Journal of Biology, Agriculture and Healthcare
ISSN 2224-3208 (Paper) ISSN 2225-093X (Online)
Vol.5, No.2, 2015

Implementation of Triage in the Hospital Emergency Room of Private Hospital, Yogyakarta, Indonesia

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Abstract
Triage in the emergency department of the hospital is one indicator of the quality hospital services, especially those in developing countries such as Indonesia whose number of health care facilities are still limited. This research which used mix method aims to study the implementation of triage in the emergency patient based on the response time of Australian Triage Scale (ATS) in one referral hospital in Yogyakarta, which is the province with the best health status in Indonesia. A total of 30 patient samples were taken for quantitative descriptive data collection, while 10 informants used in understanding the implementation of triage qualitatively (case study). In this study, it was found that the hospital already have Standard Operating Procedures (SOPs) on the implementation of triage using the Single Patient Triage system. The level of treatment accuracy is as much as 70% (21 patients appropriately and 9 inappropriately treated). The limitations of space/ area are one of the obstacles in the appropriate implementation of triage. In conclusion, the implementation of triage should be improved by reviewing various aspects that influence it to achieve patient centered care through the achievement of continuity of care.
Keywords: response time, Australian Triage Scale, emergency department

1. INTRODUCTION

The advancement of information and technology now provide a change in consumer behavior in the field of healthcare in which public is increasingly demanding aspects of quality, speed and convenience of service (Yuliastuti, 2007). The service in the Emergency Room (ER) is a health service that aims to prevent death and disablement. Therefore a method and mechanism for quick and precise service needs to be pursued (Departemen Kesehatan Republik Indonesia, 2007). The existence of a system of selection and the selection of patients to determine the level of emergency and treatment priority of the patient are so helpful in serving patients who came in the ER. The basis for sorting emergency patients (true emergency) and not an emergency (false emergency) is triage (Althaus et all., 2007; Pusponegoro, 2011).

Indonesian hospital accreditation standards KARS Version 2012 (*Komite Akreditasi Rumah Sakit*/ Committee on Accreditation of Hospitals) in chapter Access to Care and Continuity of Care 1.1.1. states that patients with emergency needs, urgent, or immediate, should be given priority for assessment and treatment. It means that patient with emergency needs, urgent, or immediate, are identified with evidence-based triage process. When it is identified as a state of emergency needs, urgent, or immediate, these patients should be examined and treated as soon as possible. The patients were examined by a doctor before other patients, received diagnostic services as soon as possible and are given treatment according to the needs (Mulyadi, 2001; Komite Akreditasi Rumah Sakit, 2012).

The response of the triage doctor or the response to a patient with this type of emergency of true emergency and false emergency affecting the quality of the hospital (Aslian, 2009). Therefore, it is necessary to conduct a research on how is the implementation of triage at PKU Muhammadiyah Hospital of Yogyakarta as one referral hospital in Yogyakarta, which is the province with the best health status in Indonesia (Dinas Kesehatan D.I. Yogyakarta, 2012).

2. MATERIALS AND METHODS

The method used in this study is a mixed methods design. This quantitative descriptive research is conducted to the accuracy and the speed of selecting patients with true and false emergency using the Australian Triage Scale response time. Patients were 30 to meet the minimum sample size of the population were selected by convenient sampling. The design of qualitative with case study approach was used to understand the implementation of triage. The numbers of informants were 10 people consisting of 6 internal consumers which are Vice Director of Medical Services, Chief of the ER, ER doctor, ER Nurse, Triage Officer, and the Information Officer, as well as 4 external consumers which are 2 patients and 2 family of ER patients which were selected by purposive sampling.

Quantitative data were analyzed using the Statistical Product and Service Solution, while qualitative data on the implementation of triage was conducted by researchers, is triangulated with the actual situation and conditions in the field by conducting in-depth interviews to classify and clarify the implementation of triage.

