RESOURCES REQUIRED IN CLINICAL PATHWAY FOR TYPHOID FEVER TREATMENT AT THE KALIWATES GENERAL HOSPITAL IN 2017

Sumber Daya dalam Clinical Pathway Perawatan Demam Typhoid di RSU Kaliwates Tahun 2017

Pratiti Swesti Komala Dewi¹, *Christyana Sandra², Eri Witcahyo³

¹Institute of Tropical Disease, Indonesia
²,³Faculty of Public Health, Jember University, Indonesia

*Correspondence: christyana_sandra@yahoo.com

ABSTRACT

Background: A clinical pathway is a concept of an integrated service which describes the stages of healthcare services started from the patient’s admission to discharge based on the medical service standards and evidence based nursing care. The Kaliwates General Hospital is an accredited hospital which has a clinical pathway. Typhoid case was the highest case in 2017 at the Kaliwates General Hospital.

Aims: The purpose of this study was to describe the resources at the Kaliwates General Hospital in the implementation of clinical pathways, especially typhoid fever treatment.

Method: This study is a descriptive and qualitative study. Nine respondents were selected using purposive sampling, including one internist and the quality team at the Kaliwates General Hospital. Variables studied were human resource factors, budget factors, method factors and time factors.

Results: The results showed that the human resources at the Kaliwates General Hospital have high commitment and motivation and moderate knowledge. All equipment and documents are considered adequate. Communication between implementers is categorized as good. Forms of compliance and training for staff are not considered. The division of duties of each team is fairly distributed even though the pharmacy unit considers that the division is quite unfair.

Conclusion: the implementation of clinical pathway for typhoid fever treatment at the Kaliwates General Hospital runs quite well. The hospital must identify and plan staff training on a regular basis, prepare the job description appropriately, and perform performance appraisal based on the job description that has been developed.

Keywords: Clinical Pathway, Typhoid Fever, Resource

ABSTRAK


Tujuan: Tujuan penelitian ini untuk mengkaji sumber daya di RSU Kaliwates dalam implementasi clinical pathway khususnya perawatan demam typhoid.

Metode: Jenis penelitian ini adalah deskriptif kualitatif. Sembilan subjek penelitian dipilih menggunakan purposive sampling, meliputi satu orang dokter spesialis penyakit dalam dan tim mutu di RSU Kaliwates. Variabel yang diteliti adalah factor sumber daya manusia, faktor budget, faktor metode dan faktor waktu.


Kata Kunci: Clinical pathway, Demam typhoid, Sumber daya

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INTRODUCTION

Hospital has an obligation to provide safe, quality, anti-discrimination and effective services by prioritizing the interests of patients in accordance with hospital service standards. The most important goal in health care is to produce outcomes that will benefit patients and society. In order to achieve the desired outcome, it depends on the quality of health services or hospitals (Ayu Fitri and Sundari, 2018).

The era of national health insurance in various countries requires health service is supported by human resources, infrastructure, and assistive devices for quality control and cost control (Chua and Cheah, 2012). The most important goal in health services is to produce outcomes that are beneficial for patients, providers, and communities that depend on the quality of health services in hospitals (Hatta, 2008). Various regulations on health services in Indonesia have set standards on the implementation of a quality control system for health insurance services, namely input, process, and output. Process standards can be divided into clinical care management processes. The management process, among others, is regulated in accreditation standards (Hospitals, Laboratories, Primary Health Care), excellent service standards and so on. For clinical processes (clinical care) is regulated in medical service guidelines and standards of nursing care or generally referred to as clinical guidelines. One form of clinical guidelines is the clinical pathway that has the potential to be used as a tool to guarantee and improve the quality of the clinical care process (Ayu Fitri and Sundari, 2018).

