

## **The Third Party Consultancy Company helps hospital optimize its IT management**

Cui Yong

Dr. MA Jun, the president of Shanghai Changning Maternity & Infant Health Institute (SCMI) began her career of clinical and hospital management since she graduated from the Department of Medicine of Shanghai Second Medical University in 1992. After Dr. MA was appointed as the president of SCMI in 2004, she initiated an overall reform including hospital management and clinical service. To improve the level of management and service of SCMI and realize the goal of becoming a digital hospital, which make the management and IT system fit its fast development, in 2007, SCMI decided to invite Dorenfest China Healthcare Group to conduct a consultation project for the hospital. With the questions of why SCMI chose to hire a third party consultancy company, if the consulting report fit the reality of hospital and how is the change before and after the consultation, our reporter visited the president of SCMI, Dr. MA.

SCMI is a second class specialty hospital with 175 beds. It mainly covers 620,000 populations in the 40 square kilometers of Changning district in Shanghai. The hospital currently has 380 staff and occupies 12,000 square meters construction area with the 1500 outpatients per day. Since the construction of billing system in 1996, SCMI has input more than 6 million RMB in the IT management of the hospital, which including HIS, LIS, RIS, pharmacy management system, outpatient physician workstation, inpatient physician workstation and part of electronic medical record system. SCMI's management team fully cognized the importance of IT management towards the future development of the hospital, and has spent around 1.5% of revenue on IT in 2007, which is ahead of the second class specialty hospitals' level in China.

Although SCMI achieved some success in hospital's IT management, with the increasing requirement of patients, more and more confusion and complain came out from hospital's management, clinical service and IT system. The system and service provided by the software vendor could hardly satisfy the needs of hospital's development, which lead the insufficient recognition and resolution to the suggestions, complaint and requirement from front line user of hospital's IT system. However, with and background of medical treatment, the management team is not familiar with IT application and its specific work. While the engineers of hospitals IT center are major in IT without enough understanding of clinical service, thus the concluded needs of medical requirement was definitely limited and unilateral.

Dr. Ma said, "while we are confusing about the situation, I was participating in a hospital management training program at China Europe International Business School,

where Dorenfest in teaching “the development history of American medical IT system”. So I invited them to our hospital and give us some suggestions. After contact and communication, we thought that it would be better to analysis the problem from the third part perspective than our inside people. They can help us to clear up current situation and problem, thus not only make up the insufficient IT knowledge of management, but also reduce our workload with a high efficiency. Moreover, we have the experience of cooperating with consulting firms of hospital management, and gained a great effect. Therefore, we decided to hire Dorenfest to conduct an overall consultation to SCMI’s management and IT construction.

## **Seeking problem through extensive investigation**

After making detailed investigation plan, Dorenfest entered into SCMI in May, 2007. The hospital called all its middle leaders including directors of clinical and functional departments, and director of nurses to project start up meeting, particularly explained the purpose and meaning of the consulting project, made everyone know the method of consulting to guarantee good communication and cooperation. Since that, the consultants began the in-depth interview with relevant personnel including senior executives, department directors, representative doctors and nurses, staff of IT department, as well as software vendor. Meanwhile, Dorenfest processed an overall investigation of hospital’s management system, operation process, IT construction, IT operation, existing software, user’s opinion and requirement. They carefully observed using characteristic of every application, to evaluate if the operation process fit with its IT process.

### **1. Satisfactions to current IT systems**

Through interview and investigation, Dorenfest found that doctors and nurses all recognized that the IT system could save their time, improve efficiency and reduce patients’ waiting time. They thought the medicine IT system and financial system are well operated and make the billing process optimized. Also they considered LIS, RIS and other ancillary system a great help to clinical treatment. Nevertheless, there were many problems in SCMI’s IT system.

### **2. Problems of current IT system**

In the hospital management aspect, along with the increasing workload of hospital, the IT system could not fit the development of operation in many parts of the management. These were reflected by the problems like weak cost analysis system, insufficient network safety, poor integration between different systems and software without a unified standard, conflict between execution and application of IT system, etc.

In the clinical service aspect, the front line doctors and nurses are dissatisfied with the IT system. This including poor integration between different models, unfriendly interface of software, inconvenient use, disability to support clinical decision,

insufficient quality management and control function, and their extra work caused by the IT system.

### **3. Conflict between hospital and software vendor**

There were also some problems in the relationship between hospital and its IT system vendor, and the conflict once reached the extent that the hospital considered to change the vendor. SCMI thought that the system vendor provided could not satisfy its needs and it is without any individualization for the hospital. They also blamed the vendor taking too long time to improve the system and didn't feed back in time to the requirement from hospital with a positive response and proper attitude. While the vendor insisted that they have already fulfill the needs of hospital and some improvement requirement were beyond the range of their original contract.

