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Appendicitis Clinical Pathway Implementations Compliance Evaluation in Hospital

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Abstract

Background: Clinical pathway (CP) is a collaborative guidance for patients treatments that focused on diagnosis, clinical problems, and stages of care. CP implementation becomes a guideline on hospital quality and safety improvement for the patient services. **Method:** The research used a descriptive-qualitative mixed methods. Primary data collected through medical record and secondary data is done by interview and observation by using CP format. **Results:** From medical records total, 23 cases were found that met the inclusion criteria. The acute appendicitis case in adults is more than children in number (3.6:1). Acute appendicitis CP compliance is 86%. There are three problems in CP compliance of acute appendicitis i.e doctor's visit adherence (physician in charge of patient 87%, 0% anesthesia), 65% adherence therapy compliance, and 52% inpatient admission. The root of the problem is the lack of socialization, monitoring, and evaluation of established standards. Some activity variations may occur during each process from time to time that will produce a variety of the outcomes as well. How to reduce process variation is to standardize. The process of standardization includes the preparation, socialization, monitoring, control, evaluation and revision of thew standards. CP profit is that it could reduce variation, is a professional requirement, and the basis for quality measurement. Implementation of good standards will ensure the safety of patients and the healthcare providers. **Conclusion:** Almost all employees have conducted medical record (MR) in accordance with clinical pathway criteria as well, but the CP sheet is not included in the MR.

Keywords: clinical pathway; appendicitis; hospital management

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1. Introduction

Appendicitis is one of the most frequent abdominal surgery case in the world, it leads appendectomy to be one of the largest surgeries in the world.[1] In Indonesia, based on data from Indonesian Ministry of Health in 2008 the number of appendicitis disease patients reached 591,819 people and increased in 2009 to 596,132 people. The hospital is an important provider of health services, loaded with tasks, burdens, problems, and where a hope of the sick hanged. In China, the trend of healthcare costs has increased significantly over the past two decades. Other issues are about a lack of medicines and medical equipment monitoring activity in local hospitals which is less touched by medical services. There are a facts of irregular doctor's behavior, unmanned management system, and irrational checks.[2]

The treatment of patients with acute appendicitis requires prompt and appropriate action because a delayed treatment increases the risk both due to appendicitis act and the course of the illness. Complications and mortality will increased eventually, especially in

pediatric patients and geriatrics.[3] One method that can reduce the occurrence of macro variation (length of care, groove), micro variation (diagnosis, treatment, procedure) and cost is with Clinical Pathway (CP).[4]

CP is a collaborative guide for treating patients focused on diagnosis, clinical problems and stages of care.[5] It has been intensively applied in many hospitals all over the world because of its benefits in the medical quality improvement, hospitalization cost control and optimization of medical service.[6] Therefore, based on the reasons above, the authors want to conduct research on Clinical Pathway on Acute Appendicitis Application Compliance Evaluation in Hospital.

2. Method

This research used a descriptive qualitative mixed method. Primary data collected through medical record and secondary data was done by interview and observation using CP format. The object of quantitative research was the data of the patient's records of simple acute appendicitis from September-November 2016 as many as 23 patients. Qualitative research subjects were the head of the surgical and ICU, In-patient and outpatient manager, quality manager, CP team leader, and head of department surgery and director of medical services.

CP in patients with acute appendicitis was something that is used as a guideline to perform job duties in the case of acute appendicitis patients in Hospital. It measured by document research. Visite patients were routine doctor's activities in the hospital in the form of visiting to assess the condition of the patient. It measured by document searching and interviewing. Therapy was an attempt to restore the health of a sick person; medical act and treatment. It is measured by document searching and interviewing. The length of hospitalization was the total time the patient takes during the hospital stay. In acute appendicitis CP was set 3 days length of stay.

Selection of research informants based on the principle of conformity and adequacy relate to the research topic and to know broadly about the purpose of research and can be trusted. The subjects were the head of surgery and ICU, In-patient and outpatient manager, quality head, CP team leader, and head of department surgery who also doubles as director of medical services. Data were collected by searching medical records, observation, and in-depth interviews on 5 informants. The result of this analysis was compliance of CP implementation, problem root, and problem solving recommendation on management of acute appendicitis patient in hospital.

