RESEARCH ARTICLE

ANALYSIS OF EARLY WARNING SYSTEM SCORE IMPLEMENTATION AT INPATIENT ROOM IN SILOAM HOSPITALS BALIKPAPAN.

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Manuscript Info	*Abstract*
	This study aims to analyze the implementation of EWS according to standards and the factors that influence the implementation of EWS inpatient care Siloam Hospitals Balikpapan. The object in this study was Inpatient Room at Siloam Hospitals Balikpapan (SHBP). This type of research used the qualitative method and field research. Primary data were obtained from in-depth interviews with structural and functional staff related to inpatient room. Secondary data were obtained in the form of EWS for inpatient patient which measures in April-May 2019. Qualitative analysis is used to see the relationship between factors (communication, resources, disposition, and bureaucratic structure) on EWS implementation. The results of the study showed that (1) The implementation of EWS hospitalized by SHBP has not yet run according to the standards. Completeness of documents that are closely related to the implementation of the EWS SOP that has been set is still 81%; (2) The implementation of EWS Monitoring inpatient services at SHBP has been carried out even though it has not been contained in the EWS implementation policy on how the EWS monitoring is carried out by the development Nursing initiative aimed at getting an overview of the results of the EWS implementation inpatient care at SHBP. The description of EWS implementation monitoring is hospitalized by SHBP in total, 87% consisting of eight forms related to EWS as much as 86% and officers' knowledge about EWS is 81%; (3) Factors influencing the implementation of EWS hospitalized by SHBP consist of communication, resources, disposition and bureaucratic structure.

Introduction:-

The issue of quality and patient safety has become a global issue and the main focus in service in the world today, is no exception in Indonesia. Since the publication of the report of The Institute of Medicine (IOM) "To Err Human" in 1999 the hospital was required to be able to guarantee the quality and safety of patients in the services provided. IOM in 2001 through its report "Crossing The Quality Chasm: A New Health System for the 21st Century" then issued recommendations regarding basic needs that must be met in a health service system known as Six Aims to Improve Healthcare, where service institutions are required to provide safe, effective, patient-focused (Patient Centrered Care), timely, efficient, and equitable services.

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There are physiological criteria that can help staff recognize as early as possible the patient whose condition is deteriorating. Most patients who experience heart failure or previous pulmonary failure show physiological signs outside the normal range which is an indication of the patient's condition worsening. This can be known with EWS. The implementation of the EWS makes staff able to identify the patient's condition deteriorating as early as possible and if necessary seek competent assistance, thus the results of care will be better (KARS, 2017).

Carberry and Clement (2014) state that the EWS concept was first introduced by the Ministry of Health as part of the recommendations in a comprehensive critical nursing report. EWS is also known as "track and trigger systems", namely by adding up all the signs of abnormal pulse, blood pressure, breathing, temperature, the amount of urine that comes out and the level of consciousness. This is an objective sign or criterion to identify or monitor the patient's condition that helps nurses and doctors make decisions about the patient's condition.

Maupin (2009) in his research entitled "Use of Modified Early Warning Score for Decreases Code Blue Evant" said that the implementation of EWS was very closely related to a reduction in mortality from 2.2% to 1.3% in 12 months so that it also reduced the number code blue event..

Inconsistent in implementing standard operational procedure (SOP) standards and staff indifference in implementing established standard procedures will increase the mortality rate of patients in hospitals. Nadkami (2006) states that the incidence of pediatric patients who experience cardiac arrest during hospital stay is around 0.7% - 3%. When this happens the child's condition worsens and it is estimated that only 15% of pediatric patients can be saved. The same is true of adult patients. The actual incidence of cardiac arrest can be minimized by the deterioration of the patient's condition by observing the signs and symptoms that can be observed.

EWS is a monitoring tool that is considered capable of helping staff to monitor and control the patient's condition, so that they can provide a report as quickly as possible to the doctor regarding the deterioration of the patient's condition. EWS can also determine the level of care and space where the patient will be treated.

Ijaz (2009) stated that EWS standardization was recorded when critical patients were highly trusted as predictors of mortality rates for hospitalized patients. This can identify patients who are at high risk with reduced awareness so that they can place the criteria for patient care.

