LITERATURE REVIEW ON FACTORS INFLUENCING THE IMPLEMENTATION OF HOSPITAL INFORMATION MANAGEMENT SYSTEMS

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Abstract

Today the development and progress of information technology are growing rapidly. Application systems in various fields are a must for an agency/company to utilize information as a basis for administration and data processing (Deddy, 2016). The implementation of an information system in hospitals (SIMRS) is very important to achieve quality services. However, it is necessary to monitor and evaluate to find out how the benefits of SIMRS in the hospital work unit. Thus, it allows the hospital to develop SIMRS taking into account the factors that influence and benefit the use of SIMRS. The purpose of this literature review is to determine the driving and inhibiting factors in the implementation of Information Management Information Systems. The method used is the electronic database method, the search for journals using Google School with the keyword "management information systems in hospitals", totaling 20,600 journals but only using 5 journals that match the criteria. The results of the study identified three main root causes, namely the completeness of standard operational procedures (SOP) and management, human resource capabilities, systems, and technology.

Keywords: Inhibiting Factors, Implementation, SIMRS, Standard Operating Procedures.

INTRODUCTION

A hospital is one of the means of service health by empowering various unity personnel trained and educated to face and handle problem medical for recovery and maintenance of good health. Technology information's role is important in service health moment this. Where quality processing information is a factor important for the success of institution service health. System information Which Good can support channel Work clinical with various methods Which will contribute to maintaining patients who better (Deddy, 2016).

Mature This development and progress technology information develop fast. System application in various fields is something must for something agency/company to utilize information as a basis for administration and data processing. As fulfillment needs the agency/company needs to do needs-related activities with a system application-based

computer so that expected capable solve more problems fast, accurately, effectively, and efficiently in carrying out all activities operational Institution House Sick always gets pressure for can repair service medical, reduce medical error, provide access correct information time, and at the same time must monitor activity service as well as control cost operational. To fulfill demands this is home Sick must own system information integrated management (SIM) that can share real-time, precise, and accurate information. System information management this no can walk in a way automatic if no supported system device software (system software) or existing enterprise systems (enterprise software). embedded in a home server according to the World Body WHO, system information is something a system provides information for the retrieval process decisions at every level within an organization; and system information House pain (SIRS) is something integrating system data collection, processing, reporting, and use necessary information for increase efficiency and effectiveness service health through more management both at various levels of service health; whereas system information management House sick (SIMRS) is A system special information designed For help management And planning program Health.

System information House Sick's role is important in service clinical and administrative. Management information in House Sick has already started using system-based electronics (SIMRS), especially in supporting decisions.

System information House Sick (SIMRS) can be characterized by its function through information and types of services offered. To support care for patients and administration, SIMRS supports the provision of information, especially about the patient, in a way that is correct, relevant, and renewable, easily accessed by person Which is appropriate on place/location Which is different, and in format Which can be used. Transaction data service collected, saved, processed, and documented to produce information about quality maintenance patients and about performance House Sick as well as cost. This hinted that system information House Sick must be able to communicate data quality between various units in House Sick. Besides communication, an objective important other from SIMRS is electronic data exchange between provider service health (doctor practices, facilities, and House Sick) so that can ensure the availability of information to patients in a way comprehensive and efficient service.

Quote Hurtubise's opinion, system information is defined as a system that provides specific information to support the process of deciding on every level of the organization (Hatta, 2008).

A system is something unity whole and composed of various factors that are related or expected to relate as well as one the same each other influence, all of which with aware prepared to reach the objective which has been determined (Sabarguna, 2005). According to WHO (World Health Organization), Information is the results of analysis, manipulation, and presentation of data to support the process of making decisions. Useful or not something information depends on objective recipient information, accuracy, and Information results analysis, manipulation, and presentation data for delivery and processing data, time, room, or place, at the right time and in form appropriate.

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House Sick in Indonesia must record and report all activity maintenance House Sick as a provision in Chapter 52 paragraph (1) Constitution Number 44 Year 2009 about House Sick.

System information management House sick (SIMRS) used in a House Sick must give convenience in operational as well as must overcome constraint service patient who There is at home Sick the.

Something system information consists of data, people, and processes as well combination of device hard, device soft, and technology communication which is known as technology information. System information is often time linked with activity collection data disease or output (output) in service health. In general, system information health will arrange the top two entity main entities processing information and structure management system information health. Data and information need health from day to day the more increase. The public cares about the situation of health and the results development of health Which has government, especially in problems of health which relate directly to health, because Health concerns life public will information health this very give mark positive for health development.

