STRATEGIC INFORMATION SYSTEM IN HEALTH CARE INDUSTRY (CASE STUDY MITRA KELUARGA HOSPITAL)

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ABSTRACT
In health care, information system can provide a competitive advantage for management if the systems are implemented as modular parts of information communication architecture rather than strictly as support for specific function, such as billing, registration, cost accounting, and lab. Given the pressures of competition and limited resource, healthcare providers must be able to add, drop, or change information system components as quickly as they can adjust programs and services provided to patients. Whereas investing in a monolithic system tends to limit option, investing in communication architecture can protect against being locked in to one vendor-frustrated by competing priorities and incompatible alternatives. This paper describes information system available in MITRA KELUARGA hospital. The discussion part includes some literature review of information system in the hospital. Based on this Porter’s competitive forces model on MITRA KELUARGA Hospital, we can see that this hospital is surrounded with so many new entrants and substitute, with different kind of customer and only a few supplier. With this position, MITRA KELUARGA Hospital has to do something, if they want to stay longer in this business. So, what this paper suggests here is gaining competitive advantage trough Information Systems to face the challenge of information era.

Keywords: Strategic information system, Health care, Porter’s competitive forces model

INTRODUCTION
Information is as critical a resource as people and money. Today more people work with information than produce manufactured goods, making our postindustrial society an information society. White collar work is almost all information intensive, using the brain rather than muscles. It is interesting to observe that information about an industry creates its own value. Timely information often creates a competitive advantage.

Sustaining a competitive advantage in an information-oriented society requires a strategic, communication-based information architecture that can quickly adjust its content and presentation as customers change. The architecture for information delivery must be in place any product or service can consistently utilize timely information. The availability of an information delivery vehicle is more critical to establishing and sustaining a competitive advantage than are the key information components required for specific product or service delivered by the vehicle.

As an information-intensive industry begins to fully recognize value, information delivery vehicle become a requirement for participation because all “players” share the few surviving national delivery vehicles. This however, significantly shifts the competitive paradigm from delivering...
information to optimizing the use of the information delivery vehicle. Much proprietary information must now be shared on the delivery vehicle to maximize customer exposure, requiring new strategies for competitive advantage. The most successful organization is the organization that has more visible information delivery vehicle and provide additional information available on the shared delivery vehicle. This shift is not a creative advance, but a fundamental redefinition of the industry requiring new innovative approaches. Past history and experience are less reliable in this new share visible information environment.

In health care, information system can provide a competitive advantage for management if the systems are implemented as modular parts of information communication architecture rather than strictly as support for specific function, such as billing, registration, cost accounting, and lab. Given the pressures of competition and limited resource, healthcare providers must be able to add, drop, or change information system components as quickly as they can adjust programs and services provided to patients. Whereas investing in a monolithic system tends to limit option, investing in communication architecture can protect against being locked in to one vendor-frustrated by competing priorities and incompatible alternatives.

In this paper, there will be a section which describes some alternative information systems that can be used to gain competitive advantage for a hospital. This paper is more like an “introduction” of suggestion paper for information system in the hospital, because of the thought, that it is not going to be fair to compare or evaluate the information system that should be available in a small hospital like MITRA KELUARGA in a country like Indonesia, who is now still in “economic trouble”

So, the section after this will be discussing about findings, include history and information system that available in MITRA KELUARGA hospital. The discussion part include some literature review of information system in the hospital, and after that, there is a last section which conclude the paper.

**FINDINGS**

**The Hospital**

Mitra Keluarga Hospital is a general hospital located in Jatinegara, East of Jakarta. This hospital first operated as a general hospital in December 1995. Registered in Health Ministry Office and approved by Ministry of Judge of Indonesia in February 1996. This company is a joint venture of Australia healthcare Group and Western Diagnostic Pathology Australia.

The mission of this Hospital is to be an international standard quality hospital, with chain all over the province of Indonesia. In achieving this mission, the hospital try to maintain a perfect system that consists of good management system, sophisticated healthcare sciences and medical facility, with qualified physicians who will give their best service for the patient.

Mitra Keluarga Hospital is always try to give a complete medical service for it’s patient. The medical service available including cardiology, child development and assessment, dental and oral surgery, endoscopic surgery, ENT (ear, nose and throat), eye treatment and surgery, gastroenterology, hepatology, obstetric and gynaecology, oncology, emergency room, medical check-up, and others. Until this time, the hospital is still invested in developing more hospitals and center for diagnosis in strategic location all over the province of Indonesia. This is consistent with the vision of this hospital that is to be the effective “house of healing” and provide the best medical service in Indonesia.