Siloam Hospitals Balikpapan is one of the first class private hospitals in Balikpapan City, East Kalimantan, which has been established since 2007. Siloam Hospitals Balikpapan is one of 37 Siloam Hospitals Group in Indonesia. At present Siloam Hospitals Balikpapan has a bed capacity of 165. Siloam Balikpapan itself has passed accreditation by KARS with a plenary status in 2017.

Although it has been accredited, overall EWS implementation has not been consistently carried out. Where data from inpatients at Siloam Hospitals Balikpapan in 2018 below explains that an average of 3 patients per month who died were hospitalized. This is a sign because of the lack of early detection in patients with the risk of worsening the patient's condition. From the patient's medical record data in 2018, it was found that 3 patients who had just entered 2 hours were hospitalized through the emergency department, experiencing a sudden decline in consciousness, even though the decline in consciousness was a condition that went through phases that could be detected in patients so that the criteria patients with worsening should be able to enter the critical care unit so that optimal treatment can be performed and not enter in a critical state. This is in accordance with Alam *et al*. (2014) in his journal entitled "The impact of the use of early warning scores on patient outcomes: A systematic review".

Approximately 22.7% of deaths that occur in hospitals can actually be avoided with optimal care, with the implementation of guidelines and service standards compiled, implemented, monitored and evaluated for implementation.

Siloam Hospitals Balikpapan has implemented EWS since March 2017. Before it was implemented, training was conducted on understanding EWS and scores set for early detection of deteriorating patient conditions, guidelines and SPO for early detection of deteriorating patient conditions. The training is aimed at clinical area staff, namely general practitioners and all nurses of Siloam Hospitals Balikpapan. After the training was given, socialization was held in each room regarding SPO for 1 week and the next step was an experiment of implementation for 2 weeks in

the 6th floor treatment room. After the experiment was conducted, in April 2017 implementation was carried out throughout the inpatient area in the hospital.

Based on the assessment elements of the national standard for hospital accreditation and based on preliminary observations found, namely from the attendance list of staff to the dissemination of related policies and procedures it was still limited to nursing staff, and there were several nurses absent due to being on leave; socialization to medical staff (general practitioners) only 3 people attended from 12 general practitioners; awareness of early detection of deterioration in the patient's condition is still lacking, this can be seen from the search document found not all patient medical records are filled with EWS scores on the Emergency Assessment Form and assessment on each shift in the inpatient room; and in the morning report every day the EWS observation table is never filled. This finding is a report from the Siloam Hospitals Balikpapan PMKP (Quality and Safety Improvement) team in December 2018 at a management meeting.

Based on the background above, where the incidence of patients dying> 48 hours conducted by Code Blue was hospitalized by Siloam Hospitals Balikpapan in 2018 of 0.39%, which is still above the Net Death Rate standard set by the Minister of Health Decree No.129 Year 2008, which was 0.24%, the researchers were interested in further analyzing the analysis of EWS implementation at Siloam Hospitals Balikpapan.

Theoretical Concept:-
Policy Implementation Model according to George C. Edwards III's model
The model of policy implementation developed by Edwards (1980) defines:

> "Policy implementation as we have seen the stage of policy making as the passage of the legislative act, the issuance of executive orders, the handling of the decision of the regulatory rule and the Consequences of the policy for the people whom it affects "

Implementation is actions taken by the government to achieve the objectives set out in a policy. George Edwards stated that the main problem of public policy is the lack of monitors for policy implementation, ineffective monitor implementation that would make policies not implemented properly. According to George Edwards III there are 4 factors that influence the success or failure of policy implementation (Wibawa, 2010).

Communication factor, namely the successful implementation of the policy requires that the implementor know what must be done, where the objectives and objectives of the policy must be transmitted to the target group (target groups, thereby reducing the distortion of implementation. the purpose, goals and objectives and benefits of the policy so that policies can be accepted and understood by policy implementers.

Resources, such as (1) human resources, implementation of a policy depends on human resources who are responsible for implementing policies. Human resources must be in accordance with the amount and ability although the contents of the policy have been communicated clearly and consistently, but if the implementor lacks the resources to implement, the implementation will not be effective; (2) budget resources affect the effectiveness of policy implementation. The available budget is limited can cause limited service quality to the public; (3) equipment resources are important in policy implementation. Limited equipment will reduce implementation results; and (4) information resources and authority are very much needed in policy implementation. Authority is needed to ensure that policies are carried out as expected.

