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The role of HMS will grow exponentially'

Satish Kini, principal consultant and director, Novella Hospitals Systems and Management Consultants Pvt Ltd in conversation with **Rita Dutta** on benefits and hurdles of implementing HMS and the road ahead

What are the tangible and intangible benefits of implementing HMS? Is it possible to quantify how HMS impacts the efficiency of services of a hospital?

Implementing an integrated HMS in a hospital provides tangible benefits to the hospital firstly by boosting the productivity and revenues of its high cost and limited resources, namely the consultants, the operation theatres and cath Labs, ICCUs, diagnostic centres with CT MRI and pathology labs. Secondly, it reduces costs of operations by reducing inventory/ equipment maintenance costs, brings down lower receivables and reduces staff costs because of streamlined processes. Thirdly, it decreases revenue leakages due to malafide/negligent staff, wrong billing, wastages and pilferages/expiry of expensive medical stores/ pharmacy items.

While I am not aware of any official statistics available in India on the benefits that hospitals get on account of HMS, some of our own hospital clients have reported 10-30 per cent reduction in inventories and receivables and ability to handle much larger numbers of patients with the same staff and facilities. In a nutshell, you can scale up without having to add substantially more non-direct staff and without affecting patient satisfaction.

The intangible benefits are also very significant and in many ways more important to the reputation of the hospital. Firstly, there is reduction in errors. Even the US, where the HIS systems and legal systems are strong, have recorded 10 per cent errors in hospitals! We can only imagine the level of errors in Indian hospitals.

Secondly, there is increased satisfaction of patients and their relatives due to lesser anxiety because information is available when required, lesser waiting in queues, timely delivery of reports and prompt discharge with accurate billing. Thirdly, there is increased satisfaction of doctors/surgeons/physicians on account of better planning and scheduling of OPDs, OTs, ICUs, etc, online availability of patient medical records and investigation reports can dramatically improve speed and line of treatment and prompt and accurate settlement of honorariums removes the irritation of keeping track of personal accounts.

The hospital management benefits by better controls despite higher volumes, higher responsibilities/ accountability at all levels, better and faster implementation of management policies and quick decisions on important issues due to accurate and fast MIS. The hospital staff benefits as IT helps them carry out their SOPs more efficiently. There is no need to 'remember' important things which affect patients; all important transactions are recorded systematically on the computer which can provide alerts and alarms to remind and reduces tedious and duplicate paperwork.

Does the benefit trickle down to patients as well?

We must first of all remember that a patient, unlike other customers in other service business like hotels or banks, is an unwilling customer to the hospital. Nobody would like to be a customer of a hospital unless he has no choice. So the entire effort should go towards reducing his anxiety with prompt treatment and information about his ailment and reduce the running around for his relatives.

Also the costs are perceived to be very exorbitant because medical costs are never budgeted for by individuals and it eats into other plans for that money. Patients and their families benefit from the HMS implemented at the hospital as the facilities (like web-based appointment bookings, web based reporting) and prompt information (like availability of doctors, beds, cost estimates, etc) reduce their anxiety and reduce the hassles the relatives go through during hospitalisation. Also the personalised attention by staff, delivery of correct medicines and reports and accurate billing and prompt discharges reduce the trauma of the hospital visit.

Does HMS have an impact on profitability of the organisation?

The larger the hospital, more the number of staff working. Typically a 500-bed hospital could have anything from 1200- 1800 nursing, technical and administration staff and 250 doctors working 24X7. To co-ordinate the work of so many people with different skills and knowledge and provide personalised services to each and every one of the 500 indoor patients plus an estimated 1000 plus OPD patients each day is a gigantic task. In addition, the OTs, diagnostics, labs, etc (which are the limited high cost resources) have to be properly scheduled to deliver smooth medical services to these 1500 plus patients everyday.

HMS is critical to harmonise the work of all the people thus improving productivity of the staff and doctors, improving the quality of treatment provided, reducing wastages, maintaining optimum levels of inventories and spares, prompt and accurate billing to patients and corporates and timely collections. It is therefore very obvious that HMS can significantly contribute to higher profitability.

What are the factors that have driven the growth of HMS market in India?

Medical insurance and medical tourism are two major business drivers which will change the face of hospital management in India. From about five million people covered by medical insurance to more than 200 million people by 2010, this large segment represents people with buying capacity which will look for quality from the hospitals they go to. To ensure quality and improved processes, hospitals will have to go for integrated HMS just as it happened in the automobile business as well as in the banks. With medical insurance and medical tourism driving the need to certify and accredit hospitals by their facilities and their quality of services, the role of HMS will grow exponentially.

