

Analysis Of Clinical Pathway Implementation Of Urinary Tract Stones At Royal Prima General Hospital Medan

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Abstract.

In realizing individual health rights, health services are required to be able to place resources and organization efficiently with the advancement of medical world. Clinical pathway (CP) is a disease management tool used to reduce unnecessary variations in services to improve clinical outcomes and to control the use of resources (financial). Acute appendicitis is one of the most common causes of acute abdominal pain, with cases from 20-30% and increasing 32-72% at age of <60 years. Therefore, it is necessary to conduct a study on the implementation of CP in the RSU. Royal Prima Medan. This study was conducted by using mix method with a case study design. Qualitative data were taken by interview and observation with case manager, medical committee, and nurses (n = 5) and quantitative data were taken with simple descriptive from acute appendicitis CP documentation in medical records and ICPAT (January - September 2020, n = 117). The level of completeness for CP was 100% and form filling was 85%. ICPAT dimension 1 contents and quality are good, dimension 2 contents still lack, and quality is moderate, dimension 3 contents is good and quality is moderate, dimension 4 content in moderate criteria and quality is good, dimension 5 contents still lack and quality is moderate and dimension 6, contents is good and quality is in moderate category. Where the obstacles are due to lack of understanding and time constraints. The development of urinary tract stones CP is not quite optimal; it is necessary to conduct periodic socialization and training to support understanding in filling out CP.

Keywords: Analysis of clinical pathways implementation, urinary tract stones and ICPAT.

I. INTRODUCTION

Health is a fundamental right of everyone which is stated in the WHO constitution. In realizing individual health rights, health services are required to be able to place resources and an efficient organization with the advancement of the medical world [1]. The quality of good health services is determined by the correlation between good input, process, and output. Structure which includes organization, regulation, finance, personnel, facilities, and infrastructure. Process is the professional interaction between the patient and all activities of the health workers. While the output is the result of what has been given or services by health workers to patients [2]. Clinical pathway (CP) is a disease management tool that is used to reduce unnecessary service variations to improve clinical outcomes and to control resource (financial) savings. The CP document provides for every important part of the healthcare service, with specific clinical problems for most patients. as well as with the desired results in detail [3]. The United States applies clinical pathways to almost 80% of all health services there. In Indonesia, the implementation of clinical pathways related to the implementation of INA-DRG (Indonesia Diagnosis Related Groups) is expected to increase the efficiency and quality of health services in hospitals. In Indonesia, this document is also one of the requirements that must be met in the 2012 KARS version of the Hospital Accreditation Standard.

CP also plays a role in improving quality control and hospital costs, for example shortening the length of stay, reducing the risk of recurrence, complications and patient mortality, and overall hospital costs [4]. Based on the results of a study by Yasman regarding the benefits of a clinical pathway, the results obtained were an increase in service, implementation of evidence-based practice, more monitoring of service standards and more focused documentation, increased inter-departmental collaboration, improved care delivery for patients and increased risk management [5]. Also, from a study which compared clinical pathway care and ordinary care carried out by Kinsman the results showed an increase in documentation with clinical pathways and a decrease in disease-related complications [6]. The Royal Prima Medan General Hospital is one of the type B accredited hospitals that serves public health, both general and BPJS, which has implemented CP. One of them is CP Urinary Tract Stone which is one of the biggest diseases that is often

found in the past few months. Where is the case of Urinary Tract Stone patients in RSU. Royal Prima Medan continues to increase every year from 357 cases in 2018 and 447 cases in 2019. Therefore, it is necessary to conduct further studies regarding the implementation of CP with the aim of analyzing the implementation system, monitoring and evaluation of CP as a means of service quality control and control. hospital costs. Royal Prima Medan.

