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Research Article

The Clinical Risk Management (CRM) Assessment at Dr. H. Abdul Moeloek Hospital, Regional Public Hospital in Lampung Province Indonesia, using Briner's CRM Instrument in 2020

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ABSTRACT

Every year the number of patients who died because of patient safety problems exceeds the number of patients who die from AIDS or breast cancer. Several studies in Indonesia, show that the implementation of patient safety has not been optimal. To achieve hospital services that ensure patient safety, risks need to be properly managed by the hospital. Clinical Risk Management (CRM) is a special form of risk management that focuses on clinical processes that are directly and indirectly related to the patient. CRM plays an important role in improving patient safety in the hospital. Dr. H. Abdul Moeloek Hospital, Regional Public Hospital in Lampung Province Indonesia, is a big hospital and is required to use CRM to manage patient safety. It is necessary to assess the maturity level of the Dr. H. Abdul Moeloek Hospital in supporting the improvement of health services that have a positive impact on community satisfaction.CRM maturity level in Dr. H. Abdul Moeloek Hospital in 2020 is measured using the CRM instrument through a survey. The survey was conducted on 221 respondents composed of four professional groups: doctors, nurses/midwives, heads of wards, and Quality and Patient Safety Committee. The CRM index is divided into two groups: the hospital/organization level and the service level. CRM maturity level assessment of Dr. H. Abdul Moeloek Hospital in 2020 showed positive results:Hospital/organization level (H1) at the high level of 80.1% and the low level of 19.9%, andService level (S1) at the high level of 97.3% and the low level of 2.7%. The results obtained for the overall CRM index were 94.6% at the high level and 5.6% at the low level. The CRM maturity level in Dr. H. Abdul Moeloek Hospital, Regional Public Hospital in Lampung Province Indonesia, in 2020 is at a high level, both at the organizational/hospital, service, and overall.

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INTRODUCTION

Modern medicine has an impact on the increasingly complex techniques and processes of treatment. While this creates opportunities for better safety, the risk of side effects and harm to patients also increases. The leading cause of death and increased mortality in hospitalized patients in many countries are unsafe and potentially life-threatening healthcare. Several studies in Indonesia show that the implementation of patient safety has not been optimal(Insani and Sundari, 2018; Kurniavip and Damayanti, 2018). In Bantul area hospitals, the implementation of patient safety ranges from 55-65%(Fitriana and Pratiwi, 2018). Other studies also show that patient safety affects patient satisfaction(Widiasari, Handiyani and Novieastari, 2019). Hospital incidents or unwanted incidents due to poor patient safety are considered serious problems in various parts of the world. Every year the number of patients who died due to this problem exceeds the number of patients who die from AIDS or breast cancer(Adibi et al., 2012). Based on the above conditions, the risks associated with patient safety need to be acknowledged.

Hospital risk management is important,especially to deal with risks such as Adverse Event, Near Miss, Non-Injury Event, and Reportable Circumstance which are part of Patient Safety Incident (KKPRS, 2015; Cooper et al., 2018). Patient Safety Incident in Indonesia is not well recorded, this may be because many do not report it due to not knowing the procedure (Iskandar, Maksum and Nafisah, 2014; Iskandar, Wardhani and Rudijanto, 2016; Aladin, Kuntjoro and Lestari, 2019)or does not have sufficient time to report(Rahayu, 2017; Tristantia, 2018)or fear of sanctions for wrongdoing(Vellyana and Rahmawati, 2016). The Patient Safety Incident reported based on research results in Indonesia is only 0.22%, smaller than the theoretical calculation of 10% (Iskandar, Wardhani and Rudijanto, 2016). Based on PERSI, it was reported that the incidence of patients falling in 2012 was 14% which made this percentage included in the top five clinical incidents Based on 2017 research in a type B education hospital at Yogyakarta, if patient safety is implemented according to the rules, the risk of a second incident can be prevented through learning about the first incident(Budi, Lazuardi and Tetra, 2019).

Clinical Risk Management (CRM) is a special form of risk management that focuses on clinical processes which are directly and indirectly related to patients (Briner et al., 2010). CRM are all structures, processes, instruments, and activities that enable hospital employees to identify, analyze, limit, and manage risks while providing clinical and patient care. CRM is a systematic way of integrating a proactive and reactive approach within the organization, not focusing on the individual and their potential to make mistakes.