Disposition, is the character and characteristics possessed by the implementor, such as commitment, honesty, democratic nature. If the implementor has a good disposition, then the implementor can run the policy well as what is desired by policy makers. When the implementor has a different attitude or perspective than the policy maker, the policy implementation process also becomes ineffective.

Bureaucracy is one of the most frequent implementers of activities. This bureaucratic structure includes aspects such as organizational structure, division of authority, relationships between organizational units and organizational relationships with outside organizations. Therefore, it is necessary to collaborate with various related parties and standard operational procedures to facilitate and uniformize the actions of all implementers involved in carrying out what is part of their duties. Organizational structures that are too long will tend to weaken supervision and lead to

red-tape, which is a complicated and complex bureaucratic procedure, which makes organizational activities inflexible.

Monitoring and Evaluation System

Monitoring in terms of the relationship to performance management is an integrated process to ensure that the process goes according to plan. Monitoring can provide information on the sustainability of the process to set steps towards continuous improvement, namely Compliance monitoring and performance monitoring Mercy (2005) Compliance monitoring serves to determine the organization's progress in achieving the expected targets.

Generally, the monitoring output is a process progress report. The output is measured descriptively and non-descriptively. The monitoring output aims to determine the suitability of the process. Monitoring output is useful in improving the mechanism of the process / activity where monitoring is carried out.

Evaluation is part of the management system, namely planning, organization, implementation, monitoring and evaluation. Without evaluation, it will not be known how the condition of the object of the evaluation in the design, implementation and results. The term evaluation has become a vocabulary in Indonesian, but this is an absorption word from English that is evaluation which means assessment or estimation. Whereas according to the term evaluation is a planned activity to know the state of something object by using instruments and the results are compared with benchmarks to obtain conclusions. According to Arikunto (2010) evaluation as a process determines the results that have been achieved several activities planned to support the achievement of goals. According to Wirawan (2012), evaluation is research to collect, analyze, and present useful information about the object of evaluation, then assess and compare it with evaluation indicators and the results are used to make decisions about the object of the evacuation.

EWS Score

EWS Score (EWSS) is an early warning system using markers in the form of scores to assess and overcome the deteriorating conditions of patients and can improve management of care in patients with acute illness as a whole. EWS Score is used with the parameter evaluation of changes in the patient's condition through systematic and measurable observations of all changes in the patient's physiology. This system was introduced by using the concept of a proactive approach to improve patient safety and better clinical outcomes of patients by standardizing the assessment approach and establishing simple physiological parameter scoring. It can be said that the EWS Score is a system of requests for assistance to deal with patient health problems early. EWS is based on an assessment of changes in the patient's condition through systematic observation of the patient's physiological changes. This system uses a proactive concept to improve patient safety and better clinical outcomes with standardization that uses assessment and determination of scoring simple physiological parameters (Williams, et al., 2012)

Code Blue

Code blue or blue code is an emergency condition that occurs in a hospital or an institution where there are patients who have cardiopulmonary arrest and are passwords used to declare that the patient is in an emergency condition (KARS, 2012).

Research Method:-

The type of research used is qualitative methods and field research. This research was conducted at Siloam Hospitals Balikpapan. Data collection is carried out with in-depth interviews with parties related to EWS and through literature with reports and documents relating to the EWS implementation of inpatient room at Siloam Hospitals Balikpapan. The population is structural staff and functional staff related to the Inpatient room in Siloam Hospitals Balikpapan. A sample of 9 informants were selected for in-depth interviews and were willing to take part in this study by signing the informant's consent sheet, as well as collecting EWS data and EWS implementation of inpatient measures in April-May 2019. EWS collecting data is processed using manual calculation which shows the presentation of implementation of EWS in inpatient room by using a checklist form. To assess the implementation program of EWS was analyzed using the qualitative method.

