HEALTHCARE IT
PRODUCTS

CASE STUDY: IMPLEMENTATION OF MAGNUM SUITE OF PRODUCTS AT ADITYA BIRLA MEMORIAL HOSPITAL

HEALTHFORE
Transforming Healthcare

HealthFore – Transforming Healthcare

HealthFore Technologies Limited is a global healthcare IT solutions and advisory services company. Our B2B and B2C IT solutions help hospital chains, diagnostic centers and public health enterprises realize superior clinical outcomes.

Our patient-centric healthcare solutions focus on wellness, preventive care and condition management. Our information and health advisory services ensure prompt diagnosis and treatment of diseases. We create mass awareness to improve the quality of life through self-care.

HealthFore's IT products and services are built on leading-edge technology. Our solutions increase productivity and boost revenue for healthcare providers through process automation, interoperability and collaboration. Significantly, our customized solutions enable world-class patient care and comply with healthcare regulations, while minimizing costs.

We increase the reach of healthcare by investing in R&D. Our team of doctors, radiologists, dentists, physiotherapists, nurses, hospital administrators, pharmacists, and technicians provide insights to develop innovative solutions and streamline healthcare. Our strategic relationships with Microsoft, Oracle, IBM, HP, and Barco are the backbone of our healthcare solutions.

About Our Customer

Aditya Birla Memorial Hospital (ABMH), a tribute to Late Mr. Aditya Birla, is a 500-bed, multi-specialty medical center located at Pimpri-Chinchwad, Maharashtra (A West Indian State). The healthcare center is known to provide high-quality, cost-effective medical services with state-of-the-art resources and infrastructure.

Since its inception on 14th November 2006, the hospital aimed at being a world-class medi-city. Spread across 16 acres of land, the hospital also has a satellite clinic in Pune, Maharashtra. ABMH is equipped with the latest

technology infrastructure and has some of the world's best doctors, making it a benchmark hospital in healthcare standards.

Business Setting

Due to its size and complexity of business, ABMH wanted an IT solution modeled on ERP concept to efficiently handle the hospital operations. The apparent increase in demand for healthcare services today, necessitated the integration of such solutions into the business management of ABMH hospital. In the year 2005, the hospital management floated a tender for IT services and solution providers to which 5 major industry players participated. After a detailed and stringent analysis of the participant's Request for Proposals (RFPs), HealthFore' HIS & PACS were short-listed among the other HIS vendors, including Siemens, Wipro etc... Amongst the many differentiators, robustness and stability of HealthFore' HIS & PACS products scored over its peers.

Business Challenges

People: ABMH is the first healthcare endeavor of the biggest business group in India, The Aditya Birla Group. The group involved its top officials to kick-start the project. But, a majority of these officials did not have prior healthcare experience. This was one of the biggest challenges that HealthFore had to contend with. Commissioning of the hospital was also delayed due to an extension in the hospital planning, design and construction phase.

Process: Many processes and policies had to be articulated and put in place to enable a smooth transitioning of the hospital operations from a manual form to an electronic form. The IT solution had to be molded to the hospital's specific requirements. This entire process took considerable time as there were frequent group transfers of some key executives in a span of 1.5 years, as per their group policy.

Risk: Another challenge that had to be tackled was the integrity and security of information during its transfer. The hospital premises being huge, transfer of information from one processing unit to another and the chances of information being tampered or missed, posed as a critical issue in a

healthcare setup like this. The hospital also wanted to cut down on the possibilities of medical errors, partially through IT systems, as against other Indian hospitals. Towards this, the hospital decided to completely digitize and automate all departments in the facility. With its vision to be a world-class Medi-city and a completely paper-less, film-less organization, the interfacing of IT solutions with the hospitals latest equipment also posed as a huge challenge.

Place: Location was an important matter of concern for the group to enable effective care delivery. The hospital is in the interiors of Pune City making its accessibility for general masses, an important consideration in its functioning.

Workload: Due to its world-class infrastructure, competitive pricing and brand, the hospital received a very good response from the community. To address this increasing demand and deliver efficient, effective medical care, the hospital has employed 1200 people to cater to an outpatient load of 200 on an average, and 65% occupancy for its Inpatient services, apart from external and healthcare package patients.

Methodology: One of the major challenges was to elicit the exact requirements and consulting from the management who brought with them, the knowledge of product/production industries to run a service driven, complex and sensitive industry. Best industry practices had to be put in place for the hospital to ease their operational issues and to implement IT solutions and services effectively.

Our Solution

HealthFore's Magnum is a comprehensive Healthcare Information Management System (HIMS) for managing the automation needs of every segment of the healthcare environment. To achieve complete automation, Magnum is tightly integrated with HealthFore' other Healthcare products like Medical Imaging – Picture Archival and Communication System (PACS), Patient Relationship Management, Knowledge Management and Business Intelligence applications. The product has the capability to be interfaced with the latest of the technologies and has been proven effective with two

successful implementations before ABMH. It is comprehensive with over 32 modules. It covers the best practices followed in the hospitals world over, for better patient service, both administratively and clinically.

Requirement: The first and the foremost challenge in collecting requirements from a client new to the healthcare space were addressed by HealthFore' team of consultants. The top officials and panelists were asked to follow a stringent requirement collection exercise through RUP process by the HealthFore team. This helped the client in defining the business processes and the top management & panelists to understand healthcare easily.