Assessment of hospital CRM needs to be carried out in support of improving health services that have a positive impact on community satisfaction (ARSADA, 2017). Clinical Risk Management (MRK) plays an important role in improving hospital patient safety.

Dr. H. Abdul Moeloek Hospital, Lampung Indonesia, could not entirely avoid the Patient Safety Incident. From February to April 2019, there were 10 Reportable Circumstances, 20 Near Miss, and 42 Adverse Events (RSAM Quality Committee, 2019). Thus, Dr. H. Abdul Moeloek Hospital needs to use risk management in its activities, especially concerning patient safety associated with clinical risk.

The formulation of the problem underlying this study is how to assess the maturity level of CRM in Dr. H. Abdul Moeloek Hospital using the CRM instrument.

MATERIAL AND METHOD

Assessing Maturity of CRM

Hospital CRM Index assessed based on the study by Briner (Briner, Manser and Kessler, 2013). The CRM instrument consists of 12 indices: the G1 index, the general CRM index for the hospital (combining indices H1 and S1); Hospital level; H1 index, CRM index at hospital level (combining indices H2 and H3); Index H2, CRM process; Index H3, leadership, staff participation and training; Index H4, incident reporting; Service level; Index S1, CRM index at service level (combining indices S2, S3, S4, S5, S6); Index S2, CRM process; S3 Index, communication/information; Index S4,

documentation; Index S5, learning/development; Index S6, training/education; and Index S7, local incident reporting. The CRM instrument by Briner states that the incident reporting system is not related to the main elements of CRM. The CRM index and related questions can be seen in Fig.1.