Results and Discussions:-
Communications
Information Submission Process (Transformation)
Based on the answers of the informants and documents found in the field in this case the EWS Guidelines Policy, out of the nine informants stated that they had meetings with related units such as Head Department, DPJP, case manager, Head Nurse and Medical Committee, Nursing Committee. This is in accordance with the contents of the policy which states the implementation of this socialization as well as the implementation in each treatment room involving all related components. Likewise, the training carried out by Siloam Hospitals Balikpapan (in house training) by inviting doctors and nurses from competent Head Office in the EWS field was justified by the nine informants and documentary evidence the researchers found in the form of an assignment letter directly from the President Director of the Head Office to the Resource Person.

Clarity of Information (Clarity)
Based on the results of in-depth interviews with the nine informants and review of the policy document implementation of the EWS procedure regarding clarity of objectives and policy objectives, it can be seen from the scheme that all states are clear where the stated policy objectives state that the EWS implementation aims as a parameter of assessment of changes in the patient's condition through observations that systematic and measurable towards all changes in the patient's physiology. Meanwhile, the implementation of the EWS clearly stated in the policy is borne by the nurse and RMO and DPJP who are responsible for preparing and completing the implementation of the EWS in accordance with the specified case.

Consistent
Based on the results of in-depth interviews with the nine informants and review of the results of the data collection phase one of the EWS SOP regarding the lowest results in the first phase of EWS SOP implementation, there were two informants who said that the causes were lack of communication while seven other informants said they were inconsistent the least or lowest of all phases of the implementation of the EWS SOP.

Resource
Based on the results of in-depth interviews and documentary evidence that the researchers got in the field were the nine informants stating that (1) the number of nurses, RMO and DPJP was sufficient, this was evidenced by the data we obtained from the HRD section. no doubt the competence of nurses, RMO and DPJP; (2) There are facilities prepared in the form of forms for EWS implementation; and (3) There is authority granted formally by policy makers in this case the Director of Siloam Hospitals Balikpapan to nurses, RMO and DPJP. Policies regarding the implementation of EWS SOP and EWS Siloam Hospitals Balikpapan SOP.

Disposition
Based on in-depth interviews and documentary evidence the researchers obtained in the field that out of nine informants, four informants said they had often conducted trainings, reminding the implementers while five other informants stated that the support in the form of training was only done once and that had been a long time. This shows that the leadership's commitment in providing support or motivation to the implementers has not run properly. One of the informants, indicated that the implementing commitment was largely determined by the leadership. Strong leaders who support policies are expected to be able to improve employee performance in terms of EWS implementation. Compensation as a form of rewards given to employees / staff is felt unnecessary because the standard salary salary system that has been applied by the Siloam Hospitals Group.

Bureaucratic Structure
The procedures needed in implementing EWS implementation policies for implementing health workers in the field are arranged in the form of standard implementation procedures, better known as SOPs and servant guidelines, this SOP is a reference for all implementers of EWS implementation in the field. In implementing the EWS each professional group already has a standard operating procedure or a Clinical Practice Guide which forms the basis for implementing the EWS implementation. This EWS SOP is a technical guide for nurses, RMO and DPJP in providing health services in their respective fields. Regarding the clear division of tasks, basically the nine informants already understood the duties and functions and responsibilities of each, but in its implementation, if seen from the responsibilities held by the implementing officers in the field, there were still shortcomings in the tasks and functions that were appropriate.

Discussion:-

The process of submitting Information on EWS implementation policies by the Siloam hospitals Balikpapan Managing Director to policy implementers in this case is the Head Division Medic and Head Division Nursing and related units to be forwarded to inpatients, RMO guards and doctor in charge of services (DPJP), carried out so that the policy can be transformed appropriately. The delivery process is carried out through meetings with related ranks and inhouse training, about EWS.

Likewise, the training carried out by Siloam Hospitals Balikpapan (in house training) by inviting doctors and nurses from outside and from the head office who are competent in the EWS field was justified by the nine informants and documentary evidence the researchers found in the form of direct assignments from the President Director to the Resource Person. This shows that the policy transformation process from policy makers in this case the Managing Director and implementing policy has been running as it should so that the target of the meeting and training can be achieved (Sitohang, 2014).

