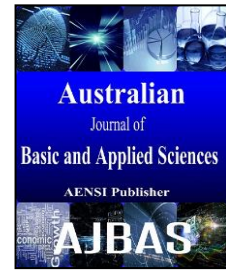




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Standardization of Integrated Emergency Services of Brain Injury as a Satisfaction Improvement and the Effect on BPJS Participant Socio-Economic Condition at Gambiran Hospital Kediri

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ABSTRACT

Background: Regional General Hospital of Gambiran Kediri provides 24 hours services of emergency room. The congested traffic due to its strategic transportation lane, increased the risk of accident, thus also increased the number of patients with brain injury. **Objective:** The purposes of this research were to analyze the effect of integrated emergency services standardization on patient satisfaction, to analyze the effect of emergency patient care on patient satisfaction and to analyze the effect of patient satisfaction on patient economic and social condition. The research was conducted at Regional General Hospital of Gambiran, Kediri, for 10 months, from June 2013 to March 2014. This research used 40 indicators with the sample size about 5 x 33 = 165 respondents. The data analysis was conducted using SEM with AMOS software. **Results:** The results of the analysis showed that the standardization of integrated emergency services, especially in terms of human resources, has a positive effect on the satisfaction of patients with brain injury who use BPJS (Health Insurance for Community) card. The services to patients in the emergency room with both mild and severe brain injury also have a positive effect on the satisfaction of patients who use BPJS card. However, patient satisfaction does not have a significant effect on the economic and social condition of the patients who use BPJS card during the treatment process in the hospitals. **Conclusions:** Standardization of integrated emergency services especially in terms of human resources has a positive effect on the satisfaction of patients with brain injury cases who use BPJS. Emergency room services to patients with mild to severe brain injuries have positive effect on the satisfaction of patients with brain injury cases who use BPJS. Patient satisfaction does not have a significant effect on the economic and social condition of patients with brain injury cases who use BPJS.

INTRODUCTION

The rapid growth of the number of hospitals, ranging from 1.268 hospitals in 2005 into 1.292 hospitals in 2006 and around 2.062 hospitals in 2012 which consist of 1.591 general hospitals and 471 hospitals with specific services (Wibowo, 2012). Quality assurance of services needs to be increased by using accreditation. Today, there are only 1.192 hospitals from 2.068 hospitals which have been accredited with national or international accreditation assessment. The government and the owner or person in charge of the hospital

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should have the motivation and innovation to develop the services quality due to the limitations of the hospitals (Wibowo, 2012).

Regional General Hospital of Gambiran, Kediri provides 24 hours services of emergency room for emergency cases. The strategic location of Kediri increases the congested traffic in the area. The increased traffic of two and four wheels vehicles increases the risk of accident and thus will increase the number of patients with brain injury in Regional General Hospital of Gambiran, Kediri. For example, the number of morbidity and mortality caused by traffic accidents for the last 3 years was amounted to 7.88%. The passive service of brain injury patient is awaiting the arrival of the patient in the emergency room. There is not any coordinated services strategy from citizens, police officers and or families as well as emergency room health care providers so that the process of handling the case of head injuries is separated between pre-hospital as part of civil-oriented service and hospital as part of state-oriented service. In the future, it is expected to build a coordinated and integrated services from citizens, traffic police officers, introductory patients, ambulance crew, parking area personals, hospital security guards and emergency room officers so that an integrated citizen need-oriented services and integrated civil-oriented services can be provided (Denhardt and Denhardt, 2000).

