E-Health Implementation in Support of Hospital Service at Indonesia of Health National Insurance Era

Study on MHR at DMS Surabaya

Titin Wahyuni, Puteri Mahawati Ersalina
STIKes Yayasan RS. Dr. Soetomo
wtitin.2012@gmail.com

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Abstract: E-health is an Outpatient queuing management system at Dr. M. Soewandhie Hospital. This system provided by Surabaya City Government for supporting the implementation of Health National Insurance. On the other hand, its success requires support from Dr. M. Soewandhie Hospital in term of health records availability when service is performed. Based on observations made on 23 to 27 January 2017 found 718 misfile health records with an average of 144 ones per day. This research focuses on finding cause of misfile health records. We observed 257 ones during June to July, 2017 by purposive sampling method. The result shows that the most significant cause of misfiling health records based on observation is the doctors not complete yet health records from inpatient room. Based on the interview outcome, all of respondents agree at the most significant cause led to misfiling is human error due to wrong sub shelf and the best effective to avoid the problem by building up electronic health record and fixing problem at shelving and space. We suggest to design and launch intervention program to improve readiness providing health record and it suppose to be an effective long term follow up to assess the sustainability of intervention.

1 INTRODUCTION

Universal health coverage is defined as ensuring that all people have access to needed promotion, preventive, curative and rehabilitative health service, of sufficient quality to be effective, while also ensuring that people do not suffer financial hardship when paying to these service. Universal health coverage has therefore become a major goal for health reform in many countries, including Indonesia (WHO, 2017). To Indonesia, it is not just about to carry out a priority objective of WHO. It is a part of the implementation of the 1945 constitution as well (Mboi, 2015).

Indonesia launched National Health Insurance called Jaminan Kesehatan National (JKN) in January 2014, a way to achieve universal coverage. It is initially cover around 120M population who are already engaged in various social health insurance (SHI) schemes under a fund management agency called BPJS. In the year 2019, Indonesia targeted all population is around 250M people to be coverage. Once when this goal is achieved, JKN will be the largest program that coverage the highest population in the world (WHO Indonesia, 2017).

Thailand became exemplary leader for achieving universal coverage among South East Asian Nation. Moreover, Thailand could benefit all citizens with comprehensive health service. While Philippines also gave an excellence lesson with its health service not only portable to utilized inside the country but it could use outside one as well. Although it is not a comprehensive one, Philippines are able to eliminate the threat of impoverishment due to illness for most of the population (Thabrany, H., 2015).

Government of Surabaya city has concerned in developing e-government which one of the innovation is called as e-health. E-health is an outpatient of queuing management system. It is an integrated health system that had been implementing to 62 Primary Health Services and 2 hospitals owned by government of Surabaya city. One of them is dr. M. Soewandhie Hospital (Regulation of Mayor of Surabaya Number 5 Year 2013).

On the other hand, this implementation required well preparation from hospital particularly in

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availability health record of future patient who would be service at the certain date and time. When patient who already queuing by e-health system came at the hospital, filing staff of health record division is supposed to be prepare patients' health record at least a night before the actual admission. In consequence, at the certain day when they are attending to hospital and health records are not ready yet due to misfiled, it would make them cannot receive hospital service at certain time that had promised as seen as screen on e-health.

Based on our observation on 23 to 27 January 2014 found that a total 718 misfile health records and 144 ones on the average of ones. Therefore, in this paper we focused to analyse the causes of misfile health records of patients who already registered to queuing system by e-health.

Once a health record is declare as misfiling one, at the end step of procedure to find out one, if there is a dead lock, filling staff must provide a new health record as a solution of misfiling. Therefore, it able to create duplication of existing health record. Moreover, it make ones to make the data of become hard to be synchronous (Karlina et al., 2016).

2 METHODS

This research focuses on finding cause of misfile health records. We observed 257 misfile health records during June to July, 2017 by purposive sampling method. List of patients who will visit in the outpatient tomorrow, will be prepared his medical record by filing officer on D-1. The health record found will be marked and the undiscovered will be crossed. We will track on the service day where it was found and then addressed the cause and the issues due to in misfiling.

3 RESULT

We conducted interview in order to determine the cause in a great number misfiling events. Result of the interview compiled in the Table 1.