In the implementation of the EWS SOP in the field, the delivery of information is carried out quite clearly, in the form of SOP available in all rooms and can be accessed easily. It's just that there are several phases in the SOP that take place where the process of delivering information according to researchers is not going well because factors are less consistent. It was seen at the beginning of the EWS SOP that it had started well, namely conducting routine EWS monitoring to determine the initial score of patients entering new hospitalization. Compliance at the start of the SOP is 96% meaning that only 4% do not take this step even though it is expected to be in the standard of 100%. Inconsistency can be seen from the decrease in adherence in implementing the EWS SOP, where in the medium score phase only 56% and the high score compliance was 81%. This means that the communication in the delivery of information has not occurred adequately so that there is inconsistency in the implementation of the EWS SOP in hospitalized Siloam Balikpapan Hospital.

The process of delivering information is an important dimension in implementing a program. Dadang Kusnadi in his International Journal entitled "The Influence of Policy Implementation from Change of Institutional Status Towards Quality of Patient Service in Hosptals" said that communication specifically that is the process of delivering information is very significant affecting a program implementation. In his research shows that communication factors get the highest results affect the implementation of programs that greatly affect the quality status of hospitals where the first dimension of communication is the process of delivering information. (Kusnadi, 2012)

All health workers responsible for 24 shifts to prepare patient services, patient satisfaction, service coordination, conduct policies including having communication skills to make a positive impact. Communication means being an advocacy to create a positive atmosphere. Professional communication is a form of delivering information to improve communication between professionals.

The process of delivering information that has been carried out at Siloam Hospitals Balikpapan is carried out by Downward Communication, where coordination is through plans that have been made or planned and forms of communication that eventually go down. This communication is one-way from the leader because this is a policy that must be followed by all concerned. In addition to downward communication, upward communication is also done by coordinating feedback, especially in matters of a technical nature.

Informants and EWS implementation policy documents regarding clarity of objectives and policy objectives, it can be seen that all stated clearly that the stated policy objectives stated that the implementation of the EWS aims to make officers able to identify the patient's condition deteriorating as early as possible and if necessary seek competent assistance, thus the results care will be better. Meanwhile the implementation of the EWS clearly stated in the policy is borne by nurses, RMO and DPJP who are responsible for preparing and completing the implementation of the EWS in accordance with the prescribed case. The foregoing is similar to the theory put forward by Edward III which states that the clarity of the information conveyed is important so that all parties concerned can understand the intent and purpose of the information and can carry out their respective functions.

Clarity of information also relates to the dissemination of information which is the start of the implementation process. Clarity of policy information is an important point of implementing the implementation itself (Mthethwa, 2012). According to this study, the clarity of information is very important because the policy information was born from articulation, debates and drafts that have been made in a language that is quite clear as a policy. Clarity of

information is one dimension of policy implementation. The above research takes a seven-dimensional reference that influences policy implementation (Bhuyan, Jorgensen and Sharma, 2010). It is said that there are three important things how to be able to achieve the objectives of a policy implementation, namely first, namely commitment commitment from policy makers and implementation of policies to achieve goals, secondly increasing effectiveness to improve program quality with understanding and overcoming obstacles in implementation, thirdly fostering equality and quality because Effective policy implementation can set minimum standards for quality and reduce inconsistencies. Clarity of information is also an important and very influential factor in the implementation of the policy stated also by Shelvy Haria Roza in the Journal entitled "Analysis of Policy Implementation of Local Public Service Agencies in Hospitals" (Roza, 2018).

Clarity of information is an important matter to avoid misunderstanding between policy makers and implementers of the policy so that it does not become an obstacle in implementing a program. Information clarity has a very important relationship with trust in communication.

While the Journal entitled 'The teaching of a structured tool' states that clarity of information is optimal communication between health professionals as a significant causal factor in dealing with incidents of patient safety.

The communication factor is very very influential on the acceptance of policies by the target group, so the quality of communication will influence in achieving the effectiveness of policy implementation. Thus the dissemination of policy content through a good communication process will affect the implementation of the policy. In this case the communication media will influence the implementation of the policy. In this case, the communication media used to disseminate policy content to the target group will play a very important role.

