CASE STUDY

CENTIUM HIS IMPLEMENTED THROUGHOUT THE HOSPITAL SUNGAI LONG

Case Study: Centium HIS implemented throughout the Hospital Sungai Long

Customer:
Hospital Sungai Long, Kajang, Selangor Darul Ehsan.

Industry:
Healthcare

Accommodation:
60 bedded

Website:
www.hospitalsungailong.com.my

About

Hospital Sungai Long (HSL) is a private hospital which opened on 1st March 2010. Located at Sungai Long town and opposite the Universiti Tunku Abdul Rahman (UTAR) campus, HSL provides comprehensive treatment services including 24-hour accident and emergency, medical and general surgery, pediatrics, orthopedics, oncology, obstetrics and gynecology as well as imaging.

Centium HIS

Centium HIS is a complete end to end Hospital Management System designed for use in small and medium healthcare facilities. The system is designed by professionals and practitioners with multiple years of experience and knowledge.

Centium HIS is broken up into 9 Core modules and multiple sub modules. The system is designed with the Patient as the central focus. This is to ensure the system assist the users to provide the best in health care practice providing quick information, at all times.

The 9 core module as below

- Patient Relationship Management (PRM)– Covers appointment scheduling and patient registration.
- Clinical Practice – Essential doctor and nurse sub module which includes Patient Initial Assessment, Progress Notes, Patient Charts, etc.
- Services – Related to doctor service request which includes radiology, laboratory and physiotherapy.
- Cashier and Billing – Essential cashiering sub module which includes Cash Register, Order Entry, Billing, Payment and Refund Advice.
- Store Management – Related to flow from receiving goods till write off task. Consist of purchasing management, stock management and consignment goods management.
- Medical Records Office (MRO) – Primary patient medical record management such as patient record scanning, patient record movement tracking, etc.
- Back Office - Consist of Cash management, account payable, account receivable, fixed asset, vendor management, etc.
- Reports – Covers facility operation statistics, financial reporting's, government regulation statistic reports, etc.
- System Administration – Management of system level configurations, module level configurations, etc.

Implementation

On 2nd January 2012, Centium team starts working on implementing the Centium Hospital Information System (HIS) with the dateline of 1st March 2012.

We have devided the team into two; software and hardware. Since the schedule was very tight, both activities must be run simultaneously.

Software activities

- It started with master data gathering from the Head of Department (HOD).
- Then those master data were compiled according to the data formats in the database.
- Once completed, the master data were uploaded into the database.
- Then configuration and testing the application with master data database activities take place.
- Final database released after completion of the above activities.
- At this stage, we have to prepare/configure/install the database and application for training and live environment.
- Training on HIS was held in the training environment for the users (including super user) on the module. Training approached was theoretical; hands-on and mock-run.
- Finally on 1st March system Go-Live at HSL.

Hardware activities

- It started with planning for hardware allocation such as servers, PC, printer, barcode scanner, wireless access point, plasma tv queue on each floor/location/station/counter. Once it has been finalized, an order being made by HSL.
- Since the building is an old building, all network ports need to be checked. Those faulty network port needs to be replace either the face plate or need to do the recabling.
- Installation and configuration activites started immediately after the arriving of the hardware i.e. server, PCs, printers and other peripherals.
- On top of that, the team must make sure all consumables are sufficient till and after Go-Live day.

Infrastucture

- We had deployed a total of 52 units of Acer desktop computer with various model and specification, 7 units of Zebra GK420t label printer, 1 unit of Zebra ZXP Series 3 card printer, 7 units of HP Laserjet printer, 2 units of IRIS Card Reader, 5 units of Plasma TV, 18 units of

barcode reader, 40 units of Eaton UPS 800VA/480W and 1 unit of Epson LQ300+II dot matrix.

- On the server side, we had deployed 1 unit of PowerEdge R710 (Intel Xeon CPU E5645 @ 2.40GHz 2.39GHz (2 processors) and 32GB RAM) which installed/configured with Windows Server 2008 R2 Standard (64-bit), Microsoft SQL 2008 R2 and ClearCanvas Server (used for mini-PACS); 1 unit of Dell Power Vault MD3620F; 2 units of Eaton MX5000 UPS and 1 unit of NetGear Prosafe 24-port Fiber Gigabit L3 Stackable Manage Switch GSM7328FS.
- Each floor being installed with 1 unit of NetGear Prosafe 24-port Gigabit Stackable Smart Switch GS724TS together with Eaton Evolution 650 Rack 1U UPS. Fiber optic cable used as backbones. Cat6 cable used for each point/station to the floor switch. 8 units of Ruckes ZoneFlex 2942 Access point being installed at various location.

Challenges

- Time – Centium HIS need to be implemented in 3 months. Delays in master data gathering/compilation and delivering hardware will impact the time line.
- Cost – Budget allocated for implementing software and hardware is very tight. Centium has to make sure all purchases within the budget.
- People – User came from different hospital which have been used the HIS have high expectation on the Centium HIS. The user understands on the application differ from one another eventhough they have gone through the same training.
- Teamwork and communication – Working with many people which comes from different hospital or industries and with high expectation is very challenging. Clear instruction and explanation will avoid miscommunication which can lead disaster for the entire project.

Lesson Learned

- Master data gathering and compilation need to be done very detailed and carefully. Failing to do that will impact the application.
- Communication is very important. The message must be delivered clearly and understood by everyone. All progress/updates must be synchronized with everyone. This to avoid work redundancy and miscommunication.
- Since there are complexity of hospital structure, user expectation is higher. Do remind the user on the HIS capabilities; which area is covered and which is not.
- Give the application training to a small group of 4 or 6 people. The smaller the group the better it is. We can focus and identify their level of understanding on the application.
- Split the application training between HOD and normal user. HOD might ask/discuss a topic which is not relevant to the normal user.
- Doctor training needs to be done on one to one basis. This to ensure doctor understands what being taught to them and for us to collect their valuable feedback. The relationships between the doctor and systems have a lot to do with how efficient the system become. If they are not found attractive, it does not matter how much functionality it contains.
- Stakeholder involvement and support are much needed for the entire project.
- Different HIS use a different standards of forms, and until it been defined as standard in the healthcare industry its subject for debating and discussing. At this moment, the standard is much comes from the person initially setting up the department.