Table 1: Interviewed outcome with respondents in term significant cause of misfile health records events

Respondent	Interview outcome
Filling staff 1 (1st respondent)	Health records did not return yet from inpatient rooms
	Health records have moved from the main of filling shelf
	Health records have located at wrong sub shelf
	Health records have been at poly specialist for surgery preparation
	Those health records are owned by new patients
Filling staff 2 (2nd respondent)	Those health records are owned by new patients
	Health records have been at poly specialist for surgery preparation
	Health records did not return yet from inpatient rooms
	Health records have located at wrong sub shelf
Filling staff 3 (3rd respondent)	Health records have located at wrong sub shelf

Table 1 describe how different considerations in term significant cause of misfile health records events among 3 filling staffs. Overall, 2 respondents gave several cause of factors while the other gave only one cause. Both respondent 1 and 2 are agree to 3 of significant due to ones. They are health records still at inpatient room, at poly specialist for surgery preparation, and owned by new patients. Based on table 1, they contributed at 36%, about 4%, and 5% respectively. Moreover, 3 respondents agree to significant causes of ones are health records have located at wrong sub shelf. While it seems only 2% of it significant due to ones.

In conclude, the most problem based on their point of view are the most highest significant and the lowest significant as showed at table 1. In other words, their answer only significant with incompleteness health record at inpatient room by doctors. Comparing their answer within data that we observed afterward, we also then interviewed toward the best solution to keep away misfile health records events. The interview outcome are presented by table 3. Based on observation in June to July 2017, we analyse 257 misfile health records.

Table 2: Factors and issues contributing in misfiling at outpatient service of DMS Hospital

Factors and issues	Total misfile health record per day	Percentage (%)
Doctors		
a. They do not complete yet health records from inpatient room, so they do not return yet to filling room. Consist of two issues: 1. Return to health record room by 2x24 hours 2. Return to health record room by more than 2x24 hours	 21 71	 8 28
b. They do not complete yet health records from emergency room	47	19
Shelving and space Room is an adequate and resulting overloaded files. Therefore, they moved from main filling shelve	57	22
Patients		
Attending hospital without ID, resulting double numbers	32	12
Filling staffs		
a. Wrong sub shelf b. Declared health record as a misfile when in fact it is due to new patients category	6 14	2 5
System		
Health records at Poly specialist (pro surgery, incompleteness health record post surgery)	9	4

Table 2 show factors and issues that considering misfiling health records incidents in the month June to July 2017 with its percentage. Overall, doctors contributed to the most significant factor in misfiling ones incidents while system is the lowest contribution to them. The most significant issue are health records not returning yet from inpatient room to filling room, totally at 36% and most of them as big as 28% is due to incompleteness of ones for more than 2x24 hours. Incompleteness ones are also happening both at emergency room and poly specialist, we can show from table above it is represented by 19% and about 4% respectively. Alongside with them, the second highest frequency is being moved from main filling self (22%) due to overload of ones. In this research also found an issue that need to be concern are double numbers of ones (12%). In conclude, doctor has a factor and incompleteness ones is the most significant effect in misfiling ones.

Moreover, We interview 3 respondents regarding to find significant cause of misfile health records events according to their opinion.

Table 3: The best effective way to avoid misfile health records events according to respondents

Respondent	Interview outcome
Filling staff 1 (1st respondent)	make the filling room wider or move into wider room
Filling staff 2 (2nd respondent)	Maintain and develop the system that has been applied, both in the work and electronic system. Moreover, it also needs to increase amount of the shelves
Filling staff 3 (3rd respondent)	The electronic health record should be become hospital's priority cause of every patients' history will be recording in it. Therefore if health records are declared misfile it can be solve by looking into it.
Head of health records division (4th respondent)	It needs to realisation electronic health record urgently so that if there are misfile health records events, service still can be running without complain due to respond time of it from patients; doctor and others persons in charge can access every data on it

Table 3 describe how different consideration in term the best effective way to avoid misfile health records events among 4 respondents. 2 respondents are agreeing at build up electronic health record while 2 others have different idea toward the best solution of it. Electronic health record must be hospital's priority regarding respondent 3 and 4 due to several benefit that can be provided by it. For instance, misfile health record can be tracking on it; pursuit the respond time of it if there are misfile health records happening so service still can be running without complaint from patients.