3. RESULT

3.1. General description of PKU Muhammadiyah Hospital of Yogyakarta and the ER

PKU Muhammadiyah Hospital of Yogyakarta is one of the largest religious private hospitals in Yogyakarta. Based on hospital accreditation in Indonesia, this hospital with a capacity of 160 beds is included in Type B with 12 services. The hospital location is very strategic because it is located in the city center so there is no difficulty in achieving the location.

ER is a separate working unit of a hospital that provides 24 hour services, especially to emergency patients in accordance with the standards of emergency services, also serves patients the non-emergency patients through false emergency services. Doctors who work in the emergency room are 15 people with all have ACLS certification. Nurses who work in these units are 19 people with all have PPGD certificate. According to medical records, the average patients admitted in the ER is approximately 112-140 patients per-day. These patients consisted of emergency patients and non-emergency patients (false emergency).

3.2. Characteristics of patients who underwent triage

Table 1. Data on patient characteristics that underwent triage

No.	Characteristics		Number	%
1.	Sex	9	Male	30
		21	Women	70
2.	Age (years)	8	0-20	26,7
		13	20-40	43,3
		9	> 40	30
3.	Type of emergency	8	True Emergency	26,7
		22	False Emergency	73,3

Based on Table 1, we can see that most of patient are women and in 20-40 range of year. The observation also has a result that most of the patients that admit to the ER were False Emergency. That's mean the management of ER should be improve because of the false emergency patient could be disturb the treatment of real emergency patient.

3.3. Australian Triage Scale (ATS)

Table 2. Data Response Time and the Australian Triage Scale

No.	ATS Category	Response time	Clinical Descriptions
1	III (30 minutes)	2 minutes	Hyperpyrexia
2	V (120 min)	20 minutes	Dyspepsia
3	V (120 min)	15 minutes	Hypertension
4	V (120 min)	15 minutes	Acute Gastroenteritis
5	V (120 min)	25 minutes	Acute Respiratory Tract Infection
6	V (120 min)	8 minutes	Acute bronchitis
7	V (120 min)	2 minutes	Febrile Observation
8	V (120 min)	2 minutes	Vulnus laceration
9	V (120 min)	8 minutes	Febrile Observation
10	V (120 min)	5 minutes	Febrile typhoid
11	V (120 min)	5 minutes	Acute Tonsil pharyngitis
12	II (10 minutes)	1 minute	Acute Coronary Syndrome
13	V (120 min)	6 minutes	Acute Gastroenteritis
14	V (120 min)	2 minutes	Acute Gastroenteritis
15	V (120 min)	2 minutes	Hypertension and Diabetes Mellitus
16	III (30 minutes)	2 minutes	Seizures Fever Complex
17	V (120 min)	5 minutes	Febrile Observation
18	V (120 min)	2 minutes	Vulnus laceration
19	V (120 min)	6 minutes	Febrile Observation
20	V (120 min)	2 minutes	Vertigo and Hypertension stage II
21	V (120 min)	4 minutes	Vulnus Excoriations
22	II (10 minutes)	3 minutes	Asthma Bronchiale on attack
23	I *(immediate)*	1 minute	Decreasing Awareness Observation
24	V (120 min)	2 minutes	Dyspepsia
25	III (30 minutes)	3 minutes	Seizures Fever Complex
26	V (120 min)	3 minutes	Acute Respiratory Tract Infection
27	V (120 min)	3 minutes	Febrile Observation
28	V (120 min)	3 minutes	Febrile typhoid
29	II (10 minutes)	1 minute	ST Elevation Myocardial Infarction
30	III (30 minutes)	3 minutes	Acute Gastroenteritis Dehydration

Table 2 show that the average of response time of yellow tag patient were 2,5 minutes, while red patients were 1,5 minutes. The average of response time of the real emergency patient (True Emergency) was still in the consider time based on the diseases and patient condition.