**Information System in The Hospital**

1. Transaction Processing Information System

In this hospital, transaction occurs when this hospital provides a service to patient. This is the essential of this information system, many activities include in this hospital like to provide a service this hospital needs to buy medical supplies like medicine and others from supplier, in every month they need to pay the salary or electricity, to bill customers, or collect money. This hospital used transaction processing information system and this information system really help this hospital keep their account up to date.
2. Operation System
The active role of this hospital in the cultural life of the local community has been made this hospital responsible for treating acute illnesses and trauma, treating and supporting those with chronic illnesses, promoting healthy lifestyle, and training health professionals. This different operation for different activity in this hospital has been made this hospital as a complex organization. This hospital using the “information based model” system, that is the system that can link the management processes of the organization to the direct clinical activity through information system based on this model. Contracts and budgets can be negotiated on the basis of the patients that are expected to be treated and the clinical activity expected to be involved with each patient. This system also makes it easier for this hospital to make collaboration with “third party” like insurance or to be a healthcare provider in any company who needs their service.

3. Reporting Individual Patient Record
In this hospital, they are using patient-based management information system that brings together detail of all patient activities. The information will be summarized and gives pointer to where more detailed information may be found.

4. Internet Profile Corporation
This hospital have a home page in the Internet which has content about the profile of the company that include the history of the company, health information, the service offer, and the list of physicians along with the day and time of practice, also there is a section for communication called “talk to us” for the visitor of the web to ask questions via e-mail.

In general, only these four information system is now available at MITRA KELUAR Keluarga Hospital. As we see, recently, the development of the hospital is heading toward physical quantity, the management of the hospital tend to think about building another hospital in another province of Indonesia, rather think about the quality of the hospital or forget about another part of the mission that is to be an international standard quality hospital, which has back up with information system as a competitive advantage.

DISCUSSION
Before the discussion begins, we try to look at the Porter’s competitive forces model on MITRA KELUAR Keluarga Hospital below:
Based on this Porter’s competitive forces model on MITRA KELUARGA Hospital, we can see that this hospital is surrounded with so many new entrants and substitute, with different kind of customer and only a few supplier. With this position, MITRA KELUARGA Hospital has to do something, if they want to stay longer in this business. So, what this paper suggests here is gaining competitive advantage trough Information Systems to face the challenge of information era.

Any other information systems that this paper can suggest for this hospital are:

1. Logistic Systems

   Logistics management deals with ordering, purchasing, and inbound logistic and outbound logistics activities. Hospital using logistic management inter department and some supplier, inter unit (like distribution of medicine direct from prescribe doctor to pharmacy, distribution of food that required for patient from doctor, the availability of rooms, medical equipment for surgery) and extranet (with the supplier), all these activities using EDI.

2. Medical Staff

   In today’s competitive care environment, an important key to success is partnering between the hospital and medical staff. More than ever, the growth of managed care demands that hospitals and medical staff develop and foster a symbiotic relationship.

   The medical staff is the engine of every hospital. It is the medical staff that determines case mix, admits patients, controls the use of resources, assures quality of care, creates the documentation that forms the basis for billing, and help to assure that regulatory standards are met. The full participation and support of medical staff is critical to the attainment of all quality and revenue goals. All too often, hospitals and their medical staff find themselves on what appears to be opposite sides of the issue.

   Unfortunately, in some instance this “matter of perspective” has become part of the institutional culture.

3. Patient Access

   Effective case management, control of hospital resources, quality of care and accurate medical record begin when the patient enter the hospital. With the proliferation of specialized clinics, ambulatory and outpatient service and increasing public reliance upon emergency units, the avenues by which patients gain access to the system are growing. Developed systems for consolidated patient access service for hospitals must be across the nation.

4. Patient Account

   Everyone knows that efficient patient account management can do wonders for the health of the bottom line. However, while computers are an essential tool, there is no substitute for staff performance. Health care is a human endeavor and effective patient account management must be founded upon a logical organizational structure, backed by clear and comprehensive policies and implemented by a productive and thoroughly trained staff of specialist.

5. Managed Care

   Managed care will continue to be a central topic in the national debate on health care cost. Regardless of the current penetration of managed care into the hospital’s market and implementing effective case management now will help to ensure success in inevitable competition for managed care contracts. The effective case management is the key to manage care and will benefit the hospital, patient and physician alike.

6. Medical Information

   This system develops a strategic and operational plan to bring the facility’s disparate medical information services and systems into one logical and efficient system that supports billing/reimbursement, clinical care, clinical research and regulatory compliance.

7. Clinical Decision Support System (CDSS)

   CDSS is a system that combines two or more data elements pertinent to a specific patient and leads the clinician towards a clinical decision specific to the individual patient case. Example of this system is medical expert systems, medical artificial intelligence systems, and clinical database systems.
CONCLUSION

Based on the review of information system in MITRA KELUARGA Hospital, and after realizing the position of this hospital in the Porter’s competitive forces model, we can say that this Hospital need more information system to gain its competitive advantage, regardless of the size of the hospital/company and the country where they are, because in time they finally have to face the globalization era.

Another thing to consider in this hospital is that in health care, information system can provide a competitive advantage for management if the systems are implemented as modular parts of information communication architecture rather than strictly as support for specific function, such as billing, registration, cost accounting, and lab.

REFERENCE