While others approve at increase amount of the shelves (respondent 2) and make the filling room become wider or move into wider room (respondent 1). In conclude, we believe that the best solution based on their idea is making a way out on problem of the shelving and space by building up electronic health record and appropriate filling room.

4 DISCUSSION

Misfiling health records are responsibility filling staff. Firstly; the result shown that the most significant cause is doctor factor due to incompleteness ones. On the other hand, based on interviewed with the 3 filing staffs, the all agreed on their owned mistakes due to place at wrong sub shelf. That is the smallest percentage that shows at table 2. On the other words, the interview outcome has different side with observation data that we take in the month June to July 2017. It also means that misfiling incidents have never checked or evaluated before by them therefore they did not aware about the cause of these evident. Good medical record keeping is at the forefront of medical practice. Complete and accurate medical records will meet all legal, regularly and auditing requirements (Ebirim NL., Buowari YO., 2013).

Completeness health record is the presence of all necessary information of patients based on standard and all entry are dated and signed; it must be completing by 2x24 hours. Health record completeness is a key performance indicator that is associated with delivery of health services in the hospital. Improving health record completeness service is an important step towards improving the quality of hospital. It can also provide valuable information to help measure progress and effectiveness (Kasu T, Haftom A, Yemane G, and Birhanu J, 2017).

Secondly; the highest cause of misfile due to doctors who have not completed the medical record more than 24 hours. This cause related to centralization system in keeping health record management. This means that each patient has only one health record, whether they receive outpatient services or inpatient will be placed in a single file. So when the patient who has been discharge from hospital, then make visits for control in outpatient at the other day and filling staff not found health record at filling room. It will end up with result in misfile medical records. This is one of the shortcomings of the centralized system. The finding of Kasu T., Haftom A., Yemane G., and Birhanu J., 2017 projects suggest that a simple of intervention availing inpatient health record format and training hospital provider improves the inpatient health record completeness. Thirdly, the solution from their point of view is how to build adequate filing space and change from health record to electronic health record. However, shelving and space is the second largest factor that cause in misfiling health record. Cortes PL, and de Paula Cortes EG, 2011 the most cases resulted in multiple patients folder and led to misfiling was shown to be shelving and space, staff and logistic. and there was significant reduction in the use of multiple folder for five months intervention period by electronic health record implementation.

The electronic health record, with its advance storage, accessibility and linkage capacities, can be leveraged to reduce diagnostic errors by providing quick access to information, the ability to share assessments in real time between clinicians and with patients and advanced capabilities to follow up test result and track medication, whilst also providing access to electronic sources of knowledge information at the point of care (schiff and Bates, 2010).

Hence, electronic health record have potential to improve patient safety, and the efficiency and effectiveness of healthcare delivery (Callen J., 2014). Based on the best way to avoid misfiling, Teviu EAA et al, 2012 state that proper filing of patient's health records ensures easy retrieval and contributes to decreased patient waiting time at the hospital and ensures continuity of care. Moreover, studied show in other developing countries have observed their record keeping systems to be in adequate with about half (52,2%) of the records retrievable within one hour, some records were poorly designed and there is use of multiple patient health records by patients (Aziz S and Rao MH, 2002; Kerry TP, 2006 in Teviu EAA et al, 2012).

In the term of satisfaction using electronic health record, study shown that patients believe that electronic health record enabled more personal time with their providers by improving the quality of visit. Patients could benefit by reducing the incidence of various provider asking the same question in previous visit by nurses or physicians (Rose, Richter, & Kapustin, 2014).

5 CONCLUSION

Overall, the most significant cause of misfiling health records based on observation is the doctor while the highest issue is the health records have not returned to filing room for more than 2x24 hours. Based on the interview outcome, all of respondents agree at the most significant cause led to misfiling is human error due to wrong sub shelf and the best effective to avoid the problem by building up electronic health record and fixing problem at shelving and space. We recommended to design and launch intervention program to improve health record completeness and it supposed to be an effective long term follow up to assess the sustainability of intervention.

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