3. Results and Discussion

3.1 Results

From the medical record, 23 cases were found that fulfilled the inclusion criteria during September-November 2016. No CP acute appendicitis was found in all patient medical records. Table 1 shows that cases of acute appendicitis in adults are more than children, consisting of 10 males and 13 females. Patients entering through Emergency Unit also dominate as many as 16 patients compared with those through the polyclinic, this is because patients with acute appendicitis experience sudden (acute) abdominal pain in right lower quadrant, along with other symptoms such as fever, nausea, vomiting and anorexia. These symptoms and laboratory marker are also present in the clinical score system for the diagnosis of appendicitis (namely the Alvarado score).[7]

Table 1. Sample Characteristics

Characteristics		Total
Age	Adult	18
	Children	5
Gender	Man	10
	Woman	13
Inpatient by	Emergency Unit	16
	Polyclinic	7

In Table 2 it can be concluded that there are three problems in CP compliance of acute appendicitis that is physician visite compliance both physician in charge of patient and doctor of anesthesia, adherence therapy, and length of stay (LOS). The average adherence

to acute appendicitis CP was 86%. At an average length of stay (AVLOS) of 3.56 days, this is not consistent with CP limiting the treatment of acute appendicitis simple for 3 days.

Table 2. Characteristics of Compliance CP Acute Appendicitis

Activity	Compliance
Admission	100%
Diagosis Support	100%
Visite physician in charge of patient	87%
Visite Anesthesia	0%
Medical treatment	100%
Therapy	65%
Nursing care	100%
Pharmaceutical Care	100%
Nutrition Care	100%
Get Started	100%
Education	100%
Discharge Planning	100%
Administrative Procedures	100%
Length of Hospitalization	52%
Average Compliance	86%

Root Analysis Problems

a. Visite Compliance

There are 2 factors that play a role in Visite compliance, that is Man factor and Methods factor. Both factors are the root of the problem due to lack of socialization, monitoring, and evaluation of predetermined standards or policies. The influential Man factors are low visite culture, low CP implementation commitment, and many part-timer doctors. The influential factors of the method are the non procedural operational service flow, the elective patient's operation criteria and the cito are unclear, the visite policy has not been fully implemented, the visite reminder system is not yet running, and the monitoring and evaluation of CP implementation is not routine.

b. Therapeutic Compliance

Variation of therapy that happened was giving injection tranexamat acid at the time of hospitalization as much as 6 patient from total 23 patient. To analyze the adherence of therapy used barrier factor analysis. From the analysis of barrier factors that should be a barrier to the variation of service that is Guidance Implementation of CP and SOP Filling of CP. Both of these have not worked well, consequently the service to the patient becomes ineffective and efficient. Barriers fail because the commitment of medical personnel to the implementation of CP is still lacking, lack of socialization, and monitoring evaluation is not routine. It should be 3 months, but the practice is only 1 year.

c. Inpatient Stay Lenght Compliance

At the hospital there is a dilemma in an effort to realize the quality of health services. On the one hand quality can be defined to what extent health services are provided in accordance with SOP or fixed medical procedures. When the SOP is implemented as for example in some government-owned education hospitals, it is considered by the patient for too long and convoluted. On the other hand, according to the eyes of the patients, the government's education hospitals are considered less qualified than private hospitals that can be faster on service because the procedures are applied more flexibly.

Table 3. Five Why's Analysis Inpatient Stay Lenght Compliance

Problems	LOS compliance 52%, AVLOS 3.56 days
Why	Service Delay
Why	Physician in charge of patient is not visite
Why	The visite reminder system is not running yet
Why	Implementation of CP has not been maximized
Why	Monitoring and evaluation is not routine, lack of socialization

3.2 Discussion

Each process of health care will occur variations over time that will produce a varied outcome as well. The way to reduce variation is to standardize. The process of

standardization includes the preparation, implementation (socialization), monitoring, control, as well as evaluation and revision of standards.

The existence of standards or in this case Clinical Pathways are multidisciplinary care plans that outline the sequence and timing of actions that are necessary for achieving expected patient outcomes and organization goals regarding quality, costs, patient satisfaction, and efficiency.(8) The Clinical Pathway will provide benefits, such as reducing variation, is a professional requirement, and the basis for measuring quality. Implementation of good standards will ensure the safety of patients and healthcare providers. Reduced variation in services will improve the consistency of health services, reduce patient morbidity and mortality, improve efficiency in services, and facilitate service personnel.(9)

Implementation of CP was closely related and related to Clinical Governance in order to maintain and improve the quality of service with predictable and affordable costs. Clinical governance was a system of efforts to ensure and improve the quality of service systematically in an organization of efficient health service providers. CP was not a standard service from a specialist's perspective, it was not a substitute for a doctor's clinical judgment, and was not a substitute for a doctor's order. However, CP was an integrated documentation tool for stabilizing the patient care process, effectively managing the results of clinical and financial calculations, and the results of collaborative practice and team approach.(10)

4. Conclusion

Almost all employees have conducted medical record in accordance with clinical pathway criteria well. Acute clinical pathway compliance with acute appendicitis is 86%, but Clinical Pathway sheet is not included in medical record. There are three issues in clinical pathway compliance of acute appendicitis ie physician visite adherence, treatment adherence, and length of hospital admission. The root of the problem in visite compliance, therapy, and length of hospitalization is the lack of socialization, monitoring, and evaluation of established standards

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