The increase of mortality and disability in head injury cases at emergency room is caused by late arrival to the hospital, excessive wait time in the emergency room because of limited parking lot, unstandardized triage room, unseparated rooms for cases of injury or trauma, for new and old patients, and for surgical and non-surgical patients. The data on service performance of emergency room in Gambiran hospital for the last 3 years is reported as follows (data from Gambiran hospital in 2012). Data of patients' payments showed that there were an increased number of patients covered by government insurance (*jamkesmas* and *jamkesda*) for about 14.77%. Patients with brain or head injuries reached 20.07%, as the highest percentage among ten emergency cases in the emergency room, less-than-24-hours mortality rate increased by 7.81%. Furthermore, the results of patient satisfaction survey on the emergency room services conducted in the second semester of 2013 showed that there were some shortcomings in terms of comfort, communication and education. In addition, the results of internal audit conducted in the second semester of 2013 found some shortcomings in the service standardization. In terms of health care infrastructure, the number and size of emergency room class B were still below the standard. They were lack of additional medical devices as the emergency room standard requirements, the patients' waiting rooms were also still below the standard; and only 80% of physicians and 70% of paramedics were certified.

In general, the quality of emergency room services in Regional General Hospital of Gambiran, Kediri was less standardized. There was not good communication between workers and patients. There was not clear designation and labeling for acute care patients and prompt care patients. In addition to health care system problems, there were also administrative problems especially in the financial labelling of public patients and insurance covered patients. Other problems faced by Gambiran hospital were the increase of less-than-24-hours death rates, the high cases of brain injury which need immediate treatment, the increasing number of patients with government insurance, and the absence of additional physical infrastructure facilities for the last 2 years. These conditions will decrease the service performance of the emergency room as the front line or show room of health services in the hospital (Edy, 2012).

As hospital which serves all health care social insurance programs, the number of patients at Gambiran hospital has increased for the last 2 years including the emergency room patients. The increasing number of patients and emergency cases is not followed by the improvement of the facilities, inpatient services, human resources, as well as medical equipments and medical devices. The temporarily workload minimizing efforts before the hospital is moved to the new location. It were made by increasing the services performance, human resources competence, equipments, and other factors of services such as comfort, staff competences, costs and communication with patients and families.

Health care quality service improvement is expected to be followed by the increasing of trust from the BPJS (Health Insurance for Community) participant in Indonesia. It is also expected to be able to decrease the preference of Indonesian citizens to foreign medical treatment because Indonesian hospitals have been managed effectively and efficiently as well as more transparent and accountable. Patients, families and insurance providers as costumers will feel satisfied with the certainty of the treatment, the medical services, the cost of services and the healing time. By giving enough information and building good communication with customers, it is expected to improve customer satisfaction on the professional and continuous health care provided. The purposes of this research were to analyze the effect of integrated emergency services standardization on patient satisfaction, to analyze the effect of emergency patient care on patient satisfaction and to analyze the effect of patient satisfaction on patient economic and social condition.

Research Method:

This research was conducted in the emergency room of Gambiran hospital for 10 months from June 2013 to March 2014. This research was part of explanatory research with survey method. Descriptive study was aimed at obtaining information about the characteristics of the service emergency room service quality variable and the

effect on patient's satisfaction and socio-economic of society and employee's loyalty. The hypothesis testing is conducted to explain the causal relationships between variables (Kuncoro, 2003).

Data Collection Method:

The qualitative data was obtained from the key respondents chosen using purposive sampling, the sampling technique with a certain consideration. The respondents were chosen from Gambiran hospital, Health Department of Kediri Regency, Regional Planning and Development of Kediri Regency and Statistics Central Bureau of Kediri Regency based on their basic tasks and functions in the health care field. These personal were supposed to understand the existing development of the research interest and understand the potentials of the study area. The respondents were determined by using snow ball sampling technique in which the research subjects recruit future subjects from among their acquaintances to complete the information (Sugiyono, 2009).

The sampling technique is used to determine the sample size. Referring to Solimun (2002), this research used 40 indicators so that the sample size is $5 \times 33=165$, means that this research used 165 respondents.