II. METHODS

This research was conducted using a mixed method with a case study design. Retrieval of qualitative data by interviews and observations to obtain more in-depth information about the implementation of the Urinary Tract Stone clinical pathway in RSU. Royal Prima Medan. Quantitative data were taken descriptively through documentation of CP Urinary Tract Stones in the medical record and ICPAT to determine compliance in completing CP Urinary Tract Stones. This research was conducted at RSU Royal Prima Medan, Jl. Ayahanda, No. 66 A, Medan, North Sumatra, Indonesia. The time of this research was conducted from November 2022 to January 2023. The population of this study were medical records with a diagnosis of appendicitis for the last 9 months and informants directly related to the clinical pathway. Quantitative samples were taken from all medical records of Urinary Tract Stones selected by total sampling with the inclusion criteria namely CP Urinary Tract Stones used in RSU. Royal Prima Medan, medical records which include medical records that have a diagnosis of Urinary Tract Stones from January 2022 to September 2023, and with the exclusion criteria of patient medical records that are illegible and damaged and miss. Qualitative samples that will be taken for information through interviews are informants who are directly related to the clinical pathway consisting of: Case Managers, Medical Services Committee, and Head Nurses of Inpatient Rooms using purposive sampling technique ($n = 5$). Primary data was obtained through in-depth interviews and observation of 5 informants who are directly related to the Urinary Tract Stone Clinical pathway.

Secondary data were obtained from all medical records of patients with a diagnosis of Urinary Tract Stones from January 2022 to September 2023. The selection of the number of samples in this study was based on need and adequacy related to the topic. Observations in this study used the medical records of Urinary Tract Stone patients in January 2022 – September 2023. From the medical records, it was obtained whether the use of CP Urinary Tract Stones was properly stored in the medical records. Then the clinical pathway observation tool was also used in the form of the ICPAT form. The interviews used questions based on ICPAT which aimed to find out the process of implementing Urinary Tract Stone CP, the obstacles experienced during implementation in the implementation of Urinary Tract Stone CP at RSU. Royal Prima Medan. This type of validation of research results by means of triangulation of data sources. Source triangulation is carried out by processing and preparing data, re-reading the entirety, and analyzing data obtained from sources and medical records, so that conclusions can be drawn about the results of the action in the form of narratives or qualitative reports. In quantitative data, the ICPAT form no longer needs to be tested for validity and reliability because the ICPAT form has been validated, where this form is commonly used for clinical pathway assessment in the United Kingdom (Whittle, 2009). The results collected from qualitative and quantitative research were then triangulated by reconfirming with respondents through interviews and observation of research subjects. The variable of this research is the implementation of a clinical pathway which consists of several indicators, namely: Input indicators (Format of clinical pathways, organizational role, Facilities and infrastructure and HR), Process indicators (Clinical pathway documentation, Clinical pathway development, Application of clinical pathways, Maintenance Clinical pathways) and Output indicators (Clinical pathway compliance).

Table 1. Operational Definition

Variable	Definition	Measuring instrument	How to Measure	Results Measure
Implementation CP	CP implementation process	1. Interview guide 2. ICPAT Checklist	1. Observation 2. In-depth interviews 3. Complete the	Rating percentage yes and no.

			ICPAT checklist	
Evaluation ICPAT	Combined steps in the treatment of acute appendicitis patients. Diagnostics, problems clinical and service measures. The CP assessment consists of 6 dimensions: a. CP format b. CP documentation c. CP development d. Application of CP e. Maintenance CP f. organizational role	1. Interview guide 2. ICPAT checklist dimensions 1-6	1. Interview 2. ICPAT Checklist	Percentage ratings for content items and quality items. Based on Whittle et al, (2009). Where is the percentage of "yes" answers from each dimension. Classification: 1. >75% good, 2. 50-75% moderate, 3. <50% less
Obedience clinical pathway	The process of completeness of <i>clinical pathway</i> files in medical records	1. Medical records 2. Interview guide	1. Observation 2. Interview	Percentage results of Completeness file from the record sample medical
Obstacle clinical pathway appendicitis	Find constraints that exist in RS under implementation <i>clinical pathways</i> appendicitis.	Results interview	Interview deep	The results of the interviews were made into narratives and then conclusions were made
Medical records	Document contains identity and stages patient's illness Urinary tract stones.	Medical records	Observation	Meets dimension 2 on ICPAT