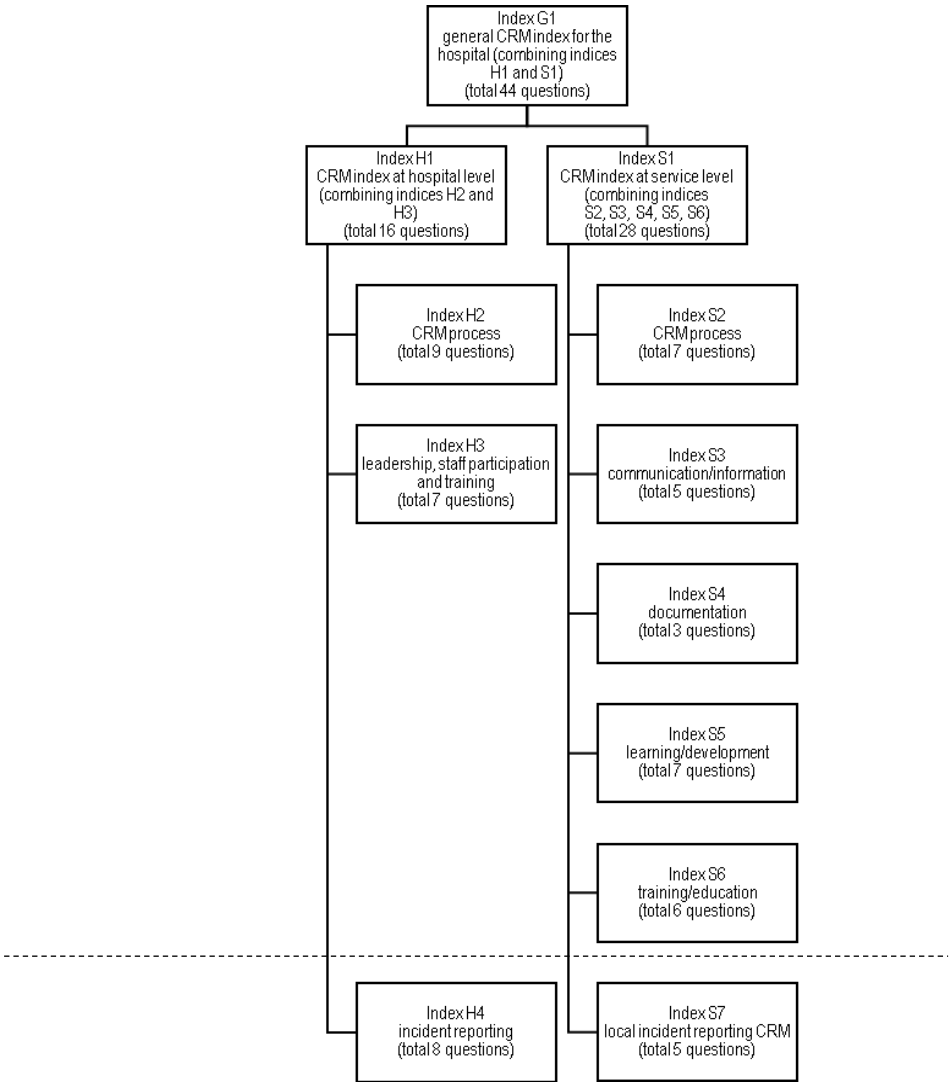

Fig.1: CRM Indices and Total Questions

Research Subjects

Dr. H. Abdul Moeloek Hospital is the research subject for assessing the maturity level of CRM in the hospital. The hospital has various types of employees involved with clinical risks that sampling is necessary that represent each type of employee. The intention is to avoid bias and more objective data results. The method is chosen to address the limitations of previous studies which only conducted surveys and interviews with individuals responsible for CRM (Briner et al., 2010; Briner, Manser and Kessler, 2013).

There are 1,055 employees at Dr. H. Abdul Moeloek Hospital composed of medical and non-medical personnel. The population in this study is 495 medical personnel involved with clinical risk. There are four professional groups in the population: doctors, nurses, heads of wards, and the Quality and Patient Safety Committee(RSUD Dr. H. Abdul Moeloek Provinsi Lampung, 2018).

The Slovin formula (Fig.2)used to calculate the sample(Nasir, Muhith and Ideputri, 2014).

$$n = \frac{N}{1 + N.e^2}$$

Information:
n = sample size
N = total population
e = 95% precision level or sig = 0,05

Fig.2: Slovin Formula for Calculating Samples

Based on the calculation (Fig.3), the sample (n) is 221 samples (45% of the population).

$$n = \frac{495}{1 + 495.(0{,}05)^2} = 221$$

Fig.3: Sample Calculation

Samples are divided proportionally into professional groups (Nasir, Muhith and Ideputri, 2014). The number of respondents required in each group is calculated based on the population of each type of profession. Table 1 presented samples of professional groups.

Table 1: Samples of Professional Groups

Group type	Population	%	n
Quality and Patient Safety Committee	13	2%	5
Doctor	129	26%	58
Nurse/Midwife	329	67%	148
Head of the Ward	24	5%	10
TOTAL	495	100.00%	221

Data Analysis

The survey result became the basis for data analysis. The results of the survey using the CRM assessment instruments were reduced and analyzed using descriptive statistics. Descriptive Table 2). The development stage is divided into two groups: low maturity of CRM for stages 1-3 and high maturity of CRM for stages 4-5. Scale measurements obtained from the aggregate value statistics used to explain hospital CRM maturity level.

There are five development stages for CRM maturity level (

CRM maturity level rounded to the nearest stage. Each rank has a numerical value based on the Development Stage.

Table 2. Maturity of CRM

Maturity of CRM	Development stage	Hospital Level (H)	Service Level (U)
Low maturity of CRM: Hospitals that did not carry out the CRM components (combining stages 1, 2 and 3)	Precontemplation (Stage 1)	Not yet examined (1)	Not true for any service (1)
	Contemplation (Stage 2)	Examined, but so far no implementation plan (2)	Not true for any service (2)
	Preparation (Stage 3)	Implementation planned in the next 12 months (3)	Planned for some services/ planned for all services (3)
High maturity of CRM: Hospitals that have implemented the CRM components (combining stages 4 and 5)	Action (Stage 4)	Not systematically implemented (4)	True for certain services (sometimes additionally planned for all services) (4)
	Maintenance (Stage 5)	Systematically implemented/ Deliberate decision against implementation (5)	True for all services (5)

RESULTS AND DISCUSSION

Respondents Frequency Distribution

Respondents from the medical personnel employee of Dr. H. Abdul Moeloek Hospital have a participation rate of 100%, for a sample size of 221. From these data (Fig.4), 67% of respondents were nurse/midwife, the most populous personnel duties and functions closely with clinical risk management. Medical doctors also take 26.2% of the total respondents. Medical doctors play an important part because their main responsibilities and functions are closely related to the implementation of clinical risk management.