Table 3. Data of Accuracy in Using Triage Form

No.	Clinical Descriptions	Accuracy	Triage	True/ False
1	Hyperpyrexia	right	Yellow	True
2	Dyspepsia	right	Green	False
3	Hypertension	right	Green	False
4	Acute Gastroenteritis	right	Green	False
5	Acute Respiratory Tract Infection	right	Green	False
6	Acute bronchitis	right	Green	False
7	Febrile Observation	Not	Green	False
8	Vulnus laceration	Not	Green	False
9	Febrile Observation	Right	Green	False
10	Febrile typhoid	Right	Green	False
11	Acute Tonsil pharyngitis	Right	Green	False
12	Acute Coronary Syndrome	Right	Red	True
13	Acute Gastroenteritis	Right	Green	False
14	Acute Gastroenteritis	Not	Green	False
15	Hypertension and Diabetes Mellitus	Not	Green	False
16	Seizures Fever Complex	Right	Red	True
17	Febrile Observation	Not	Green	False
18	Vulnus laceration	Not	Green	False
19	Febrile Observation	Not	Green	False
20	Vertigo and Hypertension stage II	Not	Green	False
21	Vulnus Excoriations	Not	Green	False
22	Status asthmatics	Right	Red	True
23	Decreasing Awareness Observation	Right	Red	True
24	Dyspepsia	Right	Green	False
25	Seizures Fever Complex	Right	Red	True
26	Acute Respiratory Tract Infection	Right	Green	False
27	Febrile Observation	Right	Green	False
28	Febrile Typhoid	Right	Green	False
29	ST Elevation Myocardial Infarction	Right	Red	True
30	Acute Gastroenteritis Dehydration	Right	Yellow	True

Based on Table 3, we can see that 9 of patient triage were not done accurately. This numbers shows that 30 % of triage was not treat patients properly. This situation can place patients at risk.

3.4. Data of Triage Activities Observation

Table 4. Data of triage activities observation

No.	Activity	Not done (N)	Not perfectly done (N)	Done perfectly (N)
1	Triage Officers sorting the patients into the ER waiting room by giving priority to emergency patients	0	22	8
2	Triage Officers sorting and putting patients requiring the room, according to triage category	0	23	7
3	Triage Officers re-perform triage if there is new information or changes in the patient's condition	28	2	0
4	Triage Officers perform standard/ universal precautions	19	11	0

Source: processed primary data (2012)

Table 4 shows us about appropriately of triage process. There were 4 activity indicators that should be done perfectly in the process of triage. Based on the observation, most of indicators were not done perfectly while triage was done. This condition should be harm for the patient and healthcare workers.

3.5. Data of In Depth interview on the Implementation of Triage in the ER

Below are the characteristics of the informants in this study:

Table 5. Data of Informant Characteristics of Staff PKU Muhammadiyah Hospital Yogyakarta

No.	Characteristics		Number
1.	Sex	Male	6
		Women	0
2.	Age (years)	20-30	1
		30-40	1
		> 40	4
3.	Latest Education	D3	1
		S1	3
		S2 / Specialist	2
4.	Working Period (years)	1-3	1
		3-5	0
		> 5	5
5.	Employment Status	Full	5
		Contract	1
		Honoree	0

Source: processed primary data (2012)

Table 6. Data of Characteristics of Informants of Patients of PKU Muhammadiyah Hospital Yogyakarta

No.	Characteristics		Number
1.	Sex	Male	3
		Women	1
2.	Age (years)	20-30	1
		30-40	2
		> 40	1

3.5 Triage Implementation Flow

Here is the flow of triage execution based on Triage SOP that should be implemented in the ER of PKU Muhammadiyah Hospital Yogyakarta. The Figure 1 shows that triage is starting point of process of patients care. Each aspects of patients care would affect to another process. Because of that, triage should doing properly by healthcare providers.

