them is the de-skilling strategy where the routine or less demanding tasks are performed by individuals with less education or training. This strategy serves to address shortages in highly skilled or trained personnel and also increases operational efficiency within its facilities. In addition, CARE Hospitals has found that less skilled personnel are easier to retain, especially with some added responsibilities to their positions that the practice of de-skilling provides.

Finance model

A key factor for the success of Care Hospitals has been its capital efficiency model, wherein capital expenses are minimized to the maximum extent possible. CARE's capital efficiency model is based on the use of leased space (instead of property acquisition), modular

expansion of facilities, and reduction of space allocated per bed under allowable limits. CARE primarily undertakes existing underused facilities (e.g. lease underused existing hotels or hospitals) and makes incremental investments into these rather than build something from a scratch.

General breakdown of Care Hospitals' financial performance:

25 percent of care is provided below full costs but above variable costs, 50 percent of care is provided close to full costs, and 25 percent of care is provided with margin[3].

While most new hospitals in India take three to five years to reach profitable levels, Care Hospitals capital efficiency model, has consistently helped it reach profitable levels within one year of opening new facilities. Care Hospitals financial sustainability is dependent on volume and multi tariff system. For instance, the general ward prices are close to cost, semi-private prices are one X price of general ward and Private rooms are 2 to 4 x price of general ward.

It also adopts "rational drug choice" policy to procure low-cost pharmaceutical products and reduce materials expenses in order to manage pharmaceutical costs. With internally developed IT systems, it is able to monitor costs almost in real-time and monthly reviews are performed at all facilities. Professional fees are tiered, based on each patient's ability to pay. For additional cost reduction it focuses on minimizing non-clinical expenses such as advertising and marketing activities.

CARE Foundation

CARE Foundation was started in 1996 before the formation of CARE Hospitals with the mission of making advanced comprehensive healthcare affordable and accessible to all. It was started with the purpose to

I. Conduct research & impart specialized education
II. Develop cost effective medical products
III. Provide healthcare to people from the economically weaker sections of the Society and those living in rural area

CARE Foundation works toward the development of new technologies. It employs 20 engineers the purpose of medical research, and has been involved in the development of devices such as coronary stents and pacemakers. A current area of focus is telemedicine, especially image processing, with emphasis on open-source software. A major challenge in rural India is the availability of trained doctors, especially specialists. Using telemedicine, CARE Foundation has not only provided over 1,000 real-time echocardiographs in rural settings with real-time remote interpretation and but has also performed over 20,000 CT scans with remote interpretation.

The foundation has also founded a "Little Hearts" program to offer surgeries for paediatric patients with cardiac congenital abnormalities and has performed over 1,000 surgeries over the past two years through this program. This program is funded by various sources- Government sources provide 50 percent of funding, Care Foundation provides 30 percent of funding, and private foundations provide 20 percent of the funding. Fees at Care Hospitals is reduced 50-75 percent for these procedures.

Relisys

Relisys is a for-profit company that focuses on:

- Commercialization of technologies developed within Care Foundation
- Indigenous production of other technologies.

A shared philosophy to increase access to quality health care and decrease costs, unifies the operations of Care Hospitals, Care Foundation, and Relisys. The Relisys component facilitates the use of less expensive devices and supplies, further decreasing the costs of care delivery.

Relisys started off by developing coronary stents with price points ten times lower than stents produced in the US and has recently opened a new manufacturing plant (in accordance with Good Manufacturing Practices guidelines and other international regulations) on the outskirts of Hyderabad. This plant had 50 workers in January 2008, with plans to expand to 100 workers within several months.

Performance

Over the years, the volume of patients has increased substantially at CARE. In the year 2009-10, it had 80, 452 admissions. The overall patient mix consists of 25 percent low income group, 50 percent middle income group and 25 percent upper income group.