CRM Maturity Level

Respondent's perceptions of Clinical Risk Management in their workplace were assessed to measure the CRM Maturity Level of Dr. H. Abdul Moeloek Hospital.

Frequency Distribution of CRM Maturity Level (G1 Index) shows the majority of 94.6% respondents think that the CRM Maturity Level is at the High Maturity level (levels 4-5). A minor 5.4% of respondents considered that the Clinical Risk Management Maturity Level (G1 Index) was at the Low Maturity Level (levels 1-3). CRM Maturity Frequency Distribution is detailed in Table 3.

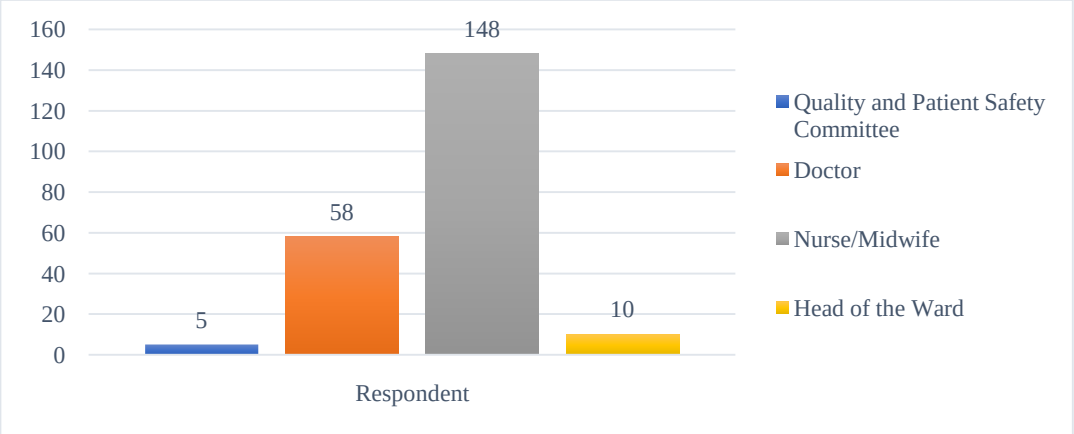

Fig.4: Respondent Group by Profession

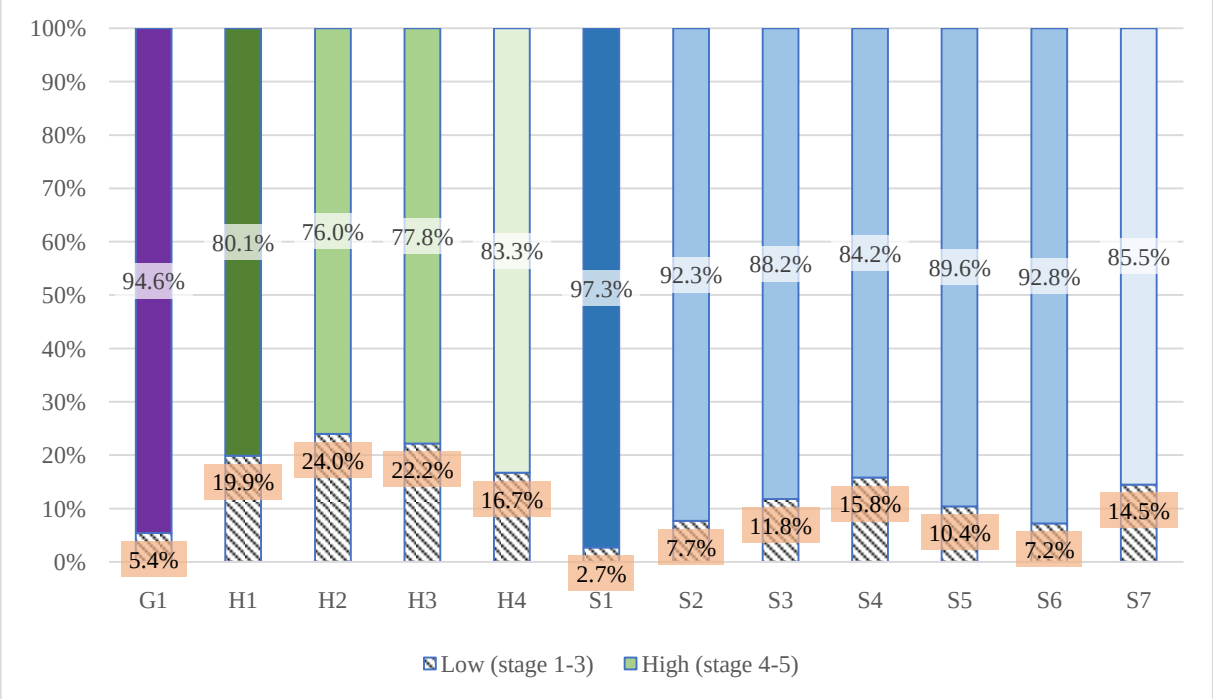

Fig.5: Maturity of Hospital CRM

Table 3: CRM Maturity Frequency Distribution

	Low (stage 1-3)		High (stage 4-5)	
CRM indices	**n**	**(%)**	**n**	**(%)**
Index G1, general CRM index for the hospital (combining indices H1 and S1)	12	5.4	209	94.6
Hospital level				
Index H1, CRM index at hospital level (combining indices H2 and H3)	44	19.9	177	80.1
Index H2, CRM process	53	24.0	168	76.0
Index H3, leadership, staff participation and training	49	22.2	172	77.8
Index H4, incident reporting	37	16.7	184	83.3
Service level				
Index S1, CRM index at service level (combining indices S2, S3, S4, S5, S6)	6	2.7	215	97.3
Index S2, CRM process	17	7.7	204	92.3
Index S3, communication/information	26	11.8	195	88.2
Index S4, documentation	35	15.8	186	84.2
Index S5, learning/development	23	10.4	198	89.6
Index S6, training/education	16	7.2	205	92.8
Index S7, local incident reporting CRM	32	14.5	189	85.5

CRM Maturity Level frequency distribution is relatively skewed towards a CRM High Maturity Level (levels 4-5) with a mean of 0.95 and a standard deviation of 0.221. CRM Indices for Maturity of Hospital CRM shown in Fig.5.