According to Indonesian Law Number 44 of 2009 concerning Hospitals, realizing Universal Health Coverage (UHC) and hospital accreditation is an obligation that must be carried out by an Advanced Referral Health Facility or Fasilitas Kesehatan Ru- jukan Tahap Lanjut (FKRTL) or hospital. In the 2012, Hospital Accreditation Committee or Komite Akreditasi Rumah Sakit (KARS) version of the hospital accreditation assessment, hospitals wishing to apply for accreditation were required to have a minimum of 5 clinical pathways (Hospital Accreditation Committee, 2017). A clinical pathway is in line with the aim of hospital accreditation where hospitals are expected to be more efficient and have high accountability which makes clinical pathways as an alternative for quality control and cost control (Ismawardani et al., 2014). Those are the key elements that must be built in order to achieve the success of the clinical pathway. A key result of the project was the identification of five distinct and sequential stages. These stages were defined as: 1) Increased awareness and commitment 2) Develop a system for implementing the Clinical Pathway 3) Documentation (and designation) 4) Implementation (trial, implementation, and development) 5) Evaluation. Clinical Pathway is an integrated service concept that describes in detail the stages of health services provided from the time of admission to the discharge of patients based on medical service standards and evidence-based nursing care with measurable results. Also, the clinical pathway is also a part of documents and tools in realizing Good Clinical Governance in hospitals (Wijayanti, 2016).

Based on data from the Social Security Agency for Health or Badan Penyelenggara Jaminan Sosial Kesehatan (BPJS Kesehatan) of Jember in the control report on inefficiency of Hospital claim costs during 2016, there were 14 hospitals that experienced cost inefficiency. One of the hospitals that experienced cost inefficiencies was the Kaliwates General Hospital, which ranked 7th in hospitals with cost inefficiencies in 2016 of Rp. 181,425,000. The Kaliwates General Hospital is a hospital that has been accredited A level and has a clinical pathway. The agreed Clinical Pathway is a Typhoid clinical pathway, a Heart Failure clinical pathway, a clinical pathway for Diarrhea, a clinical pathway for dengue hemorrhagic fever, and a clinical pathway for sectio-caesarea.

Based on medical record data at the Kaliwates General Hospital obtained from the ten highest diseases at the Kaliwates General Hospital in 2016, the number of hospitalized patients from January 2017 to March 2017 reached 512 patients. There were 109 or 21.28% of the total of 512 patients hospitalized due to typhoid cases. This figure shows that typhoid case is the highest numbered case and making the typhoid case become a priority case that needs more consideration regarding quality control and cost control.

The typhoid clinical pathway at the Kaliwates General Hospital was implemented in June 2017 as an effort to improve the quality of care for typhoid patients. The implementation of the typhoid clinical pathway will not run well and accordingly if it is not accompanied by readiness from the hospital and the implementers, namely medical personnel who play a role in the implementation of the clinical pathway. Input in a system are all things needed for the application of health services (Azwar, 2010). The condition of human resources also affects the outcome of the desired goal. Human resources are very vital organizational assets. Therefore, their roles and functions cannot be replaced by other resources. Even if modern technology is used, or no matter how much funds are prepared, without professional human resources everything becomes meaningless (Handoko, 2012). According to this situation, the aim of this study is to review the resources at the Kaliwates General Hospital in implementing clinical pathways for typhoid fever treatment.

METHODS

This research is descriptive research with subjects selected using purposive sampling. Respondents in this study were nine people including one internist and quality team at the Kaliwates General Hospital, two Heads of Inpatient Rooms from inpatient rooms and B Nursing and staff who played a role in the implementation of clinical pathways, each consisting of nurses, medical records, pharmacy, nutrition, and laboratory parts.

Variables used in this study are human resource factors in the form of commitment, knowledge, and motivation of the Kaliwates General Hospital staff involved, budget factors namely budget provided, equipment/material factors including supporting equipment and supporting supporting documents, method factors namely communication between implementers, compliance of the implementers, division of tasks of the implementers, as well as trainings that have been followed, and minutes / time
factors, namely the time limit set by the Kaliwates General Hospital in the implementation of clinical pathways for typhoid fever treatment. Primary data collection was through interviews with medical staffs, while secondary data obtained through retrieving medical record data of typhoid clinical path, supporting documents for the implementation of clinical pathway for typhoid fever treatment, SOP, and decrees issued by the Kaliwates General Hospital. The data obtained were analyzed univariately, and the presentation of data from interview guides, the results of observations and reviews of documents were displayed in narrative.