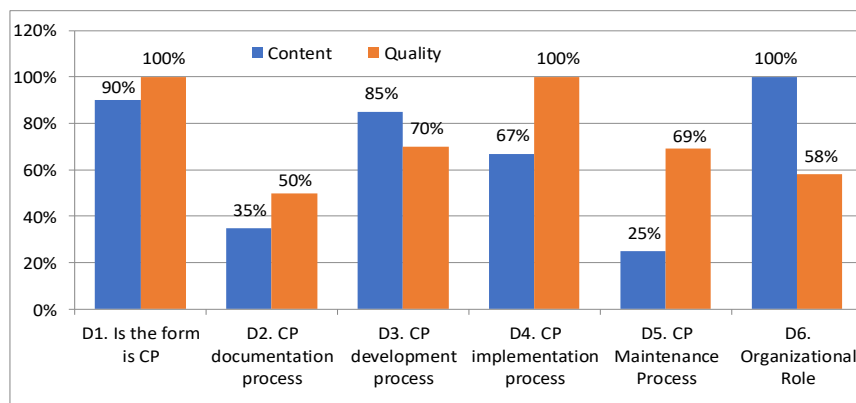
III. RESULT AND DISCUSSION

Inpatient Room Data

The Inpatient Room at the Royal Prima Medan General Hospital consists of buildings A and B, namely 5 floors in building A where floor 6a is for obstetrics and gynecology patients, floor 9a is for class I BPJS patients, floor 10a is for stroke patients, floor 11a is for pediatric patients and floor 15a for general adult patients. Whereas for building B the treatment room consists of 7 floors where the 5b floor is for BPJS class III patients, the 6b floor is for PBJs class I and II, the 10b floor is for chemotherapy patients, and floors 9b, 11b, 12b and 15b are designated for handling COVID-19 isolation patients 19. There is no floor specification for the care of surgical patients. As a sample for treatment on the 5b floor ward which handles BPJS class III patients an average of 200 patients per month, it has 13 rooms, namely 11 inpatient rooms, 1 nurse station, 1 meeting room as well as medical and non-medical equipment rooms. For 1 inpatient room has 4 beds with a total of 46 beds, where each bed is partitioned with curtains.

ICPAT Evaluation Results

Fig 1. ICPAT Form Evaluation Results



Based on the literature Whittle et al "Assessing the content and quality of pathways" (8) it was found that the classification of the ICPAT assessment, if the assessment obtained a percentage of > 75%, the

clinical pathway forms that were considered included in the good criteria, 50-75% were included in the moderate criteria, and <50% fall into the less criteria (9). From the results of the graph above, it is obtained an assessment on dimension 1 content and good quality. Assessment on dimension 2, content criteria are lacking and moderate quality. Dimension 3, the content is included in the criteria of good and moderate quality. In dimension 4, the content is included in the criteria for moderate assessment and good quality. In dimension 5, the content is included in the low rating and moderate quality, while in dimension 6, the content is included in the good rating and the quality is included in the moderate category.

INPUTS

a. Human Resources

Based on the results of observations and interviews, there are 4 general surgeons at the Royal Prima Medan General Hospital, while the number of nurses focused on the 5b floor is 21 people where 4 are men and 17 are women. Based on existing human resources, interviews with researchers regarding clinical pathways, along with the coding results of nurses' understanding of *clinical pathways*.

Table 2. CP Comprehension Coding

Axial	Theme
Definition of clinical pathways - Clinical flow - Service guide - Patient care guidelines	1. <i>Clinical pathway</i> is a guideline for clinical care services
The function of clinical pathways - Quality and cost control - Patient handling is more focused - Reduce the risk of mishandling	2. The function of the clinical pathway is to establish uniform service standards for quality, time, and cost control

All respondents stated that the clinical pathway is a guideline in clinical care services to establish uniform service standards and reduce treatment time and costs. The following is data on the number of patients on the 5b floor in the last 3 months (July 2020- September 2020).

Table 3. Data on the number of patients on the 5b floor of RSU. Royal Prima Medan Period July 2020 - September 2020

Period	Patients	Beds	Total Length Treatment	Treatment Days	BOR	LOS
Jul 2020	172	24	956	834	95,86	5,56
Aug 2020	132	24	814	687	78,96	6,17
Sept 2020	157	24	917	817	93,90	5,84

Source: RSU Medical Record Data. Royal Prima Medan, 2020

From the number of nurses on duty, nurses on vacation and non-medical staff in the treatment room on floor 5b, it can be calculated the interpretation of the need for nursing staff based on the guidelines for calculating the need for nurses according to the Directorate of Nursing Services, Director General of Yan-Med, Ministry of Health RI (9) as follows (10):