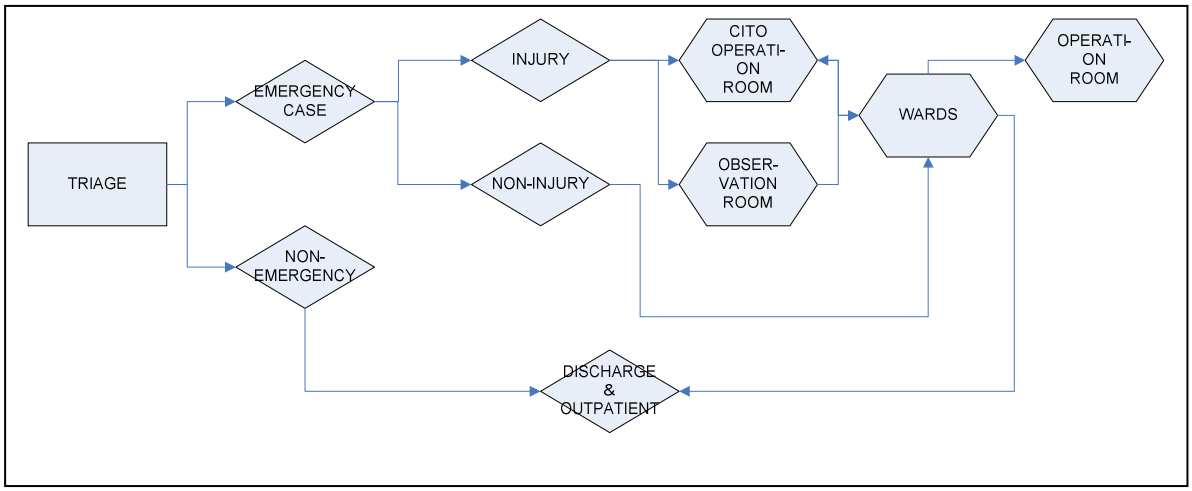

Figure 1. Chart of Implementation of Triage in the ER of PKU Muhammadiyah Hospital Yogyakarta

Figure 2 below, shows the resume of the study of triage implementation by this qualitative study.