RESULTS AND DISCUSSION

Distribution of Human Resources in the Implementation of Clinical Pathway for Typhoid Fever Treatment at the Kaliwates General Hospital

Human resources are components involved in the implementation of programs in an organization and have a very vital role. Therefore, their parts and functions cannot be replaced by other resources. The variables of human resources studied include knowledge, commitment, and motivation. Collecting data about human resources is obtained by collecting answers from questionnaires and documentation studies.

Commitment

Commitment in this study is an attitude of a willingness of Human Resource (HR) to implement clinical pathways for typhoid fever treatment. Organizational commitment is a behavioral dimension that can be used to assess the tendency of employees to survive as members of the organization. Organizational commitment is the identification and involvement of someone who is relatively strong towards the organization. Organizational commitment is the desire of corporate members to maintain their membership in the organization and are willing to strive for the achievement of organizational goals (Sopiah, 2008).

In the research questionnaire, the questions posed include the staff support when the leader determines typhoid case as a service that will use clinical pathways, the active role of staff in the implementation of clinical pathways, staff compliance with the Clinical Practice Guidelines or Panduan Praktis Klinis (PPK), the willingness of staff to be involved in the development of clinical implementation pathway, the staff loyalty in the execution of tasks, the staff support for leaders who emphasize the implementation of clinical pathways and the staff compliance in the application of clinical pathways.

According to the results of the study, it was found that respondents had a high commitment of 75%. The highest results were obtained from the willingness of staff to be involved in the efforts of developing clinical pathways and evaluating their implementation. But there were respondents who state that there are some staffs who are not actively working on the clinical pathway report. One of them is the medical record technician who never checks the completeness of filling the clinical pathway report that has been done by the staff.

This result is supported by the research of Chua and Chech (2012) which states that the formation of organizational commitment is needed in the application of clinical pathways in hospitals. Commitment is an effort to unite perceptions and agreements, as well as shared determination to achieve a goal (Chua and Chech, 2012). The theory of George C. Edward III holds that policy implementation is influenced by four variables, one of which is commitment (Subarsono, 2006).

Results of the study show that there are respondents as implementers of the clinical pathway who supports the implementation of clinical pathways in Kaliwates General Hospital to further improve services and to fulfill commitments as accredited hospitals. This is in line with the implementation of clinical pathways which are also a means to realize the goals of hospital accreditation, namely to improve hospital patient safety and improve protection for patients, the community and hospital resources (Hospital Accreditation Committee, 2017). Commitment can also arise because of the leaders of the Kaliwates General Hospital who considers the implementation of clinical pathways. This is supported by the research of Hidayati which states that leadership directly influences organizational commitment (Hidayati et al., 2014). The absence of physician commitment, clinical leadership, and clinical management support was a thing that impeded the implementation of clinical pathways (Iriani, 2010).

Knowledge

Knowledge in this study is everything understood by HR related to clinical pathways. In this study, respondents' knowledge was measured by questions about the understanding of clinical pathways, the purpose of clinical pathways, the benefits of clinical pathways, the main components in clinical pathways and supporting documents and reference documents for the implementation of clinical pathways. It is known that there are seven respondents (77.8%) who have moderate knowledge. From the results of the study, there were 2 out of 9 respondents who had low knowledge. This is because the two respondents did not understand the clinical pathway and the respondents stated that they only carried out the SOP of the clinical pathway implementation.

Clinical pathway is an important opportunity to narrow the evidence on gap practice in specific clinical settings. Given their interprofessional and typically hospital-based nature, integration of clinical pathways into these settings involves complex interventions (Jabbour et al., 2013). Suhartini states that higher and better knowledge, the employee's performance will increase as well, and vice versa (Suhartini, 2011). Organizational performance from individual aspects becomes important because the characteristics of individuals must have knowledge that is relevant to their work (Kuncoro, 2013). From the results of the study, two respondents had low knowledge. According to Notoatmodjo, the intensity or level of one's experience of a particular object is not the same (Notoatmodjo, 2012).
Motivation

Motivation in this study is an encouragement from within the respondent to be able to implement the clinical pathway in any situation. According to Dirgagunarsa (1996), motivated behavior can be formulated as behavior in the background by the existence of needs and directed at achieving a goal, so that a requirement is fulfilled and a desire is satisfied (Manullang, 2012). There are three kinds of motivation, need for achievement, need of power, and the need to affiliate or have close relations with others (need for affiliation). One way to measure motivation through a questionnaire is to ask clients to fill out a survey that contains questions that can provoke client motivation (Notoadmodjo, 2012).