Based on theory HR inputs data on driver's license RS to increase quality service House Sick, a leadership House Sick must notice system information House Sick, wrong the only one with put power record medical and information health in every one part recording unit medical, at the polyclinic take care road, units take care stay or ward.

System information House Sick (SIMRS) can characterized by its function through information and types of service offered. For support maintenance of patients and administration, SIMRS support provisions information, especially about patients, in a way correct, relevant renewable, and easily accessed by persons with appropriate places/locations with different formats that can used. Transaction data service collected, saved, processed, and documented to produce information about quality maintenance patients and about performance House Sick as well as cost. This hinted that system information House Sick must be capable of communicating data quality between various units in House Sick.

System information House Sick (SIMRS) can characterized with its function through information and types of services offered. For support maintenance patient and administration.

According to the World Body WHO, system information is something system which provides information for process-taking decisions at every level in an organization; and system information housepaint (SIRS) is something integrating system collection data, processing, reporting, and usage information that requires For increase efficiency And effectiveness service health through management which better in various levels service health; whereas system information management House sick (SIMRS) is A system information Which special designed For help management And planning program Health.

From the description in on, effort utilization system information is step proceed Which need to be held in face very change fast and era globalization already start felt impact. When development is too late, they will more left behind Again by need public, and so will the more left behind era. System Information House Sick part small has There is, and necessary utilized more carry on so that integral with information other can useful (Sabarguna, 2005).

With existing systems information health very helps in in process activity processing data part big the process done using a computer which is programmed with various programs will handle something application (Dadan, 2001).

METHODS

The method used for compiling the literature review is using an electronic database. Method search journal uses Google Scholar. Say the key used in the search journal is system information management on House Sick 20,600 journals but only use 5 appropriate journals with criteria. Journal Which used limited from 2015-2021. The journal that was used in the literature review was obtained from various journal studies among them Journal Medicine.

The data obtained Good in a way direct or even No direct, then determination priority problem in Installation Radiology House Sick use the right method of Ultrasound (Urgency, Seriously, and Growth). Ultrasound is the Wrong tool to Arrange the order priority issue or problem that must resolved. The method with determine the level of urgency, seriousness, and development issue by determining a scale value of 1 – 5. Issues that have a total score are the issues that became a priority. For more explanation, understanding urgency, seriousness, and growth can outlined as follows:

1. *Urgency* (U)

   How urgent the issue must be discussed linked with the time available as well as how much hard pressure time the for solve problem which causing issues earlier.

2. *Seriousness* (S)

   How many Serious issues need to be discussed and linked with consequences Thatarise with delayed solutions the problem that gave rise to the issueor consequence that gives rise toproblems other problems reasons the issue is not solved

3. *Growth* (G)

   How likely the issue is to develop is linked possibility problem cause of the issue will get worse if left unchecked.

From the results determination of priority for overcoming that problem caused No fulfillment of SPM on installation radiology. the problem, then analyzed with fishbone analysis Furthermore writer made.

RESULTS AND DISCUSSION

Results

Identification of problems

According to Ery Rustianto (2010), a Management Information System House Sick (SIMRS) can used as a strategic means to provide service-oriented goods to a patient take care road nor take care stay to the satisfaction patient. This is to the theory put forward by Hatta (2008) that information systems are carried out with process. A process which intended are mandatory policies and procedures followed and held by para system users. But in the process, No Matter No Possible found several problems and inhibiting factors. Factor man and organization can roles as pusher nor inhibitor in the implementation SIMRS,

In a literature review of five journals that discuss factor inhibitor implementation of hospital management information systems, that problems generally happen in some of the:

a. Management And completeness of standard operational procedures
    a. SIMRS Team in Organizational Structure Not yet coordinated
    b. Not yet in full standard procedureoperational/SPO SIMRS
    c. Task principal and function (TUPOKSI)organization SIMRS Not yet clear
    d. Not yet There is supervision SIMRS from management
    e. Management does not encouragepersonnel to use SIRS
    f. Evaluation No done tooperation SIRS
b. Cognition And HR capabilities
    1) Not yet There is concern about user
    2) Not yet There is *entry* discipline data
    3) Competence *user* Not yet uniform
    4) Lack of training SIMRS Andofficer special
c. System And technology
    a. *Servers* often hot, LAN often jammed
    b. *Hardware* is lacking severalrooms
    c. Not yet complete means driver's license in each unit
    d. Connection often disturbed

Determining Problem Priority

In essence, the problem that is found must be resolved completely and comprehensively because the determination priority problem aims to determine order or rank problems from most important and must be resolved immediately problem which not important and doesn't have to be quickly resolved. Matter this aims to make it easier to finish the problem found. In identifying the problem, there are several matters which need to be noticed such as human resource capabilities, cost, power, technology, etc. For that, evaluate priority problems from most pressing to not too urgent.