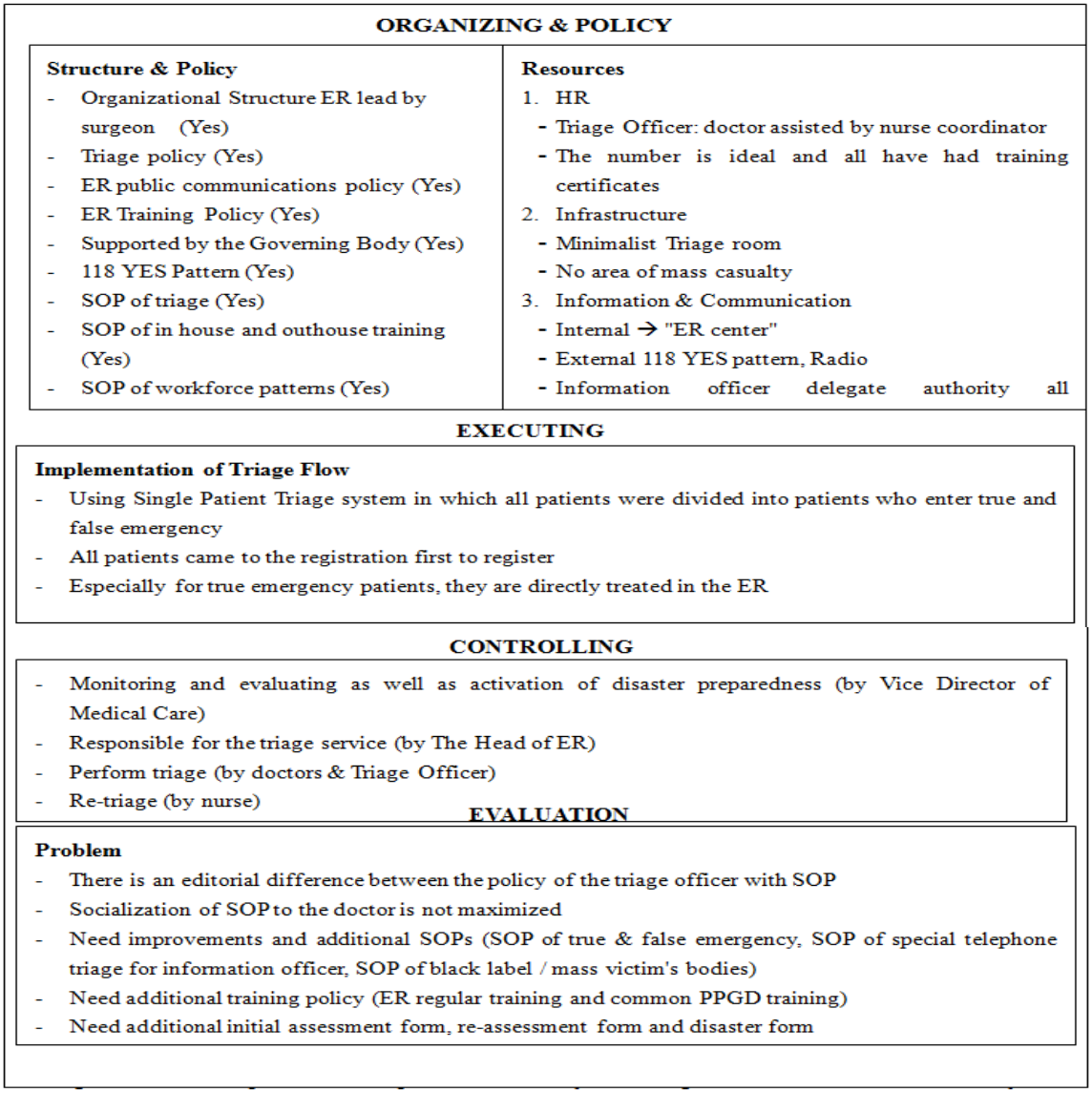

Figure 2. The Recapitulation of Implementation Analysis of Triage in the ER of PKU Muhammadiyah Hospital Yogyakarta

4. DISCUSSION

From the results above, it can be seen that the use of a form of triage accuracy was 21 of 30 samples (70%). Triage activities undertaken, based on observations conducted by researchers also showed that not all done perfectly, and even quite a lot of activities that supposed to be done but not done. This requires the need for improvement. Researchers conducted in-depth interviews with the informant related factors that influence the inaccuracy/imperfect implementation of triage and remediation efforts digging to do RS.

4.1. Organization, Policies, SOPs and Resources in the Implementation of Triage

4.1.1. There is a difference between policy and SPO editorial about triage

Policy is a set of concepts and principles that become guidelines and basic plans in the execution of a job, leadership, and way to act. This term can be applied to governments, organizations and private sector groups, and individuals. Policies are different with rules and laws. If the law can impose or prohibit a behavior (e.g. A law requiring the payment of income tax), the policy is only to guide the actions that are most likely to obtain the desired results (Althaus et all., 2007).

Standard Operating Procedure (SOP) is a written statute as to what to do, when, in where, and by whom. SOP is made to avoid variations in the process of implementation of activities that will interfere with the performance of the organization as a whole. SOP is the driving mechanism of the organization/institution to run/function effectively and efficiently (Firmanda, 2012).

Editorial differences occur is about the triage officer. In the policy, it is stated that all patients in the emergency room undergo triage, which is done by attending doctor assisted by a nurse coordinator. However, the SOP statement does not seem to be strict enough in referring to an existing policy. SOP of triage states that a triage procedure is performed by a triage doctor. Policy is a statute that sets out principles to guide how to act made in a planned and consistent in order to achieve certain goals (Firmanda, 2012), so it needs to repair the editorial in order to maintain consistency.