Research Variables:

The endogenous variables were the Standardization of Integrated Emergency Services (X_1), Brain Injury Service (X_2), and Inter-hospital Integrated Emergency Services (X_3). The two exogenous variables used in this research namely Patient Satisfaction (Y_1) and the Social and Economic Effect (Y_2).

Data Analysis:

Structural Equation Modeling is the second generation of multivariate analysis techniques (Ghozali and Fuad, 2005) which allows researchers to examine the relationship between complex variables, for both recursive and non-recursive, to get overall pictures of the model. Data analysis using this method was aimed at explaining the effect of performance appraisal on employee's promotion which was processed using software LISREL 8.8.

Linear Structural Relationship (LISREL) is the most popular program used because it is a sophisticated SEM program to estimate various problems which cannot be estimated by other programs. In addition, LISREL is the most informative program for presenting the results of statistical models in which modification or poor fit model can be easily identified (Ghozali and Fuad, 2005). Ghozali and Fuad (2005) also said that an index which indicates a fit model does not guarantee that the model really fit. Conversely, a fit index which shows a bad model does not guarantee that the model really does not fit. In SEM, researchers should not only rely on an index or several fit indices but consider the entire fit indices.

RESULTS AND DISCUSSIONS

Effect of Emergency Room Service Quality on the Satisfaction of Brain Injuries Patients:

Integrated Emergency Services (X_1) on Patient Satisfaction (Y_1):

The results of the analysis showed that there was a positive and significant effect of Standardization of Integrated Emergency Services (X_1) on the Patient Satisfaction (Y_1) as shown by the value of CR (6.248) which was greater than 1.960 and the p-value (0.000) which was smaller than alpha (0.050). The positive coefficient (0.851) showed that the increase on the Standardization of Integrated Emergency Services (X_1) will significantly increase the patient satisfaction (Y_1).

Based on the statistical results, it is known from SEM model made by the author that the standardization of integrated emergency services had a significant effect on patient satisfaction 0.851 or 85.1%. The other 14.9% of patient satisfaction was influenced by other variables outside the research. The standardization of integrated emergency services for brain injury cases had to be done in order to save more patients with brain injuries who use BPJS, especially in terms of human resources because human error often occurs in the treatment.

The results of some studies showed that good service quality provides more profits to the hospitals compared to low-cost hospitals but with below-standard human resources and operating procedures (Xin and Xu, 2011). Human resources elements consist of medical and non-medical staffs of emergency room in Gambiran hospital. To improve the integrated emergency services, both medical and non-medical staffs need to be given an education and training related to standard of services in emergency room as the rules set by Indonesian Health Ministry.

Brain Injury Services (X_2) on Patient Satisfaction (Y_1):

Emergency room services of patients with brain injury provides a positive effect on patients' satisfaction (0.531) with 53.1%, which means the services to patients with brain injuries in the emergency room affect 53.1% patient satisfaction and the other 46.9% is affected by the variables outside the research. Brain injury patients in the emergency room need to be classified into mild brain injury case, moderate brain injury case, and severe brain injury case. Good services to the three types of brain injury patients will increase patient satisfaction. Health care providers of the three classifications of the brain injury should improve their skills by

attending training in handling those different types of cases. Although the medical staffs have already finished their physicians or nursing education, they still need to attend additional training (Kaufman, 2012) as an effort to improve the standardization of integrated emergency services of brain injury.

Inter-hospital Integrated Emergency Services (X_3) on Patient Satisfaction (Y_1):

Based on the results of the statistical computation, it is known that inter-hospital integrated emergency services index is 0.415 or 41.5% of the variable effect the patient satisfaction and the remaining 58.5% is influenced by other variables. It is known that the inter-hospital integrated emergency services do not affect patient satisfaction highly because the value of the effect is below 50%. However, the effect can be higher if the communication between Gambiran hospital and the referral hospitals is built because more than 80% of Gambiran hospital patients are referred from other hospitals such as from Trenggalek, Blitar and Tulungagung. With inter-hospital integrated emergency services standardization, the communication between Gambiran hospital and the referral hospital is built properly so that the medical records from the previous hospital can be used as a consideration (Hasmoro, 2012) in giving better service in Gambiran hospital which in turn will improve the patient satisfaction.