How many hospitals in India have implemented HMS? What is the size of HMS market in India?

While there are no genuine HMS implementations in govt/public Hospital, I would say only about two to three per cent of private sector hospitals have implemented proper integrated HMS systems. Many more private hospitals have computerised but they use computers in bits and pieces for discrete small applications like lab reports, registration etc, more like glorified typewriters rather than as an integrated HMS.

What is the strength of HMS market in India? Who are major players?

The HMS market is a virgin one and still very immature. But with all the state and central govt planning large investments in e-governance in health, the market for HMS is just opening up. Because of increasing competition amongst the private players and new swanky hospitals coming up every month with very advanced systems to tap the medical tourism market, the existing hospitals have no choice but to clean up their act. New delivery and business models are evolving because of availability of reliable and affordable IT and communication technologies and that too will force reluctant hospitals to adapt to new ICT based management of hospitals. The big names in HMS in India are TCS, CMC, Wipro, Siemens amongst the large software companies and amongst the focused HMS product and consulting companies I am aware only of Novella and Sofscript (from Mumbai) and Karishma and Apollo Group (from Hyderabad).

In terms of number of hospitals implemented, Novella and Sofscript are by far the largest in India. There are a couple of players from the Middle East like Quest and Medicomp (Oman), but they are not focused on India as their price realisations in India is quite low compared to similar size projects in Middle east, Far east and Africa where they are concentrating. There are many smaller regional players in each region of the country catering to smaller 50-100 bed hospitals and nursing homes.

What precautions should be taken by hospitals before implementing HMS?

The precautions which management should take are firstly to understand that HMS is not a technical product they are getting but a management process which will involve BPR and change management. Secondly, to ensure that their own policies and manual systems are clear and unambiguous or be prepared to change them if they are not.

Thirdly, they should ensure that they themselves and their people are prepared for process of change. Fourthly, get involved in the entire process of selection of HMS not delegate it to an IT manager or IT consultant. Most managements think they have to understand IT to decide on an HMS. The fact is they have to understand hospital management more than IT to be able to evaluate a good HMS.

Fifthly, don't start reinventing the wheel and think of developing an HMS in-house or with any software company, however good it is. Deal only with experienced and professional HMS companies which have successfully implemented in at least four to five similar hospitals over the last four to five years and follow the methodologies they have used successfully. Sixthly, plan proper budget in terms of money, time and management responsibility. Seventhly, don't cut corners on stable hardware, networking and printers as recommended by the HMS consultants.

What are the impediments in implementing HMS?

The biggest reasons for failures of HMS is when hospitals try to develop their own in-house HMS or with some software vendor. It is almost like a patient deciding to treat his problem by starting to learn medicine from scratch or like asking your family physician to start learning cardiology so that he can do your bypass operation for you.

The next big reason for failures is the non-involvement or inadequate involvement of hospital management and key users in the implementation and when it is driven by IT or accounts. Usually this leads to lack of ownership by the actual users leading to constant changes and customisation and eventual breakdown due loss of control over the original software design.

No self-respecting HMS vendor should do this but many weak hospital managements tend to ask the vendors to keep individual users happy even if it means twisting the system out of shape. Any they usually end up as failures.

The third important reason for failure could be the failure of the HMS company to have proper HMS implementation methodology and the right consultants at the hospital site to drive the implementation. Lastly, it is possible that the HMS product by the HMS vendor is not properly designed to be flexible enough to meet various hospital needs. This could lead to customisation and hence loss of control and eventual failure.

The reason for failures could also be unreliable hardware and networking leading to frequent breakdowns which is not acceptable to users. Also the attitude and the discipline of the hospital staff is very important to ensure success. But the single most important factor is the management attitude and seriousness in implementing HMS as a mission critical part of the hospital management and planning.

What are your suggestions to overcome the hurdles?

As I have suggested in chapter 2 of my recently published book "Instant solutions to hospital problems", the solutions lies in the correction Planning, Selection and implementing the HMS solution. HMS implementation should be undertaken just like a supra-major operation with clearcut schedules; there are pre-op conditions and procedures, the correct roles for lead consultant and his assistants, and mid course corrections based on what we find are the actuals problems. And finally the post-op instructions and procedures are to be followed. At every stage in the above, we have laid clear guidelines and documentation so that the principal consultant can review the HMS implementation progress with the hospital management each fortnight /month to ensure that the operation is headed for successful finish.