4.1.2. There is a need to increase the socialization of SOPs to the ER officers, especially the executing doctor

The patient focus paradigm brings a change in the pattern of relationships between hospitals with patients as a consequence of the implementation of the principles of patient-focused care. The implementation of the principles of patient-focused care also has implications for hospital management changes to be more standardized, meaning that there are a number of standard criteria to be followed in implementing the hospital activity. The performance standards are also be able to assess the performance of hospitals both internally or externally. This internal standard, which is procedural in nature is called the Standard Operating Procedure (SOP) (Firmanda, 2012).

The implementation of SOPs can be monitored internally and externally and SOPs are periodically evaluated at least once every two years with evaluation materials include aspects of the efficiency and effectiveness of the SOPs. The evaluation was done by a medical committee. The approach used for monitoring and evaluation using participatory approaches and hospital's internal audit. Medical Committee has a duty to assist the director of the hospital setting standards of medical services and monitor their implementation as well as carrying out the development of professional ethics, professional discipline and the quality of the profession. Therefore the implementation of SOP socialization of triage discussed at the next meeting of the medical committee.

4.1.3. There is a need for improvements and additional SOPs

Judging from its scope, the establishment of SOPs done by each unit of work and presents specific steps and procedures relating to the specificity of the main duties and functions of each unit of work which includes the preparation steps, stages, mechanisms and flow of activities. SOPs then become a tool to improve the performance of service effectively and efficiently (Hendrik, Pranowo, Sulistyo, et all., 2006; Lumenta, 2012).

Unit of work which means the ER of PKU Muhammadiyah Hospital Yogyakarta requires three additional SOPs in order to improve the implementation of the triage service. Here are three SOPs needed:

1) SOP of true and false emergency
2) SOP of special telephone triage for information officer
3) SPO of black label patients

The Emergency Room of PKU Muhammadiyah Hospital Yogyakarta sets the priority of triage, treatment using a Single Patient Triage in which patients are classified into true emergency patients and false emergency, so that it requires standardization of service for each of the patient groups. Standardization here is the establishment of the SOP for true emergency and false emergency.

Many things are forgotten in the implementation of triage. It is because triage not just management of patients bearing the red, yellow and green logos, but also performs management in patients with black logo. Management of patients who died was not easy, the stench and the possibility of fluid and mucus that will appear a few days later should be anticipated carefully since it might disrupt other services. The lack of cooling devices, body bags and the area of morgue are certainly a common problem faced by many hospitals.

One form of information and communication which are now intensively conducted is telenursing. Telenursing which had already come into effect in Indonesia is the principle of the call centers in various hospitals and care centers that receive complaints and service over the phone, carries out teletriage if the patient experienced an emergency conditions (Canadian Nursing Association, 2006; Rutenberg, 2009). Hence the need for a standard telephone communication for information officers and the ER officer if they got a call from the people who got accidents and disasters. All of these are aimed to prepare everything in order to provide assistance to the scene.

4.1.4. There is a need for additional policies

4.1. 4. 1. Policy for regular training

According to Government Regulation No. 31 Year 1996 on health workers in Article 10 (1) all health workers have an equal opportunity for training in the health sector in their respective sectors. (2) The organizer and/or the management of health facilities are responsible for providing the opportunity for health professionals to be assigned and/or work on the respective health facilities to improve skills or knowledge through training in the health sector (Handoko, 2003) . Law No. 44 year 2009 about the hospital in chapter 5 explained that the hospital has the function of providing education and training of human resources in order to increase the capacity in the provision of health services (Wijanarka & Dwiprahasto, 2005). Therefore, the hospital management needs to make a policy on training that is regularly in order to maintain the professionalism of the doctors and nurses working in the ER of PKU Muhammadiyah hospital Yogyakarta, especially in the implementation of triage.