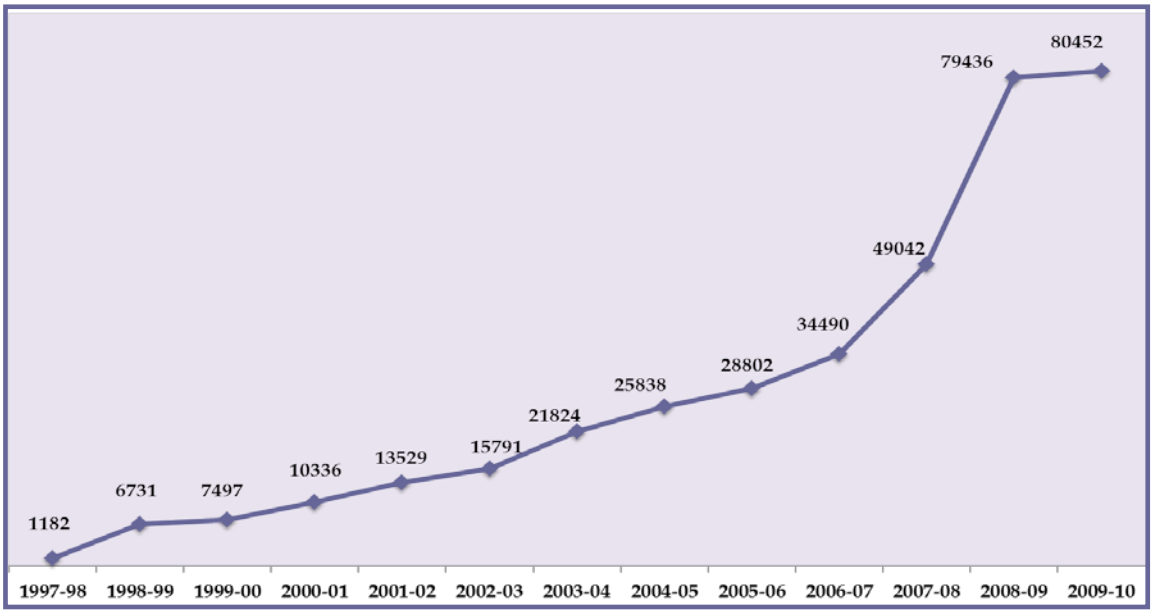

Fig 3: Admissions at CARE

Future Plans

The future plans of Care hospitals are:

- To standardise nonclinical activities.
- To scale tertiary care across India, adding capacity in the existing facility.
- To expand urban centres.

Conclusion

CARE Hospitals over the years have developed an entrepreneurial approach to serve the health care needs of India. The combined initiatives of Care Hospitals, the Care Foundation, and Relisys offer a glimpse into the evolving and innovative approaches that many organizations across India can learn and address fundamental health care needs.