Table 1. Reason System Information Management House Sick Not Yet Walk Optimal

No	Category	Reason General	Because Specific
1	MAN	Not yet there is entry discipline data	Not implemented enough discipline
		Not yet there is concern user	Award not enough
		Competence user Not yet uniform	Not enough Training
		Lack of training driver's license	
		Team SIMRS in Structure organization Not yetcoordination	Organization Not yet clear
		Not enough commitment officer room	
2	METHOD	Not yet all SPM created driver's license	Lack of driver's license
		Not yet There is SIMRS supervision from management	Organization Not yet clear
		Results SIMRS study Not yet Can executed	comparative study has not been carried out
		List tariff Laboratory And RadiologyNot yet clear	SPO not yet There is
		Not yet complete SPO SIMRS	
		TUPOXY organization SIMRS Not yet clear	Lack of organization and main duties
		Not yet There is training procedures driver's license routine	Lack of training
		The BPJS application is not yet perfectly connected to the center	Users not yet understand
3	ENVIRONTMENT	Room SIMRS not enough representative	Wide room limited
		Not yet build a work culture	There is no supervision yet monitoring
4	MATERIAL	Hardware not enough in a few room	Completeness SIMRS Still not enough

		Not yet Complete SIM facilities at each units	Completeness SIMRS Still not enough
		Connection often disturbed	Network problematic
5	MACHINE	Server frequently hot	Lack of technician
		LAN often congested	

Based on the analysis above, several root problems were found which were the cause of the computer-based SIMRS not being implemented, so ideally a complete solution is needed for all inhibiting factors with systematic planning. In Table 2, the scoring is presented with a priority scale for the root of the problem using the USGL method, and 3 root problems were found, namely, the SIMRS SPO is not complete, the SIMRS Organization's main tasks and functions are not clear, there is no SIMRS supervision from management. Below is an explanation of the scoring regarding the problem priority scale.

Table 2. Scoring of root cause priority scale

No	Problem Description	USGL scale				Mark	Rank
1	TUPOXY organization SIMRS Not yet clear	5	4	5	5	500	II
2	Not yet complete SPO SIMRS	5	5	5	5	650	I
3	There is no realization of cooperation with Dispendukcapil and Dishubkominfo yet	3	4	4	3	144	VI
4	The BPJS application is not yet perfectly connected to the center	1	2	2	1	4	VIII
5	The results of the SIMRS study cannot yet be implemented	3	2	2	2	24	VII
6	Not all SPMs have been issued SIMs	1	2	2	1	4	VIII
7	The new laboratory and radiology tariff list has not yet been included in SIMRS	1	2	2	1	4	VIII
8	There is no SIMRS supervision from management yet	5	4	4	4	320	III
9	There is no routine driver's license training procedure yet	4	3	4	4	192	IV
10	There is no concern about using the unit yet	3	3	4	5	180	V
11	There is no data entry discipline yet	3	3	4	5	180	V
12	User competency is not yet uniform	2	3	2	2	24	VII

Table 3. Determination of Problem Solving

No. Ranking	The root of the problem	Solution / Problem Solving
1	SIMRS SPO is not yet complete	▪ Creating an incomplete SIMRS SPO ▪ Comparative study for materials for making SPO SIMRS
2	The main tasks of the SIMRS organization are not yet clear	▪ Create the SIMRS team's main tasks and functions ▪ Assigning the information technology governance team to form the SIMRS team
3	There is no SIMRS supervision from Management	▪ Carry out routine supervision ▪ Prepare a supervision schedule ▪ Determine the team leader for each supervision

On activity brainstorm the, done election alternative solution the most effective, relatively cheap, easy, and can done in table time 4). Based on the above assessment, the implementation of SPO SIMRS that is incomplete is a priority solution option and done program making SPO SIMRS. Based on the choice of solution is carried out by preparing a plan of action for developing SPO SIMRS. Stages (the plan of action) of the project making SPO SIMRS which is not yet complete done during 4 weeks with the following stages; preparation, compiling Team maker SPO SIMRS, gathering material for making SPO SIMRS, designing and writing SPO, socialization, test try implementation, revision and improvement, validation, implementation and maintenance or audit. All stages have been done and produced 12 SPO SIMRS. The overall SPO prepared includes: turning on and off the computer, action when happen problem is turned on, turning off, And operating the computer, merging medical record numbers, procedures for changing user log-in, data entry at the time of transition change date, module registration, terrible emergency, module, take care stay, hemodialysis, outpatient, cashier.