4.1. 4. 2. Policy on training for non–medical officer

There is a need for revitalization and improvement of task from the information officers, parking attendants, security guards, the registrar and the care giver. The presence of care giver is basically one of the innovations in providing excellent service to the patients. However unfortunately they are non-medical personnel. Therefore it is necessary to have training for non-medical officers in order to support the implementation of triage in the ER quickly and accurately.

4.1.5 The Need of Additional Medical Record

Based on the Regulation of Health Minister Number 749a/PMK/XII/1989, Medical Record is a file in which notes and documents about patient's identity, examination results, treatments, actions, and other services that patients get in health institutions, both outpatients and hospitalized patients are recorded. Medical record management of a health institution is one of quality service indicators shown by the institution. Based on Regulation of Health Minister of Indonesian Republic Number 269/MENKES/PER/III/2008 about Medical Record, the content of medical record is divided into three types; medical record for outpatients, hospitalized patients and emergency patients consisting of assessment and re-assessment.

According to the standard of hospital accreditation in Indonesia, assessment priority and treatment are given to the patients with emergency needs, urgent needs, or immediate needs. These patients should be immediately examined and given care. The word "immediately" demands the medical workers to do assessment and quick record. Therefore, special forms such as assessment and re-assessment are needed to improve Emergency Unit services in day to day emergency. On the other hand, disaster triage special forms are needed. Here are the three forms:

1) Triage Assessment Form
2) Re-Assessment Form
3) Disaster Situation Triage Form

4.2. Triage Application Flow

The places of triage services in Emergency unit must be available and have a sufficient capacity with a solid building condition in disaster situation. Therefore, design and construction of the building in earthquake prone areas must be stronger and more specific than the buildings in safe areas (Departemen Kesehatan Republik Indonesia, 2007). Yogyakarta is one of the earthquake prone areas. It demands hospitals to have a solid infrastructure to anticipate earthquakes.

Another thing that must be considered by triage officer is the capacity and hospital facilities that are not only based on the number of available beds but also on its capacity to treat patients. In a mass disaster situation, the problem appears in treating patients is surgery treatment capacity and intensive treatment unit (Departemen Kessehatan Republik Indonesia, 2007). The standard of victim reception unit in hospitals where triage is done is as follows:

a. Having direct access with the spot used for receiving victims
b. A closed place
c. Being completed with sufficient lighting
d. Having easy access to the main treatment units such as Emergency Unit, Surgery Theater, and Intensive Treatment Unit

The service in the Emergency Unit is a health service that aims at preventing death and disabilities. Therefore, fast and proper service methods and mechanisms must be performed. The existence of selection system and patient selection to decide the level of emergency and patient treatment priority are very helpful in serving patients of an Emergency Unit. The base of the selection of true emergency patients and not the false emergency patients is known as triage.

Triage is a fast and focused assessment concept in a method that enables the most efficient human resources utilization, equipments, and facilities that aim at selecting or grouping all patients who need help and deciding the proper treatments (Kathleen, 2008). Efficiency and assessment that focus on triage are supposed to decrease the number of death (Wijanarka & Dwiprahasto, 2005; ACHS, 2000).

In such situation, the place availability is a significant factor but does not hinder the willingness to increase hospital services using another resource that is human resource.

5. CONCLUSION

Based on the research result and study done, it can be concluded that: (1) Policy, SPO and resources of PKU Muhammadiyah Hospital Yogyakarta enable the triage to be done well; (2) Room limitation and place is one of the obstacles in triage implications; (3) Triage is not only selecting patients but also understanding the ability of the available resources; (4) Triage is not only a process, but also a management of hospital service quality improvement that focuses on patients in order to improve services continuity.

References

Althaus, et all. (2007). The Australian policy handbook (ed. 4th edition). Sydney: Allen & Unwin Departemen Kesehatan Republik Indonesia, (2007), hospital preparedness for emergencies & disasters, Jakarta: Direktorat Jenderal Bina Pelayanan Medik Departemen Kesehatan Republik Indonesia.