Table 4. Number of Patient Care Hours on Floor 5b RSU. Royal Prima Medan

Number of Effective Maintenance Hours/Day				
No	Category	Patients/day	Treatment Hours	total
1.	Minimal Askep	20	2	40
2.	Medium Askep	12	3,08	36,96
3.	Askep is a bit heavy	3	4,15	12,45
4.	Maximum Askep	0	6,16	0
Total		35	15,69	
Total maintenance hours by day				89,41

Source: RSU Medical Record Data. Royal Prima Medan, 2020

Table 5. Number of Nurses on Duty on Floor 5b of RSU. Royal Prima Medan

A = Number of Nursing Staff on Duty				
Number of maintenance hours/day	=	$\frac{89,41}{7}$	=	13 people

Source: Primary Data

Table 6. Number of Nurses on Holidays on Floor 5b of RSU. Royal Prima Medan

B = Number of Nursing Workers on Holiday (Loss Day)	
$\frac{\text{Number of holidays / week / year} + \text{Number of days off} + \text{Number of major holidays / year}}{\text{Number of effective working days/year}}$	x A
$= \frac{82 \times 13}{286} = 4 \text{ orang}$	

Source: Primary Data

Table 7. Non-Nursing Staff on the 5b Floor of RSU. Royal Prima Medan

C = Non-Nursing Personnel
$(A + B) \times 25\% = 13 + 4 \times 25\% = 4 \text{ people}$

Source: Primary Data

Table 8. The Need for Nursing Staff on the 5b Floor of RSU. Royal Prima Medan

The Need for Inpatient Nursing Staff			
A + B + C	= (13 + 4 + 4)	=	21 people
Head of Room		=	1 people
Total Power Requirement			22 people

Source: Primary Data

From the results of the calculation table above, it is found that the need for nurses on the 5b floor of the RSU. Royal Prima Medan has 22 people, while in the field there are 21 nurses.

b. Dimensions 1 (Format clinical pathway)

It is known that the percentage of quality content is 90% with the answer "yes" on the ICPAT dimension 1 form. From the results of direct observation on the clinical pathway sheet, the starting and ending points for using CP are clearly stated on the date and time when filling out the form. The flow that will be received by the patient, as well as the continuity of service and therapy can also be seen in the column given in red which indicates that it is mandatory to provide service for the next few days so of course it also helps staff during service, service delivery can be started and how long it should be done. The points lacking in quality content are whether CP can help decision making or show a focus of attention on other factors such as co-morbidities, risk factors or other problems, according to the interview statement from informant C which stated that,

"...there is no explanation for the inclusion and exclusion criteria for filling, including the list of variations."

From the role of the profession, it appears that all devices related to medical services contribute to service, this is supported by the statement from the interview with informant C that,

"... those who use CP are all parties involved in patient care."

and from the statement of informant P in the interview

"...the one who fills in is the doctor on duty and/or the case manager."

Based on this statement, it is clear who filled out the clinical pathway sheet.

c. Dimension 6 (Organizational role)

Based on the results of interviews with the medical committee section, the flow in making a clinical pathway is obtained as follows:

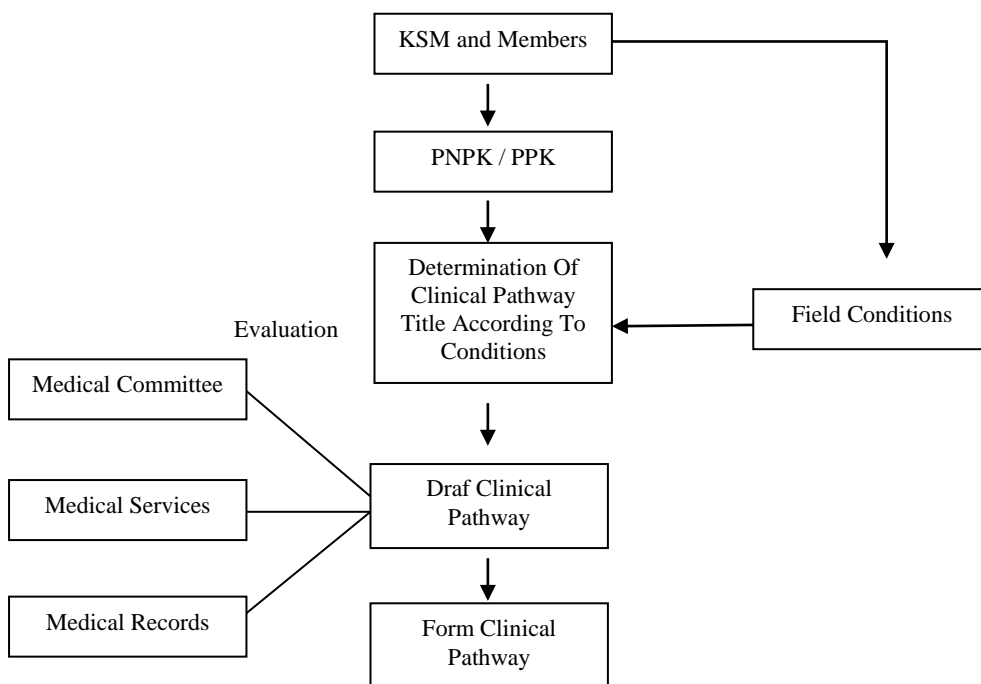


Fig 1. Flow of Making Clinical Pathway

From dimension 6 it is found that 100% content is in the good category and 58% quality is included in the moderate category. The part of quality that has not been fulfilled is the policy in clinical service documentation and long-term commitment to change. This is in accordance with the statement of informant P,

"...in the past when the operand was yes, reminding each other of the completeness of the CP, but not anymore."

And

"...when they are in the ward or inpatient room, they are given the CP sheet, but they don't always check it."

From this statement, discipline in checking CP sheets in patient status data is lacking. The lack of comprehensive training to develop CP is also an obstacle, according to informant P's statement,

"... used to be, but not anymore, once in a while..."

Based on this statement, it is known that a meeting for all staff regarding the shortage of CP has been held, but at an irregular time frame.

d. Facilities and infrastructure

Each - each inpatient room in the RSU. Royal Prima Medan is of course equipped with medical and non-medical equipment to support activities in the treatment and administration of the room. From the results of the data obtained, the necessary equipment is available according to the standards set by the hospital. The inventory data is as follows:

Table 9. Inventory Data for Floor 5b RSU. Royal Prima Medan

No.	Inventory	Total	Remarks
1.	Digital Tension	3	Good
2.	Thermometer	3	Good
3.	Suction	2	Good

4.	Saturation	3	Good
5.	Stethoscope	3	Good
6.	Set GV	4	Good
7.	Patient Bed	46	Good
8.	Illuminator	1	Good
9.	Computer	3	Good
10.	Portable	2	Good
11.	Infusion Pole	46	Good
12.	Nebulizer	3	Good
13.	Telephone Room	2	Good
14.	Printer	2	Good
15.	Medication Trolley	1	Good
16.	Nurse Call	1	Good
17.	Emergency Trolley	1	Good
18.	Medicine Refrigerator	1	Good
19.	Television	23	Good
20.	Patient Dining Table	46	Good
21.	Room cell phone	1	Good
22.	TV Remote	10	Good
23.	AC Remote	10	Good

Source: RSU Floor 5b Inventory Data. Royal Prima Medan, 2020

PROCESS

a. Dimension 2 (Documentation of clinical pathways)

From the results of ICPAT, the percentage of content is 35% and quality is 50%. On content and quality items that have not been met, namely, an explanation of the patient's condition unable to use CP, the page number on each CP sheet and the total pages, the review number and the writing date of the CP validity, abbreviations, patient names on each page, examples of signatures and recording instructions variation. This was obtained from the results of observing the acute appendicitis clinical pathway sheet in the hospital. Then the patient's access to CP, the patient's condition where to fill in several CP sections and recording variations. This is in accordance with the statement of informant K,

".. can't access it, CP is only for our paramedics..."

Based on this statement it was concluded that patients do not have access to their clinical pathways.

b. Dimension 3 (Development of clinical pathways)

It is known that the percentage of content is 85% and the quality is 70%. In terms of content, the part that has not been fulfilled is patient representatives who participate in reviewing clinical pathways. Whereas in terms of quality, the aspect that has not been fulfilled is patient involvement in the development of clinical pathways. This is in accordance with informant K's previous statement that patients do not have access to their CP. Based on this, it is known that all clinical pathway implementing representatives have not been involved in the development process.

c. Dimension 4 (Implementation of clinical pathways)

From the results of ICPAT, the percentage of content is 67% and the quality is 100%. The content items that have not been achieved are feedback on variations in CP to patients because there is no patient access to CP, according to respondent K's statement,

".. only for our paramedics."