Motivation in this study was measured through questionnaires about staff initiatives in carrying out tasks related to clinical pathways, encouragement to do a task for clinical pathways, work performance, willingness to work overtime if needed and attend a coordination meeting, be responsible for clinical pathway implementation. Employee motivation can also be seen from how they can use the clinical pathway task to develop their position or career. This questionnaire is a development of the Three Types of Needs from John W Atkinson.

It is known that the motivation of respondents has reasonable motivation which is equal to 55.6%. Respondents who had moderate motivation were respondents who play an active role in making up to escort in the clinical pathway at the Kaliwates General Hospital so that they felt more responsible to work optimally. The implementation of clinical pathways has no special performance assessment. This also causes respondent's low motivation because of the assumption that the work assignment is not possible to develop a career or position at the Kaliwates General Hospital.

Based on the results of the study it can be interpreted that the motivation of employees in the implementation of clinical pathways for typhoid fever treatment is affected by the opportunity for career development or position. The motivation of respondents examined in this study according to Iriani included in intrinsic motivation, namely motivation or encouragement that arises from within the individual himself without any coercion from others, but by his own volition (Iriani, 2010). Based on the results of the study it is also known that the motivation of employees is influenced by the opportunity for career development or position. The results of this study are in line with Edwin Locke (1984) which states that intrinsic motivational factors can influence opportunities for promotions that can improve one's performance because one's performance is measured by their opportunities for promotion (Robbins and Judge, 2012). The statement reinforces the results of research that low motivation in the research respondents is because of the presumption that the work assignment is not possible to develop a career or position at the Kaliwates General Hospital.

Based on the results of the study, it is known that respondents who have moderate motivation are respondents who play an active role in making up to escort in the clinical pathway at the Kaliwates General Hospital so that they feel responsible for working as well as possible. This is also in line with a study from Hasibuan that the factors that influence intrinsic motivation one of which is responsibility. Responsibilities here are interpreted as demands in employees as placed in work units to carry out work by their duties (Hasibuan, 2011).

Budget Distribution in the Implementation of Clinical Pathway for Typhoid Fever Treatment at the Kaliwates General Hospital

Budget design can be used as a guideline for the implementation of organizational activities. The existence of a budget will make the activities of the organization more focused and not deviate from the original goals. The budget also acts as a control and evaluation tool, because the budget is prepared by considering experience, the current situation, and future forecasting can be both short-term and long-term oriented. Also, the budget is also able to act as an early warning tool for the existence of efficiency and effectiveness in the organization (Richardo, 2013). The budget factor examined in this study is the factor of budget availability and the cost factor for the implementation of clinical pathways for typhoid fever treatment at the Kaliwates General Hospital. Based on the results of the study, it can be seen that the availability and adequacy of the budget in the implementation of clinical pathways have been fulfilled. The clinical pathway implementation budget is included in the work program of the medical record section funded in the hospital's budget plan.

According to Rudianto, the budget is an organizational work plan that is manifested in quantitative, formal and systematic forms (Rudianto, 2013). Based on the results of the study, it can be seen that the availability and adequacy of the budget in the implementation of clinical pathways cannot be categorized because the Kaliwates General Hospital does not provide a budget. The budget is generally used in the preparation of plans and control systems, but it can also be used to coordinate, communicate, evaluate performance and motivate and can be used as a means of delegating superior authority to subordinates (Hansen and Mowen, 2012).

Distribution of Equipment/Materials in the Implementation of Clinical Pathway for Typhoid Fever Treatment at the Kaliwates General Hospital

The tools/materials in this study are measured by the availability of materials/equipment used in the implementation of clinical pathways for typhoid fever treatment. The equipment/materials studied included the adequacy of the equipment and the complete documents owned by the Kaliwates General Hospital to support the implementation of the clinical pathway for typhoid fever treatment.