## **Systematizing and concluding the problems, framing solutions**

Grace Yu, principal of Dorenfest China Healthcare Group, introduced that, "after thoroughly investigation of SCMI, we carefully analyzed and concluded the problems we observed. We found that the most problem was not the current system could not satisfied the requirement of hospital's needs, but the unmatched process between IT application and hospital's management and clinical operation. Meanwhile, SCMI was lack of users' participant in the IT management, such as insufficient communication and idea exchange mechanism with front line users. Therefore, we submitted the final report including more than 90 problems. These problems could be concluded as six improvement aspects: system function, implementation matching operation process, training, hospital policy, vendor management (contract negotiation and communication), and the governance and management model of IT system.

### **1. Software system purchase and implementation**

Since the management of hospital and doctors are expertise of medical with very limited knowledge of IT system and its function, they are not able to define and describe their requirement. Most situations are when vendor ask doctors for their needs, doctors usually said, "I don't know what exactly I need, but if you make it out, I will know whether it is what I want." On the other side, the software vendor is not familiar with hospital's clinical operation. Under the condition of insufficient definition of requirement, the development and purchase of system is risky and will definitely bring problems in the implementation and application. Also the ambiguous clause of contract is also an important factor of the conflict between two parties' communication and cooperation. For example: the contract didn't clarify the definition of the responsibility when problems appear, either the solving method or the payment of expense thereout, etc.

### **2. Training**

Some problems of SCMI were caused by insufficient training to the users. Since doctors have different mastery and using extent of IT, different results could be

brought out when they were using the same clinical system. Therefore, hospital and vendor should make long term, repeated and targeted training of system and its new functions to improve the ability and level of IT application by doctors and nurses.

### **3. Hospital policy**

When hospital is making policies, it needs to adopt corresponding changes with the development of IT construction. It is important to know how IT system changes the manual process and prepare for the changing management before system implementation. Then hospital should optimize current operation process to match the IT implementation, preventing it produce redundant word load.

### **4. Managing and communication with vendors**

There is a subtle relationship between hospital and vendor. Usually in the initial stages when the new IT system is adopted, the two parties have a very close relationship just like “honeymoon”. Yet after a period of time the problems begin to appear and two parties could even hate each other at last. The most reason of this situation is the contract management and communication of hospital towards its vendor.

In the contract management aspect, due to the unclear requirement when the system is purchased, the functions of the software were not specified in the contract. Hospital tend to rely on the vendor to define the needs and functions, without depend on its own doctors, nurses and other users, which led to the conflict after the implementation. Moreover, the ambiguous definition of time and milestone of payment would also result a lot of dispute. Therefore, the contract management is the key issue.

In the aspect of communication with vendors, there is no formal ways of communication between hospital and vendor. Also no routine meeting and report mechanism and no particular record of problems and solving methods discussed in the meeting. All these could produce misunderstanding and buck-passing. There should be a routine project report and communication mechanism between hospital and vendor to follow up and record every course of program and guarantee the result achieved. At the same time, the problem check list should be established, to promise every problem brought forward could be solved properly.

### **5. About vender**

Due to venders' different extent of understanding to medical service industry and operation, also their different professionalism, there could be inherent disadvantage in the system. Plus the immature method that vendor implement the system also need to improve. These immaturities are reflected as not enough definition of customer's needs, disjoint conduct of hospital's requirement and software developing, which is resulted from insufficient communication during the implementation, lack of report system to follow up hospital's needs, faultiness in the system testing process, etc.

### **6. Problems of IT management structure and method**

Some problems are resulted from the lack of IT management structure and proper methods. For example, there is no formal decision and management structure of IT construction, the final user could not participant the purchase and implementation of software directly. The IT center made decisions but not the clinical personnel, and this lead to doctors and nurses' insufficient sense of the ownership to hospital IT system.

#### **7. Consulting report submitting with improvement suggestions**

When submitted the final report, Dorenfest also provide some improvement suggestions in hospital management and IT construction, based on the SCMI's reality, which start with reform the operation process and strengthen the communication, including:

- Delay the purchase of new systems.
- Establish an IT governance structure: Organize an IT top management steering committee, with routine meeting to guide the IT efforts and progress of the hospital. Organize an IT user steering committee responsible for defining and prioritizing needs for new systems.
- Improve IT management process: Organize the selection, evaluation and decision mechanism of IT system. Enhance clinical personnel and users' participant in the IT construction, optimize management and clinical process.
- Establish a good communication channel: Strengthen the communication between management and IT system users, as well as hospital and vendors. Enhance the training of the IT system users.
- Formalize the relationship with the vendor: establish the mechanism of scheduled progress meetings with a formal method of documenting, problem reporting, following up and solving.