Process: HealthFore being a CMMi Level 3 Company, has adopted proven and tested project management programs to streamline both, internal and external factors affecting the project, its timelines and implementation. These processes helped clients to work more actively and get involved in the implementation. Hence, they were able to analyze the criticality for IT systems to ensure efficiency in their processes.

Medical Errors: Magnum's clinical section, one of the best suites available in the market, features modules like CPOE, Drug Alerts, EMR, and Vital Signs etc. which are central for a clinician to simplify their workflow and get exact information on the click-of-a-button. These features standardize the terminologies and avoid medical errors, usually the cause, in most developed and developing countries. It also follows HIPAA guidelines on sharing the patient, clinical and administrative data. These features also alert the doctors on different reactions, availability of stock and the effect of ongoing treatment plan, which is a crucial factor in determining the further course of plan. EMR module gives a consolidated and animated view of patient's information which helps doctor to proceed with the actual diagnosis. The system enables better interdepartmental coordination between the doctors for sharing patient information through a unique file transfer system within the application. Through frequent prompts and alerts from the system, clinical community can save time in carrying out administrative operations of patient care and thereby devote more time with the patient and clinical examination operations.

Connectivity: HealthFore' solutions, HIS (Magnum) and the web based PACS & Telemedicine systems helped ABMH cross boundaries to reach the

community and vice a versa. Magnum facilitates the consistency of information and shares required information with outside consultants, satellite clinics and patients. PACS enables radiologists to view the scanned images of patient and report from outside the ABMH network.

Robustness: ABMH being a 500 bed facility, its system has to be robust to cater to the load handled by transaction system and other functions. The performance time across the application has reduced to 3-4 seconds as against long hours taken by employees. Robustness and flexibility has made the system self-reliant and more efficient in performing tasks and allotting more time with the patient for addressing their issues.

Efficiency: Timeliness is one of the main indexes of all hospitals for ensuring patient satisfaction. ABMH has drastically reduced the patient waiting time throughout the process, for both OP and IP, by using integrated HIS system. Appointment clerk can see the availability of the slots for a particular doctor through an interactive calendar and schedule the patient appropriately, thereby saving lot of time. Consultants can automatically get to know the next scheduled patient through chief complaint & EMR which enables doctors to start the diagnosis/treatment in less time. CPOE makes billing real-time, eliminating the waiting time for patients.

Discharge process, which is always a challenge to any multi-specialty hospital, requires tight coordination amongst clinical, administrative, support and billing teams for accurate, timely and efficient discharge of a patient. Our HIS helped ABMH in reducing errors by enabling frequent capturing of clinical and administrative data. With information being shared across the organization, centralized ordering ensures limited chances of omissions as orders fall directly to respective rendering locations which reflect in billing on change of status of the order. Tight integration of support modules like pharmacy, dietary, physiotherapy, lab and radiology with billing, enables quick reception of orders, processing, yielding results and posting a charge to patients final bill automatically. This enables generation of accurate interim on daily basis for patient's referral without creating confusion at the time of discharge. Insurance module enables one-time definition of the schemes and automatically calculates breakups in the bill, reducing human intervention and chances of wrong billing.

Result

Today, the hospital is completely streamlined with IT services, giving it a competitive edge over other hospitals. It is now, the most preferred hospital by the masses, as per one of the daily newspapers survey in the city. The patients / customers are delighted with prompt, accurate, satisfying response and output given by the hospital. It is one of the largest automated hospitals in the country with IT usage in almost all departments of the facility.

It has drastically brought down the patient waiting time for consultation, increased transparency in terms of empowering patients by providing interactive systems, achieved a below national average time of discharge process and kept a check on mortality with frequent quality reports generated through the IT solution.

"Magnum has been adopted broadly across most of the departments within ABMH. Magnum has been running successfully for the last 4 years and with Magnum at the core of our systems, our doctors are able to spend more time rendering Quality care and ensuring that the most appropriate decisions about the patients care have been made. This has resulted in outstanding patient satisfaction".

Rekha Dubey, Sr. GM – Operations, ABMH

The hospital's satellite clinic was started with only 3 specialties and has now spread across 11 specialties to address the increasing demands of customers in the city and the customer groups who avail only preventive treatment. Thus, Magnum Web Version has broken barriers and maintains the uniformity in data.

"After an exhaustive review, we realized that HealthFore was one of the more competent companies to offer an exhaustive range of solutions that can integrate and automate workflow across various points of medical care whilst fulfilling the specific needs of individual departments, whether that be at the patient's bedside, or in the emergency department or in the revenue department. The staff and

physicians that were privy to the selection procedure chose HealthFore's Magnum suite of solutions based on the quality of the products, the expertise of its people and the ability to support the product suite over a long term. Over the years we have also adopted HealthFore's financial management systems to increase operational efficiencies as well as upgraded HealthFore's older version of medical imaging solutions that eliminated film costs while improving turnaround time and diagnostic quality. Our strong relationship with HealthFore gives us confidence that we can meet industry challenges and provide the best care possible to our patients".

Mr. Ashwin Kothari, Director and Trustee, ABMH.

Aditya Birla, once known for cements and textiles, is today a name in the healthcare space. The group is planning to launch a chain of hospitals in the country, resulting from the success in their initial effort. This is a sign of better strategic decisions being made by the group, as they did on selecting the right IT provider, which is crucial for overall efficiency of the business and its resources.