Effect of Emergency Service Quality on Socio-economic of BPJS Brain Injuries Patients: Integrated Emergency Services Standardization (X_1) on Patients Socio-economic Condition (Y_2):

Based on the results of the statistical analysis, it is known from the model of SEM resulted that the standardization of integrated emergency services provides significant social and economic effect (0.640) with the percentage of 64 % while the other 36% is affected by other variables outside the research. With the standardization of integrated emergency services, the socio-economic effect to the patients increases. One of the social effects is word of mouth that good service has being carried out by Gambiran hospital made the patient's families tells others (Hsieh *et al.*, 2012). A high quality services that provided by the hospital can also minimize the risk of disability and mortality. In addition, a high quality service to BPJS patients will increase efficiency in patient treatment costs.

Effect of Patient Satisfaction on the Socio-Economic Condition of BPJS Brain Injuries Patients: Brain Injury Patient Services (X_2) on the Economic and Social of the Patient (Y_2):

Based on the statistical analysis, it is known that emergency services to patients with brain injuries have a positive effect on the Economic and Social condition of the patients with the index of 0.383 or 38.3%. It means that emergency room services to patients with brain injuries affect 38.3% of the economic and social condition of the patients while the other 61.7% is affected by variables outside the research. It is known that the emergency room services to patients with brain injuries do not affect the economic and social condition of the patients highly because the value of the effect is below 50%. Although the effect is not too high, a high quality of emergency service needs to be given in order to improve the economic and social condition of the patients.

Inter-hospital Integrated Emergency Services (X_3) on Patient Economic and Social Condition (Y_2):

Based on the results of the statistical analysis, it is known that the inter-hospital integrated emergency services has a positive effect on the economic and social condition of the patients with the index of 0.339 or 33.9% while the other 66.1 % is affected by variables outside the research. It is known that the inter-hospital integrated emergency services do not affect the economic and social condition of the patients highly because the value of the effect is below 50%.

Patient Satisfaction (Y_1) on the Economic and Social Condition of Patients (Y_2):

The results of the analysis indicate that a change on the Patient Satisfaction (Y_1) will not provide a change on the Economic and Social condition of the Patients (Y_2). Based on the results of the statistical analysis, it is known that patient satisfaction does not affect the economic and social condition of the patients because not all satisfied patients with brain injury cases use BPJS. Although BPJS is considered as an efficient treatment, the majority of the participants are from low economic status so that it will not affect the economic condition of the patients. In terms of the social effect, people are rarely associate disability cases and deaths because they trust the hospital for giving the best service to the patients.

Conclusions:

Standardization of integrated emergency services especially in terms of human resources has a positive effect on the satisfaction of patients with brain injury cases who use BPJS during the treatment processes. Emergency room services to patients with mild to severe brain injuries have positive effect on the satisfaction of patients with brain injury cases who use BPJS during the treatment processes. Patient satisfaction does not have a significant effect on the economic and social condition of patients with brain injury cases who use BPJS during the treatment processes at Regional General Hospital of Gambiran, Kediri

Suggestions:

To improve the service quality of the emergency unit, it is expected that the medical staffs work faster, more discipline, and more friendly to the patients because emergency room is the front line of the hospital which provides the first aid to the patients. The imbalance between the number of patients in the hospital emergency room of Gambiran hospital and the number of medical staffs should be solved by improving the number of the medical staffs, thus more responsive services can be provided and the service quality of the hospital can be increased.

It is suggested that the hospital improve BPJS registration system by taking into account the bridging system. It is also suggested that Gambiran hospital provide education and training on caring behavior regularly and evaluate patient satisfaction on medical staff caring every month.

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