21st Century's HealthNET in Goa

The Government of Goa in association with 21st Century Health Management Solutions implemented a Rs 2.5-crore Hospital Management Information System (HMIS) called HealthNET in Goa Medical College (GMC) Hospital. "The project was conceptualised almost four to five years ago in 2002-03," recalls Satish Kini, Chief Mentor and Principal Consultant, 21st Century Health Management Solutions. The project for the 1,000 bed hospital includes Patient Management Systems, Hospital Management Systems, the Laboratory Management System, Blood Bank Management System, the Advanced Imaging System (which is an advanced form of traditional PACS), Library and Academic Section Management System, and Management Information System.

The objective of the project was to improve the availability and quality of healthcare delivery process and give Goa a fully computerized healthcare system by providing good quality healthcare services to all segments of society, especially the poor in remote locations. "Our focus is to first complete this project and then showcase the entire Goa HealthNET in the next two years before we take up any other major Government projects in India," says Kini.

21st Century Health has also successfully completed the computerization of patient registration and billing for OPD and indoor patients at Navi Mumbai Municipal Corporation Hospital which handles 600-700 OPD patients a day. 21st Century Health had earlier implemented on purely charitable basis the OPD registration and billing module at the Maharashtra State Sir JJ Hospital in Mumbai as part of the Mid Town Rotary Club's mega charitable project of upgrading JJ Hospital's OPD services. This hospital handles 1500 OPD patients DAILY.

Benefits for Patients

Since earlier records and case history are available readily, it results in better follow-up and accurate diagnosis. Others point out that as the results can be accessed across the hospital, there is no replication of tests at various departments. This lowers costs, time and suffering of the patients.

Dr Kalanidi points out that in the case of patients who have undergone multiple admissions, only a small percentage brought case sheets of previous treatment when they subsequently visited a hospital. Doctors had to go by the patient's word on previous disease history instead of analysing documentation. In case of electronic medical records, such situations are unlikely.

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For Medical Staff

HIS benefits the medical staff too. The system gives all the patient-related information in a single file with an easy to sort format. Since it is centralised, the clinical details can be retrieved whenever needed. Dr Gupta explains, "Doctors' prescriptions are on the system, and routed to the pharmacy for issuing medicines to the patient ensuring better control and tracking." Regarding lab diagnosis, she says, "Lab investigations ordered by doctors go directly to the respective labs and physicians can view the lab results online from their system. Thus the turnaround time of lab results has improved."

For the Government

"The Government can keep track of disease outbreaks as well as the status of epidemics across the state," says Gopinath. It also ensures better inventory control due to ready availability of stock status. Stock requisitions are made online with necessary approval, which increases efficiency and ensures proper control. "Since the project is carried out in Public-Private Partnership (PPP) model, IT would take two to three per cent of the capital expenditure of the capital for a 200-bed hospital," says Gopinath. Reporting of epidemics, birth rates, mortality rates and non-communicable diseases are all just a click away with the HIS.

Convincing People

Challenges in implementing the solution come in the form of infrastructure and training. "Since it is a Government project, the government took care of providing the necessary infrastructure," says Dr Raman. "The challenge was to convert the doctors and the management to the new system," says Gopinath. Overcoming the challenge was in the form of training the staff to assimilate the new method. Dr Raman says, "In order to adopt a new system, the mindsets of the people have to be changed," However, he is hopeful that this change will happen in time.

"It is important for Government officials to view healthcare IT as a strategic tool to not only increase control, but also improve patient management processes and the productivity of scarce and expensive resources such as doctors, medical staff, operation theatres, medical equipment and life-saving drugs," says Kini.

"All existing manual paper processes had to be converted to electronic processes. This took a careful re-evaluation and re-engineering of the process taking the value-additions of each step into consideration," says Dr Gupta and adds, "Our HIS had to bring in, standardise and implement best practices from both across and beyond the chain."

Working with PHS

Experts point out that as far as the technology is concerned; there is not much difference in requirements. However, the contracting procedure is different. Dr Gupta, says, "In my experience, the Government-run healthcare system is more receptive and adopts faster to the discipline of a good HIS. This is because they already have a good framework and standard operating procedures in place." Government hospitals have to service huge volumes of patients and a good HIS helps tremendously in reducing the red tape and repetitive and wasteful labour. She even praises the enthusiasm of the staff of the hospitals to adopt the new system.

However, working with PHS is not a cakewalk for many. For instance, a leading information technology provider backed out of the HIS project implemented by Gujarat without citing reasons. In private hospitals, where decision-making is usually by an individual or top management, the projects are implemented in far less time, in comparison with the bureaucratic functioning of the Government. Improper communication could lead to the failure of the project, when the staff is not comfortable with the new system.

Kini elaborates, "The main differences lie in the ability of the officials to take and enforce decisions. Unfortunately, the organizational structure of Government institutions and the process of decision-making (from procurement to implementation) always leave enough room for the people at all levels in the organisation to maintain status quo."

Goa Medical College and Hospital at Bambolin is the one of the premier healthcare institutes in the state.

Another major difference is that rather than adopting improved ways of working (and eliminating many outdated processes and procedures) which are supported and enforced by modern ERP applications, Government users try to automate their old processes (by even customising well designed systems). "This approach and resistance to adopt new improved methodologies negates the entire objective of adopting computerisation to bring about positive change," complains Kini.

The problem with HIS implementation in India is that not enough groundwork is done before the implementation of software takes place, observe analysts. The process mapping being inadequate results in failure of software to deliver all that the hospital desires. The processes not being standardised leads to the need for customisation for each hospital, which has its own perils.