At Siloam Hospitals Balikpapan, the media used as the communication medium was first, a meeting of directors with the board of directors, secondly meeting the directors and related divisions strengthened with a decree on the implementation of EWS policies and disseminating them through internal memos to all employees of Siloam Hospitals Balikpapan. Establish evaluation materials by listening to the results of the audits carried out at each coordination meeting every week scheduled for all management lines. If something happens outside of what has been set, each related function will write it down on an online incident report so that the report will arrive at the relevant division and if the event has the potential to risk eating death the report will reach the highest leadership not only in the hospital director but will go to the highest leadership at the Siloam Group head office. This indicates that the communication dimension has been structured by Siloam Hospitals Balikpapan to facilitate the implementation of EWS policies to achieve the expected goals.

Speaking in sum, Siloam Hospitals Balikpapan already has a nationally applicable policy so that from planning to provide medical and non-medical human resources it has gone through stages in accordance with the laws and regulations. The calculation of nursing staff has a special formulation. According to (Ilyas, 2004), HR planning is the process of estimating the number of HR based on place, skills and behavior needed to provide health services. Looking at the above understanding, that hospital HR planning should be based on the functions and workload of health and health services that will be faced in the future. This is so that the hospital functions can be in line well, then the HR competencies must be in accordance with the HR specifications needed by the Irnalita Journal hospital with the title Analysis of Nurse Workforce Needs Based on the workload using the Work Sampling method in the Emergency Installation BPK-RSU Dr. Zainoel Abidin - Banda Aceh in 2008.

In the inpatient department, the ratio of the number of nurses compared to the number of patients is an important thing to note. But this sufficiency also often experiences problems related to the distribution and the quality of the human resources of the nurses themselves. Because each of them has different competencies so that even though the ratio is felt enough, it also does not necessarily reduce mortality. Shekelle (2013) states that the adequacy ratio of nurses has a close relationship with decreasing mortality in a hospital. However there are several factors such as nurse fatigue, job satisfaction, and cooperation. The researcher tried to explore these things to the informants and obtained data, namely there were no such things above by looking directly at the list of services that had been done by calculating the number of working hours and obtaining proportional workload data in the Talent Administration section carried out load assessment work every 6 months. Systemic reviews conducted periodically help management evaluate the adequacy and workload of nurses and other workers.

The implementation of EWS at Siloam Hospitals Balikpapan is directly related to the implementation of EWS such as medical equipment in the form of meter tension, stethoscope, oxygen saturation and others. Completeness of work facilities such as the forms needed that are related to the implementation of EWS. For social facilities, namely in the form of a place of implementation, such as a nurse station.

There is authority granted formally by policy makers in this case the Managing Director to Nurses, RMO and DPJP. The policy regarding this authority is stated in the EWS SOP and SK for the implementation of EWS Silaom Hospitals Balikpapan. This means the authority process that runs at Siloam Hospital Balikpapan, namely official authority, namely the official authority received from the authority above. Line authority has gone well where the top is done on direct subordinates. Namely the immediate boss gives authority to his subordinates, his form is the authority of the order and is reflected as a chain of orders that are revealed by the da'wah through the organization level (Handoko, 2012).

The leadership commitment in providing support or motivation to the implementers has not yet proceeded as it should have been, which appears in the discrepancy in implementing EWS in the inpatient room. The placement is appropriate and appropriate because the decree of the placement of nurses, RMO and DPJP of Siloam Hospitals Balikpapan is in accordance with their respective fields of expertise or in other words are in the respective Medical Staff Group as evidenced by the existence of a Practice Permit and Registration Certificate owned. Placement of employees aims to put the right people and positions in accordance with their interests and abilities, so that existing human resources become productive. Employee placement means giving certain tasks to workers so that they have the best position and are most in accordance with recruitment, employee qualifications and personal needs. According to Edward III, one way to increase implementing motivation in implementing policies is to provide compensation / incentives (Nawawi, 2009). This already applies to employees of Siloam Hospitals Balikpapan who have implemented the Matrix Salery system, where the income they get is in line with their performance. The implementation of the Matrix Salery carried out includes indicators of the provision of incentives so that it is not specifically applied for the provision of EWS implementation incentives at Siloam Hospitals Balikpapan.

In implementing the EWS, there is already an SOP that is the basis for implementing the EWS implementation. Understanding of the duties and functions and responsibilities of each appears in the implementation in the field that has not been in accordance with the tasks and functions that should be.

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