Aslian, Yan. (2009). Faktor-faktor yang mempengaruhi respon time pada penanganan pasien instalasi gawat darurat RSUP Persahabatan [electronic]. Retrieved on July 20th 2012 from http://rsuppersahabatan.com/elibrary_rsupp/index.php?k_index=katalog&k_sub_index=9&id_ebuku=161.

Australian Council on Health Care Standards (ACHS), (2000), Clinical Indicator-A Users Manual: Emergency Medicine Indicator. Sydney: NSW.

Canadian Nursing Informatics Assosiation, (2006), Satgger, Bragley-Thompson quotes [electronic]. Retrieved on July 20th 2012 from http://www.cnia.ca/about.htm.

Firmanda, Dodi. (2012). Clinical pathways dalam mutu layanan rumah sakit [electronic version]. The chief of Medical Committee in RSUP Fatmawati Jakarta. Retrieved on July 20th 2012 from http://www.scribd.com/doc/95268923/Dody-Firmanda-2012-Penjelasan-tentang-Clinical-Pathways-Algoritma-dan-Standing-Orders.

Departemen Kesehatan Republik Indonesia, (2007), Pedoman Teknis Penanggulangan Krisis Kesehatan Akibat Bencana, Direktorat Jenderal Bina Pelayanan Medik Departemen Kesehatan Republik Indonesia.

Dinas Kesehatan Provinsi DI. Yogyakarta, (2012), Profil kesehatan Provinsi D.I. Yogyakarta tahun 2011 [electronic]. Retrieved on January 7th 2015 from http://www.depkes.go.id/resources/download/profil/PROFIL_KES_PROV_2011/P.Prov.DIY_11.pdf.

Handoko, TH, (2003), Manajemen Personalia dan Sumberdaya Manusia, Edisi 2, Yogyakarta: BPFE UGM.

Hendrik, Pranowo, Sulistyo, et.all., (2006), Pengaruh Waktu Penatalaksanaan Kegawatdaruratan Medis terhadap Mutu Pelayanan di Instalasi Gawat darurat RSUD Bantul, Cermin Dunia Kedokteran No. 152.

Komisi Akreditasi Rumah Sakit, (2012), standar akreditasi rumah sakit [electronic version], Retrieved on July 20th 2012 from http://kars.or.id/index.php?option=com_content&view=article&id=76&Itemid=76.

Kathleen, Kelvie, (2008), Triage Consulting [versi elektronik], Retrieved on July 20th 2012 from http://www.triageconsulting.com/page_campus_events_detail.php?page_id=63&campus_id=1&sel=115.

Lumenta, N, (2012), Pedoman penyusunan SOP untuk rumah sakit [electronic version]. Retrieved on July 20th 2012 from http://www.scribd.com/doc/39154631/Pedoman-Penyusunan-SOP.

Mulyadi, Bagus, (2001), Petunjuk Pelaksanaan Indikator Mutu Pelayanan Rumah Sakit, WHO, Dirjen Yanmed Depkes RI.

Pusponegoro, A, (2011), The silent disaster bencana, dan korban massal, Jakarta: CV. Sagung Seto.

Rutenberg, C, (2009), Telephone Triage: Timely Tips, AAACN Viewpoint Sep/Oct 2009;31:4-6. Retrieved on 20th July 2012 from www.proquest.com

Wijanarka, Agus & Dwiprahasto, Iwan, (2005), Implementasi Clinical Governance: Pengembangan Indikator Klinik Cedera Kepala di Instalasi Gawat Darurat, JMPK Vol. 8/No.04/Desember.

Yuliastuti, I, (2007), Pengaruh pengetahuan, keterampilan dan sikap terhadap kinerja perawat dalam penatalaksanaan kasus flu burung di RSUP H. Adam Malik. Thesis, Universitas Sumatera Utara.

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