Equipment

The equipment in this study is defined as the availability and feasibility of the tools needed in the implementation of clinical pathways for typhoid fever treatment. In the research questionnaire, the questions asked included the availability and feasibility of stationery for the implementation of clinical pathways, the availability and feasibility of clinical pathways paper form, and the feasibility of diagnostic support laboratories at the Kaliwates General Hospital. Data collection on the equipment of...
the respondents was obtained by collecting answers from questionnaires and documentation studies. Based on the results, it is known that the equipment for the implementation of clinical pathways for typhoid fever treatment at the Kaliwates General Hospital is 100% adequate. The equipment in diagnostic support laboratories used in the implementation of clinical pathways for typhoid fever treatment used the same equipment for wider testing. This is because the Widal test is the most appropriate and fastest test to be applied to patients treating typhoid fever at the Kaliwates General Hospital. However, this is contradicted by the Doctor's Clinical Practice Guide in primary health care facilities (Pinzon, 2014). It is explained that the Widal test is not recommended in examining patients with Typhoid fever. False-positive Widal examination results often occur due to cross-reactions with non-typhoidal Salmonella, enterobacteria, endemic areas of dengue infection and malaria, history of typhoid immunization and varying commercialization of commercial antigen preparations. Widal examination is not recommended if only one acute serum examination because this can lead to high false positives that can lead to over-diagnosis and over-treatment so that the hospital should replace diagnostic support tests for typhoid patients.

Method Distribution in Implementation of Clinical Pathway for Typhoid Fever Treatment at the Kaliwates General Hospital

In term of method distribution, the management and implementers of the Kaliwates General Hospital used some variables in easily implementing the clinical pathway for typhoid fever treatment. The sub-variables studied include communication among implementers, rewarding, the division of tasks, and prior training.

Communication between implementers

Communication between implementers in this study is a way the implementers interact in the clinical pathway for typhoid fever treatment. Implementation at the Kaliwates General Hospital. Communication between implementers in this study was assessed through questions including the management’s clarity in providing work instructions, the staff understanding of the contents of the clinical pathway form, the presence or absence of two-way communication between implementers, and the success of the methods of communication applied. It was known that communication between implementers was at 55.6%. The comparison of communication results between implementers who create good communication and who is lack of communication shows only a slight difference. This is because respondents who have good communication usually do not communicate directly with the doctor in charge of service. Communication with some doctors is less cooperative because some doctors have their standpoint and have different characters so that they can create a lack of good two-way communication. According to Setiyanti, organizational success is strongly influenced by the capabilities and competencies of each and the collaboration between team members in the organization. In establishing cooperation to achieve these goals, communication is needed (Setiyanti, 2012).

The theory of George C. Edward III holds that policy implementation is influenced by four variables, one of which is communication. Without communication, the work will be confusing and chaotic so that the goals of the organization are unlikely to be achieved. So with communication, someone will receive news and information by what is in the mind or feeling so that others can understand (Subarsono, 2006).

According to Brennan, the purpose of internal communication is to improve the performance of HR in the organization. This communication occurs because there is a structure in the organization. The purpose of internal communication is to improve HR performance in the organization (Evans-Lacko et al., 2010). Communication will work well when mutual understanding arises. Good communication means that there is the fabric of understanding between one party to the other so that what is communicated can be understood, thought and implemented. Without communication, the work will be confusing and chaotic so that the goals of the organization are unlikely to be achieved (Effendy, 2006).

Form of Compliance

The structure of compliance in this study is the existence of rewards from management related to staff compliance behavior that plays a role in implementing the clinical pathway according to the rules and has discipline in the implementation of clinical pathways. This form of compliance includes giving rewards to obedient staff in the implementation of clinical pathways and special performance assessments for staff who play a role in the implementation of clinical pathways. It is known that compliance by clinical pathway implementers in Kaliwates General Hospital was not considered by the management even though some respondents said
that it does not require coercion to support work in the implementation of clinical pathways because it is related to the responsibility in the process.