And the unavailability of resource allocation to carry out training in the use of CP can only be seen based on information from the CP form.

d. Dimension 5 (Maintenance of clinical pathways)

It is known that the percentage of content is 25% and quality is 69%. The content that has not been fulfilled is that there is no individual staff responsible for maintaining CP, supported by statements from informant K,

"... currently it is still stored in the medical record... no one has written who it is, only the procedure is verbal."

In addition, there was no training for staff when there was a change in the content/format of the CP and no training on the use of CP for new staff involved, this was in accordance with a statement from informant K who stated,

"... there is, every year, usually at the beginning of the year or at the end of the year..."

The statement indicates socialization of use exists but no socialization or retraining for each time there is a change and training for new staff, only carried out at certain times once a year. Meanwhile, the quality aspects that have not been fulfilled, namely, the contents and documentation of clinical pathways have been routinely reviewed based on variations. This is based on an observation form where revision numbers have not been included and there is no input or review from patients, because patients do not have access to their CP.

OUTPUT

a. CP Implementation Compliance

Based on medical record observations, adherence in attaching the acute appendicitis CP form, there were 117 medical records from 117 medical records (100%) that were observed included the acute appendicitis clinical pathway form and from the statement of informant K that,

"... if the patient enters with a diagnosis according to the existing clinical pathway, and a single diagnosis then the clinical pathway form is entered into the patient's status."

and, from informant P that,

".. given while in the ward or inpatient room..."

From the results of these observations and interviews, it is known that the clinical pathway sheet is attached to the patient's medical record. Then from the completeness in filling out medical records from 117 medical records there are 12 medical records (15%) which have not been filled in completely, for example in the hours of admission, date of discharge, ICD code and treatment room plans, this is based on the results of direct observation of the contents of the CP in the records medical. This is in accordance with the statement of one informant P who stated

"Yes, sometimes there is a lack of discipline, because there is a lot of other work... but all the instructions are carried out, sometimes only the medical record documentation is the same as the clinical flow, one or two small ones are missing because they are busy..."

Based on this statement, it is known that the implementation of CP was carried out but forgot to fill in the details in the medical record sheet and also the clinical pathway.

Obstacle

Based on the results of interviews with informants, it is known that the Clinical Pathway has been prepared and made since 2016 by the Medical Staff Group (KSM) of each section because it needs to detail the stages in the service so that services are standardized according to the Clinical Practice Guidelines (PPK) and related to preparation for accreditation. The formation of CP for a disease is based on the results of high risk, high cost and high-volume evaluations at the Royal Prima Medan General Hospital which have been mutually agreed upon and approved by the hospital director, which will be audited by the Medical Committee and re-evaluated every 3 months and a meeting will be held. Once a year if needed. From the evaluation of the implementation and the CP form, if a revision is needed after the results of the meeting in the clinical pathway form, a new draft will be re-formed. The following is a coding table related to the obstacles that exist in CP implementation based on the results of interviews with informants.

Table 10. CP Comprehension *Coding*

Axial	Theme
Attitude <ul style="list-style-type: none"> • Limited time • Lack of cooperation in implementing CP filling • Don't understand the clinical flow issue 	Lack of understanding of the importance of filling out clinical pathways.
Documentation <ul style="list-style-type: none"> • Inaccurate in filling details 	Time is limited so it's less thorough in charging.

The clinical pathway is a form that has existed for a long time at the Royal Prima Medan Hospital and usually has it attached to the medical record when a patient enters with a certain diagnosis. The lack of understanding of the importance of filling in the clinical pathway is one of the reasons that the executors are used to delaying filling in the clinical pathway or not reminding each other or double-checking the filling in the patient's medical record before the status is returned, this results in incomplete filling of the clinical pathway. In accordance with informant P's statement to remind each other during morning meetings or during operands,

"...it used to be, not anymore."