Assessment of CRM maturity level of Dr. H. Abdul Moeloek Hospital in 2020 showed positive results. CRM maturity level in the hospital/organization level were (H1) at the high level of 80.1% and the low level of 19.9%; H2 at the high level of 76.0% and the low level of 24.0%; H3 at the high level of 77.8% and the low level of 22.2%; and H4 at the high level of 83.3% and the low level of 16.7%. CRM maturity level in the service level (S1) at the high level of 97.3.0% and the low level of 2.7%; S2 at the high level of 92.3% and the low level of 7.7%; S3 at the high level of 88.2% and the low level of 11.8%, S4 at the high level of 84.2% and the low level of 15.8%, S5 at the high level of 89.6% and the low level of 10.4%, S6 at the high level of 92.8% and the low level of 7.2%, as well as S7 at the high level of 85.5% and the low level of 14.5%. The results obtained for the overall CRM index were 94.6% at the high level and 5.6% the low level.

Dr. H. Abdul Moeloek Hospital has a high Clinical Risk Management Maturity Level. Indicated by the respondent's statement, 94.6% stating that the implementation of Clinical Risk Management in the hospital is already at the implementation stage but not systematic (Stage 4) nor the implementation stage is systematic (Stage 5). Meanwhile, the respondents who answered in stages 1-3 were very few, only 5.4%.

CONCLUSION

Based on the results, the CRM maturity level in Dr. H. Abdul Moeloek Hospital in Lampung Indonesia in 2020 is at a high level, both at the organizational/hospital, service, and overall.

Clinical risk management programs can run well if all personnel, especially leaders, have a solid commitment to implement clinical risk management. Leaders must make efforts to strengthen commitment for their employees and show their commitment clearly and openly to all staff to motivate them to support the CRM program. Commitment from the leadership demonstrated by direct involvement, policy

support, and the fulfillment of facilities for the smooth implementation of the CRM program.

CRM program implementation will have a more positive impact by providing more risk management training activities to build knowledge about clinical risk management for all personnel.

CONFLICT OF INTEREST

Authors do not have any conflicts of interest with the publication of the manuscript.

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