	Criteria	Weight				Alternative Solution Problem					
			Create SPOs SIMRS which is not yetComplete	Score (1-5)	∑	Create TUPOKSI team SIMRS	Score (1-5)	∑	Superviseevery room routine by team SIMRS	Score (1-5)	∑

m US Q	Effectiveness	0.4	SPO (*standard Procedure Operating*] SIMRS made for inside instructions operate SIMRS based computer in every appropriate room/unitthe modules available, if problems occur must report where and who that should handle.	5	2	Personnel in TEAMSIMRS must understand thoroughly his position is clear so that it can carry out tasks basically as well the function is appropriate structure organization	5	2	Supervision is carried outby TEAM SIMRS (sometimes together manager) to each indoor room/unitframe accompaniment, solution at oncejob evaluation mainly deep running SIMRS	4	1.6
	Availability Money	0.3	HR Payroll have been done according to remuneration applicable and honor	5	1.5	Payroll HR has been done accordinglythe remuneration applies	4 1,2 HR payroll has been done in accordance remuneration Whichapplies			4	1,2
	Availability Goods	0.2	machines , tools write, paper, computer	5	1	machines , toolswrite, paper, computer	5 1 Booksupervision, stationery			5	1
W A NT	Availability HR Amount	0.1 1	Team SIMRS	4	0.4 4.9	Head System Businessand his staff	4 0.4 Director, Tim SIMRS4.6			3	0.3 4.1

Table 4. Alternative Problem Solutions

Studies identify that incompleteness SPO SIMRS become root problem main Not yet optimally implemented driver's license RS. Factor not yet the complete SIMRS SPO becomes important because SPO become guide which documented in a way formal, clear, complete and detailed regarding processes, tasks, and roles every individual or group which is conducted inside every day something organization. Viewed from function, SPO works from system work and genre orderly, systematic, and work can accountable. Document SPO Also describes objective work held by policy and regulation which applies in an organization so that capable overcome challenges like existing difficulties in its use.

The creation of SIMRS SPO is based on needs and demands that exist to control quality to process activity containing organization-set instructions as instruction work in system management. Process making required stages of preparation until finally

implementation/implementation of SPO SIMRS in every activity management House Sick And application SIMRS based computers in all unit service House Sick with easy, fast and appropriate. Application SPO SIMRS which has generated a need for evaluation keeps going continuously as well as maintenance even revision repair based on the results study evaluation. Making SPO SIMRS is a prefix solution for problems in obstacle implementation SIMRS-based computers.

Discussion

As has been called before, problem-problem which identified can mapped to several domains. The problem key in each domain is discussed in part following this:

Data

Although data collection in RS has the natural digital will there are several constraints for migrating basic data as SIRS support. Data transaction /process business RS No centralized, but spread across many divisions. Hence, data does not flow by process business, and different formats and data storage media also hinder process integration. Because the technology for conversion data is specific in a way mass not available, part of the process migration data is done in a way manually. Study This found, RS that works the same as BPJS's system Indonesian Cases Based Groups (INA CBGs) in managing tariff service for the patient. Connectivity between existing systems there is with SIRS must guarantee for guard integrity data. Soh et al. (2000) in his research found that the format and relationships data available need effort 'going over' (workaround) to make it compatible with system enterprise resources planning (ERP).

Technology

Infrastructure network and computer that is not yet installed in a way evenly throughout RS section, namely problem found on stages pre - implementation SIRS. Factor technology other that is readiness device hard (hardware) and devices software Good from server side and terminal computer (client). Problem This requires a process new in the procurement of goods Which involves party management as taker Decision. Process business. Each RS own characteristics and level of complexity which are different. Matter That is reflected in module SIRS Which is implemented.