As well as the lack of socialization regarding the importance of clinical pathways and training for filling them in each revision is certainly an obstacle because socialization is only carried out once a year, even though there are revision changes or new implementing staff. Coupled with the busyness of executors such as the case manager and DPJP, so that the filling is incomplete, even though the medical record will re-check once a quarter before it is given to the medical committee for auditing so that the CP sheet will be returned to the case manager to be filled out again.

DISCUSSION

From the literature "Assessing the content and quality of pathways" the division of the ICPAT assessment category, if the percentage results are > 75% in the assessment, then the clinical pathway forms that are assessed are included in the good criteria, 50-75% are included in the moderate criteria, and <50% fall into the less criteria. Assessment is obtained by calculating with a yes answer in each dimension [7]. Based on the ICPAT assessment, in dimension 1, the percentage of content is 100% and quality is 100%. Based on these results, content, and quality fall into the good category. The assessment of this dimension is to ascertain whether the forms being assessed are clinical pathways (CP). Judging from the results obtained, it is true that the form assessed is a clinical pathway. To improve service quality, one way is to redesign the health service process by creating a clinical pathway [8]. CP details what must be done in certain clinical conditions and provides a treatment plan with service standards that are considered appropriate. CP also plays a role in improving quality control and hospital costs, for example shortening the length of stay, reducing the risk of recurrence, complications and patient death, and overall hospital costs [4]. Based on the previous data analysis, dimension 1 meets the good criteria. Based on the ICPAT assessment, in dimension 2, the content percentage is 35% and the quality is 50%. Based on these results, the content is included in the less criteria and the quality is included in the moderate category. The assessment of this dimension is to assess the CP documentation process.

There are various CP document formats, depending on the type of disease or problem based on professional agreement. In general, the CP format contains tables where the columns consist of time, and the rows contain the results of observations, examinations, and actions. Form filling consists of patient history data, physical examination, and screening assessment according to the agreement made [9][10]. In Indonesia, this document is also one of the requirements that must be met in the version 2012 of the Hospital Accreditation Standard, where the CP document provides in detail every important stage of health services, for most patients with certain clinical diagnoses or procedures, as well as the expected results [11][4]. From this it can be concluded that the documentation process is not detailed on the form, which is considered to affect communication among service staff, and to the lack of evidence regarding the audit that will be carried

out by the medical committee. Based on the ICPAT assessment, in dimension 3, the content percentage is 85% and the quality is 70%. Based on these results, the 3rd dimension content is included in the criteria of good and moderate quality. The assessment of this dimension is to assess the CP development process. The multidisciplinary professions involved in contributing to providing care can be in the form of nursing, medical, nutritional, and pharmaceutical care [10]. The problem faced is the non-involvement of patients in the development of clinical pathways. The goals of ICP are the right people, the right instructions, the right place, at the right time doing the right thing with the right result and all focus on the patient experience [12]. The evaluation carried out on CP was seen not only from the team that made it but also from the party receiving the action, namely the patient [13].

Based on this, it can be concluded that the participation of patients in the development of clinical pathways will reduce the occurrence of problems such as disputes over medical action in the future. Based on the ICPAT assessment, in dimension 4 the percentage of content is 67% and quality is 100%, where dimension 4 assesses the CP implementation process. In dimension 4, the content is included in the criteria for moderate assessment and good quality. The implementation of CP is related to and related to clinical governance to improve and maintain the quality of services at an affordable cost according to estimates, while in simple terms clinical governance is a system of efforts to improve the quality of services systematically within one organization providing efficient and guaranteed health services. CP specifies what must be done in certain clinical conditions and provides a treatment plan with service standards considered in accordance with evidence-based medicine (EBM) [14]. According to Mater, the first thing that needs to be done is to improve the quality of medical staff with knowledge related to CP before carrying out a good clinical pathway implementation [15]. So, it can be concluded that the content still needs to be improved, especially by determining the allocation of resources to train staff in the use of the CP form. Based on the ICPAT assessment, in dimension 5, the percentage of content is 25% and quality is 69%. The assessment of this dimension is to assess the maintenance of clinical pathways. Content is included in the low rating and moderate quality.