**Division of Tasks**

The division of tasks in this study is an equal distribution of work assignments so that each is responsible for implementing the clinical pathway. Division of tasks is the details of the work that contains comprehensive information about the duties/obligations, responsibilities, and conditions needed if the work is done. The assignments in this study were assessed through questions about the fairness of tasks division and understanding of each staff's job desk (Prawirosentono, 2010). It is known that the division of tasks has been fairly distributed at 77.8%. It can be concluded that the division of the tasks in each part has been fairly distributed. In the implementation of the clinical pathway, the staff implemented a shift system so that the clinical pathway continued to run for 24 hours. Also, the staff has understood the roles and job desk that each part must do.

It is known that the unfair distribution of tasks is 22.2%. This is because there is only 1 person in charge of multiple rooms and tasks. A good work situation is the existence of an appropriate division of labor and affirmation of groups of activities that are similar or at least have close relationships or relationships, will ensure a smooth implementation of work and will provide optimal results for the organization (Murti and Iswati, 2014).

From the results of respondent interviews, it was known that the staff already knew the job desk for each section. The staff understands the roles and responsibilities of their parts to minimize any misunderstanding between sections in the implementation of clinical pathways. According to Murti and Iswati, with the division of tasks, all people in the organization know what they have to do, what their duties are, what their functions are, what responsibilities, obligations, rights, authority and who is their superior or subordinate (Murti and Iswati, 2014).

**Training**

The training in this study was the participation of staff in seminars and training as an effort to gain additional knowledge and skills in the implementation of clinical pathways. The training in this study was assessed based on questions about staff participation in training and seminars on clinical pathways and the presence or absence of periodic training for staff. Based on the results of the study it was found that staff training was inadequate for all respondents at 100%. Before the implementation of the clinical pathway, the staff who played a role in the implementation stated there was only socialization of technical instructions in the implementation of clinical pathways and it was given only from the quality team. This socialization also only invites section heads/section heads to be later forwarded to their subordinates. Training on clinical pathways is only carried out by several doctors to make the initial clinical pathway.

Education and training can be seen as one form of investment. Every organization or agency that wants to develop, then education and training for its employees must receive attention. The aims are to develop knowledge, attitudes, and work skills in their efforts to improve employee performance to produce quality products. Efforts to close the gap between the workability of employees and the demands of work so that a condition that will be mutually beneficial for both the agency and employees will be achieved (Widjianto, 2017).

**Time Study in Implementation of Clinical Pathway for Typhoid Fever Treatment at the Kaliwates General Hospital**

The time variable examined in this study is the time limit available for the execution of each task and evaluation of the implementation of clinical pathways. It is known that there is a time limit for quality and evaluation based on questionnaire answers from 7 respondents (77.8%). There are two parts (22.2%) that do not have a time limit for quality and evaluation due to the absence of an evaluation of the two sections and evaluation is only carried out when before the last accreditation. The purpose of scheduling activities is to reduce some slowness in work that has a completion time limit so that it will minimize penalty costs. Minimal monitoring and evaluation in the workplace are also one of the main obstacles to achieving the potential for organizational success (Ginting, 2009).

**CONCLUSION**

The conclusion is Human Resources at the Kaliwates General Hospital have high commitment, and motivation and some respondents knowledge in the implementation of clinical pathways are categorized as sufficient. The availability of the budget and the adequacy of the budget in the implementation of the clinical pathway have been fulfilled. All equipment and documents needed and related to the implementation of clinical pathways for typhoid fever treatment at the Kaliwates General Hospital are sufficient. Communication between implementers is categorized as good. The form of compliance and training for staff in implementing clinical pathways is not a concern for management. The division of tasks of each staff has been fairly distributed even though the Pharmacy Unit have considered that the division of tasks was unfair due to the lack of human resources. The deadline for the task and evaluation of clinical pathway for typhoid fever treatment at the Kaliwates General Hospital has followed the Standard Operating Procedures.

The hospital must identify staffs who have moderate and less knowledge related to the implementation of clinical pathways to undergone staff training that can also be held on a regular basis. Human Resource division should arrange the job description appropriately so that the division of tasks for each staff is fairly distributed. The HR division should conduct performance assessments based on the job description. To improve the process of implementation, it is best to involve roles that have enough power or top management to control the process of implementation, and evaluation, and socialization about clinical pathways to all staffs involved.
REFERENCES