There is request modification SIRS become matter Which normal And must done so that the system can walk following the business processes desired by in RS the. However thereby, need for manipulation to repeat process business on system enterprise can done but with still with cost of the minimum. Lack of support from the hospital to provide a special team as bridge communication in the process manipulation repeat SIRS result slow process adjustment process business SIRS.

Cognition HR

Paradigm thinks from personnel RS is served patient and activity administrative has used to with use media physique that uses paper/book. The resistance that appears on the implementation of SIRS is caused by reluctantly lots of internal hospital employees changing methods it works from process manually to utilization technology, use SIRS. Domain cognition HR is closely related tightly with a policy issued by party management specifically policy awards (rewards and punishment).

Capabilities

The model of working hours in hospitals, Good in RS government and private, consists of two categories: management administrative, and service. Category first covers employee which has working hours fixed, meanwhile category second consists of officer medical who have O'clock Work take turns (shifts), divided into three turns each day. Constraints in the training process ie limited time which it is good for personnel management administrative or personnel service. This matter resulted in the process training needing to be done over and over again until the employee understood the use of SIRS with good. The problem other is minimal Skills in technology information Which is owned by personnel candidate user SIRS. Matter This is seen in a way clearly on the training process and accompaniment system use.

Management

Problems found in side management RS are very complex. Convincing party management to make decisions needs business sufficiently big. Management is not always ' one word' in every decision. Not all management also wants to delegate work, like related to election administrator and operator Which will do activity routine in SIRS. Problem the more complicated when personnel RS is not ready to accept delegation. Besides that, in a number of RS, management no do process socialization SIRS And mobilization personnel For

support use SIRS in a way adequate. Absence policy awards (rewards and punishment) make para personnel RS consider ' lightly ' use of SIRS several.

***PLANS OF ACTION* (PoA)**

In deciding plan follow carry on each activity arranged in detail inside POA: (5W 1H)

1. What Which done (preparation, implementation, monev): **WHAT**
2. Objective & Goal: **WHY**
3. Timetable activity: **WHEN**
4. Place implementation: **WHERE**
5. Unit/whoresponsible/ implement: **WHO**
6. Amount & Source budget: **HOW**

Table 5. Plan of Action (PoA)

No	Activity	Objective	Target	Target	Cost	Location	Time	P.I.C	Indicator Success
1	Studies appeal And make SPO SIMRS.	To be made as a guide in operate SIMRS	Entire staff Which related with usage n SIMRS	100%	RS	Internal RS	April	Penang gung answer SIMRS	Use SIMRS more optimal And more activities at the hospital controlled.
2	Make TUPOXY team SIMRS	So that staff in TEAM SIMRS must understand in a way clear his position so that it can operate task basically as well the function is appropriate	Entire staff Which related with usage n SIMRS	100%	RS	Internal RS	April	Penang gung answer SIMRS	Staff in TEAM SIMRS understand clearly his position And can operate main tasks as well its function in accordance structure organization

		structure organization							
3	Do it n Supervision to every room in a way routine byteam SIMRS	For accompaniment, as well as solutionat a time evaluation work mainly deep operate SIMRS	Entire staff Which related with usagen SIMRS	100%	RS	Internal RS	Per quarter n	Penang gung answer SIMRS	SIMRS walk with Good in accordanceSPO

CONCLUSION

According to Ery Rustianto (2010), that something System Information Management House Sick (SIMRS) can used as a means of strategy for giving service oriented well to a patient take care road nor take care to satisfaction patients. This is to the theory put forward by Hatta (2008) that system information is done with process. Process which intended is required policies and procedures followed and held by para user system. However in the process no matter what is possibly found several problems and factors inhibitor. Factor men and organizations can play a role as pushers or inhibitors in the implementation of SIMRS.

In the literature review of five journals which discusses factor inhibitor implementation system information management House sick, general problems happen that is including:

1. Management and completeness of standard operational procedures
   a. SIMRS Team in Organizational Structure Not yet coordinated
   b. Not yet in full standard procedureoperational/SPO SIMRS
   c. Task principal and function (TUPOKSI) organization SIMRS Not yet clear
   d. Not yet There is supervision SIMRS from management
   e. Management does not encouragepersonnel to use SIRS
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2. Cognition and HR capabilities

a. Not yet there is concern user
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c. Competence *user* uniform
d. Lack of training SIMRS and officer special

3. System And technology
   a. *Servers* often hot, LAN often jammed
   b. *Hardware* lacking in somerooms
   c. Not yet complete means driver's license in eachunit
   d. Connection often disturbed

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