#### **The effect of third party consultancy**

Dr. MA introduced," On the meeting of final report and suggestion representation of Dorenfest, we again invited all the middle management to attend. The report comprehensively and professionally analyzed SCMI's problems from the perspective of third party and IT expertise, with corresponding suggestions. According to these suggestions while based on the reality of SCMI, as well as related policy and circumstances, we framed our own reform plan with priority.

First, the management strengthened the status and importance of IT management, organized the IT top management steering committee and optimized the IT management mechanism with monthly IT management meeting. The hospital also involved IT construction as a key issue into its 5 years development strategy. Meanwhile, SCMI enhanced the participance of clinical and administrative departments in IT construction; with corresponding working group and IT check mechanism. The group checked the IT system of department twice a month, discussed and analyzed detailed problems of the department, and got the feed back in two weeks. With the establishment of strategic goal, clear management mechanism, improved

communication and higher participation, SCMI achieved a great progress in its IT construction and management. The hospital rebuilt its network, adopted the intelligent card system. Most problems and requirements from front line employees were realized, accompanying an obviously increasing of satisfaction to IT management and boost clinical efficiency.

Dr. MA also introduced that, in the IT construction part, Dorenfest suggested them to adopt the electronic medical record system at first. While the hospital believed that it would be more worthwhile to improve the clinical service quality and bring convenience to patients, to make the citizens and society feel the progress of hospital. Therefore, SCMI focused on the building of customer management system and improving its outpatient physician workstation. In the clinical application, they decided to optimize its RIS and LIS systems first. Meanwhile, SCMI built the registration reservation system, where patients could pick their favorite doctors, queuing and calling system, self-help printing system of laboratory test report, information broadcasting and inquiring system, SMS informing system, and waiting information system, to show their consideration of patients and provide safe and private service. The hospital reduced the average waiting time by 1.5-2 hour and gain great increasing of patients' satisfaction through reorganizing the outpatient rooms, optimizing medical process, adopting reservation and simple outpatient service, encouraging daytime operation to guide patient properly. In 2009, the emphases of SCMI's IT construction will be electronic medical record, they will establish path for single disease, formalize service process, strengthen ward management to keep improving efficiency and make the clinical service focus on the patients.

Although Dorenfest suggested SCMI to delay the purchase of new systems in the report, the hospital still purchased the logistics management system in late 2008 in the consideration of new policy ("The Comprehensive Evaluation Standard of Hospital") and need of administrative requirement. Yet they fully referred Dorenfest's suggestion during the purchase that strictly negotiated the contract, which list all the details and requirements clearly. Despite half year reversing work in the first phase, the later implement was quiet smooth. At the same time, the hospital also adopted corresponding adjustment to improve the relationship with vendor, took initiative communication and gained good cooperation.

## **Conclusion and suggestions**

As a MBA graduate from China Europe International Business School, Dr, MA concluded, "usually hospital's development strategy is focus on the operation and discipline construction, which need good management, mechanism and financial support. The IT application is also an important part to improve the efficiency and formalize hospital's management and operation. The current IT application on medical service is still deficient, while doctors and nurses spend too much time on manual paper work. IT application can help them saving their time and effort to

provide better service to patients, enhance the output ratio, reduce mistake, and thus increase medical quality and patients' satisfaction. Since the governor of medical care industry is always major in medical with lacking knowledge of management and IT, the need help from the third party consultancy. Actually, consulting firms have been involved a lot in other industries, yet not that much in the medical care industry and this is just a question of perception. We are very grateful to Dorenfest's help with better outcome than we expected. Until now, we have solved 70 out of 90 problems that Dorenfest brought forward, and we are keeping working on the less ones. Therefore, we believe that the third party consultancy will help hospital boost its IT management and reform.

Under the requirement of press, Dr. MA suggested several points for reader's reference of cooperating with consultancy: "the key is a unified recognition inside hospital, with a clear objective and meaning of cooperation. Hospital should find not only experienced but also suitable consulting firms based on its own capacity and situation. To consulting firm's suggestions, it is impossible to accept 100%, it is better to adjust your work according to the priority. IT management needs good communication from up to the front line. It won't perform merely rely on IT center or director in charge of IT, but the participance of whole hospital personnel.