From the results of this study, it is known that there is no written SOP regarding individuals who are responsible for maintaining CP so that staff are needed who are responsible for maintaining CP. According to Davis, it is important to identify leaders and groups responsible for forming a CP team that drives and sustains the change process [12]. In addition, training for both new and old staff when there is a change in the content or format of the CP at close intervals, especially when there is a revision or change, is only once per year. Davis also stated that, there are 8 stages in the development of a clinical pathway, one of which is the need for regular reviews in which variations are recorded and whether staff understand how to record these variations [12]. Apart from that, in terms of quality, there is no review based on the variations that arise. Analysis of variations in ICP allows for continuous assessment of the processes and outcomes of guidelines or standards, thereby providing an evaluation of the practices undertaken [13]. From the results of the study there was also no input from patients who changed practices because patients had not been involved and related to the fact that the variation code of clinical pathways had not been updated. Therefore, patient involvement and variations that arise in the field need to be carried out and recorded so that the maintenance process can be improved. While the ICPAT assessment, in dimension 6, the percentage of content is 100% and quality is 58%, based on these results, content is included in good ratings and quality is included in the moderate category. Dimension 6 serves to assess the role of the organization. Based on research, it is known that the management has carried out socialization, but the implementation of the clinical pathway so far is felt to be lacking even though the misses are not a big thing.

This happens because there are no sanctions or training that is more than once a year, then there is also no commitment from each medical staff who realize the importance of filling in CP in detail. So, the need for a re-examination before submission to the quarterly audit by the medical committee team. Devitra stated that doctors must be able to form clinical commitment and leadership as a role in organization [16]. According to Widyanita, the main thing that can be done to increase the role of the organization is to strengthen the commitment of every officer involved. From this, it can be concluded that the role of the organization in the application of existing clinical pathways is supported by commitment with the staff

concerned on an ongoing basis in the long term [13]. Furthermore, from the results of observations of medical records, out of 117 medical records with a diagnosis of Urinary Tract Stones, all of them have been attached with CP. Only when filling out the CP form, out of 177 medical records, 12 medical records were not filled out in detail.

Hanevi stated, CP documents provide each important stage of health services, with certain clinical problems for most patients. as well as with the expected results in detail [3]. The Hospital Accreditation Committee states that one of the effectiveness of CP documentation can save the use of facilities, increase clinical outcomes, and increase patient and practitioner satisfaction, and can reduce treatment costs [10]. From the statement above, it can be concluded that it is necessary to increase accuracy in the process of documentation and implementation of clinical pathways to reduce medical negligence. From the results of interviews with case managers and nurses, regarding incomplete written data, some informants stated that the large number of activities in the hospital and the large number of patients caused incomplete form filling to be recorded in detail. Usually, they will be reminded by the medical record when they are sent home for filling so that sometimes they are missed because there is no one individual who is responsible for CP. Apart from that, it was also known in the discussion of the need for nursing staff on It 5b as many as 22 people, but currently there are only 21 nurses. According to Devitra, human resources are the main pillars of success in implementing clinical pathways, for this reason the ability and availability to manage existing potential is needed [16]. Therefore, effective management of existing resources, especially directly related to clinical pathways, is needed.

IV. CONCLUSION

From the results of research analysis at RSU. Royal Prima, it can be concluded:

1. Inputs

- a. The clinical pathway form that was assessed was a correct urinary tract stone clinical pathway in accordance with the ICPAT assessment and met the good criteria.
- b. The facilities and infrastructure which include inpatient rooms and equipment are available to function properly and according to the standards set by the hospital.
- c. The number of general surgeons is 4 people, according to hospital B standards where there are at least 3 people and the nursing staff on floor 5b is currently lacking 1 person.

2. Process

- a. Documentation of CP for urinary tract stones has been entered into the medical record with a 100% compliance rate for completeness of the form.
- b. CP development has involved KSM, medical committee, medical services, case managers and nurses, but it is not optimal.
- c. From the process of implementing the CP for Urinary Tract Stones, there are still obstacles such as a lack of awareness of the importance of filling out CP and limited time in filling out the CP form in its entirety.
- d. There is no written notification of individual staff who are responsible for maintaining CP.
- e. Evaluation of CP implementation is carried out once a year, and training is carried out in conjunction with evaluation meetings.

3. Outputs

Compliance completes the contents of the clinical pathway for urinary tract stones, namely 85%.

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