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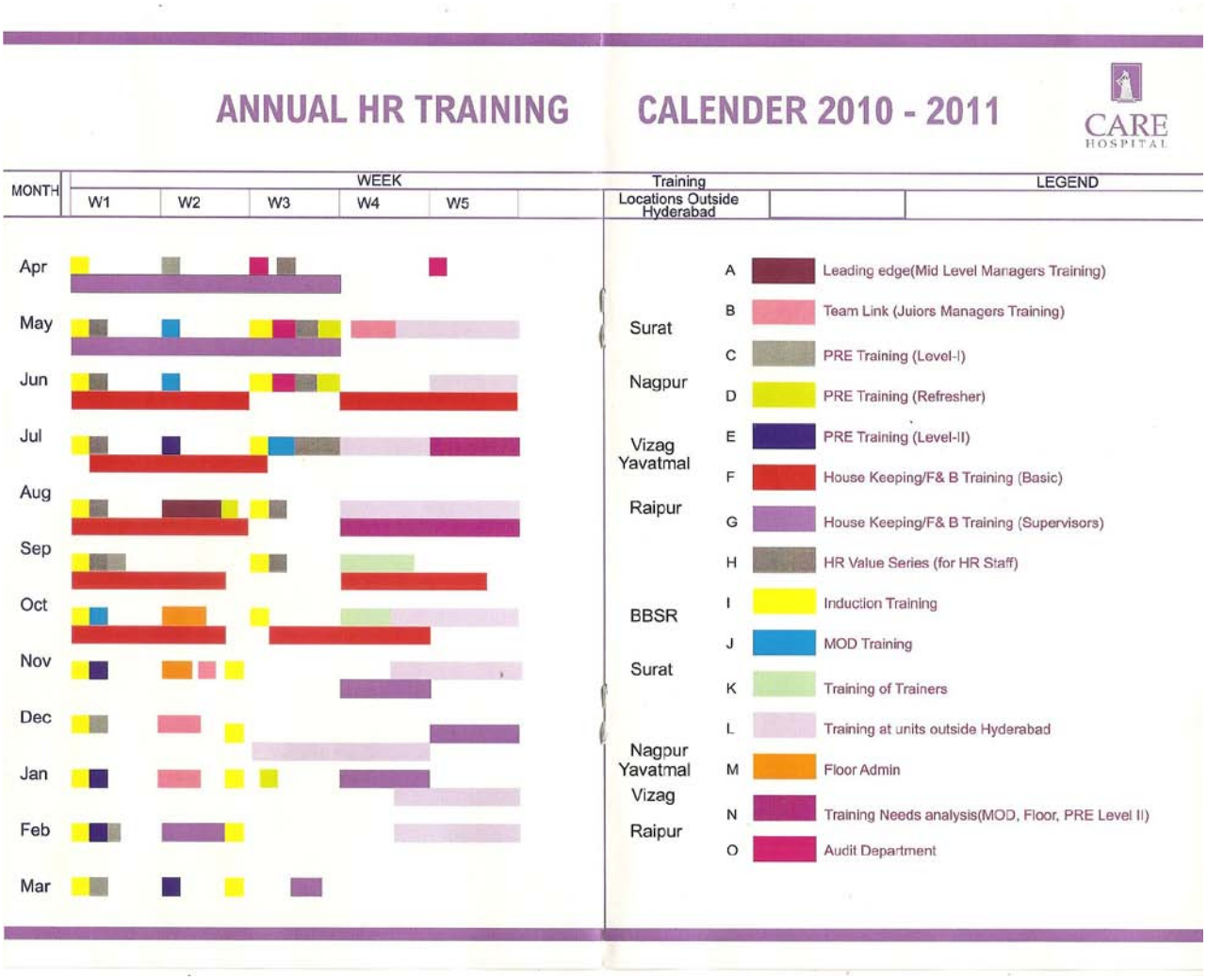
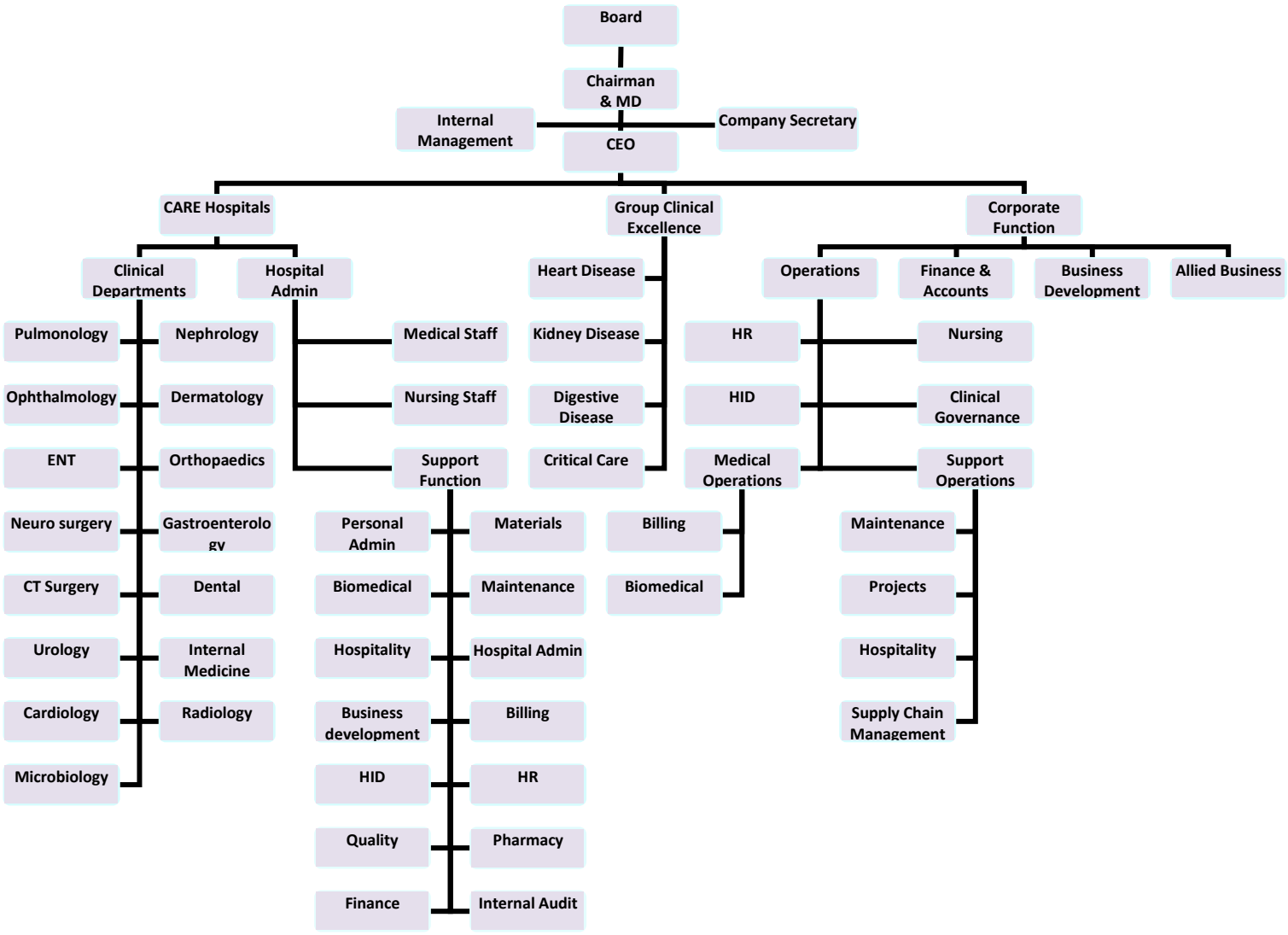
Annexure 1-Training calendar



Annexure 2-Organogram



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The case study has been compiled after primary and secondary research on the organization and has been published after due approval from the organization. The case has been complied after field visit(s) to the organization on January 2011. The author of the case or ACCESS Health International are not obliged or responsible for incorporating any changes occurred in the organization after receiving the due permission from the organization to publish the case. The case study has been developed with a specific focus to highlight some key practices/interventions of the organization and does not cover the organization in its entirety.