

## Clinical Pathway Implementation with the Quality of Service and Satisfaction Patient of DM Gangrene in the General Surgery Poly at RSUD Ra Basoeni Gedeg Mojokerto

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### ABSTRACT

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DM management requires collaborative and integrated team involvement in working with patients to set goals and implement treatment for patients. The need for treatment to individuals with DM helps provide psychological support, psychomotor skills, promote self-management, and set goals for better and optimal outcomes. Therefore, in the care of DM patients, it is necessary to apply services that can help patients in undergoing treatment better, one of which is by applying clinical pathways. The design of this research is cross-sectional analytics. The variables of this study are the application of clinical pathways as independent variables as well as quality of service and patient satisfaction as dependent variables. The population of all dm gangrene patients in the General Surgery Department of RSUD RA Basoeni Gedeg Mojokerto was 137 patients in February - March 2020. Samples were taken with simple random sampling techniques as many as 105 respondents. The data was collected by questionnaire and processed using editing, coding, scoring and tabulating and tested with chi square test. The results of this study showed that partially and simultaneously independent variables influence the occurrence of dependent variables due to the value of  $<$  of 0.05. The application of clinical pathways can help patients know all forms of services that will be received from the beginning of the action until the patient returns home. Mechanism of application of clinical pathway will be a basis of communication that is built with good quality between hospital staff and patients so that patients will receive the maximum service and patients are satisfied with the service

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## INTRODUCTION

The number of cases of DM that are not realized by the patient itself causes an increase in morbidity, in untreated DM can cause complications or increase of disease even death because diabetics are susceptible to diseases involving other organs such as the eyes, heart, kidneys, blood vessels, and nerves, therefore DM disease is often said to be "silent killer" (Sinaga, et al., 2011). DM management requires collaborative and integrated team involvement in working with patients to set goals and implement treatment for patients. DM sufferers need coordinated care from health teams such as doctors, nurses, dietitians, and pharmacists. The need for treatment to individuals with DM helps provide psychological support, psychomotor skills, promote self-management, and set goals for better and optimal outcomes (Hunt, 2013). Therefore, in the care of DM patients, it is necessary to apply services that can help patients in undergoing better treatment and obtain optimal results. One of them is the application of clinical pathways

Clinical pathways are guidelines used to perform evidence-based clinical actions on healthcare facilities. Clinical pathways are also known by other terms such as critical case pathway, integrated case pathway, coordinated case pathway or anticipated recovery pathway and made by blending general clinic guidelines into local protocols that can be applied in local health care facilities. The expected benefit of clinical pathways in addition to improving the quality of standardized services based on evidence-based medical studies, is cost effectiveness. Clinical pathway can be used as one of the tools to conduct medical audits that aim to improve the quality of service and satisfaction of services received by patients (Apriani, 2018).

Clinical pathway is one of the disease management tools that can reduce unnecessary service variation, improve clinical outcomes, and also resource efficiency. Clinical pathways provide a way to develop and implement evidence-based medicine (EBM) into local protocols. According to Rotter T. etc (2010) explained from 20 studies that conduct regular treatments using clinical pathways, shows a decrease in complications in hospitals, increased documentation, and decreased hospital costs so as to increase the satisfaction of services received by patients.

Patient satisfaction is a person's level of feeling after comparing the performance the patient feels with the expectations that the patient wants when he/she wants to seek treatment. If the patient is satisfied, this greatly affects an action based on past experience where they will not easily switch services due to marketing stimulation (Yulfita, 2016). Patient satisfaction is the result of health care and a change in the healthcare system that is in place cannot be targeted and successful without measuring patient satisfaction (Pohan, 2012).

Although in its development the hospital has shown adequate and quality services, but there are still many people with DM gangrene who complain about the services received in addition to diabetics and their families bear almost the entire cost of medical care, not only excessive health expenses due to DM disease itself but also impact on the loss of productivity of sufferers such as lower productivity at work and limitations of day-to-day activities, disability, even death. This condition also occurred in DM gangrene patients at the General Surgery Department of RSUD Ra Baoseni Gedeg Mojokerto where the number of dm gangrene patients in 2018 there were as many as 11 patients and in 2019 increased to 40 patients. Based on the medical records of dm gangrene patients many are incomplete in clinical pathway records during the treatment period at the hospital. Based on the results of a preliminary study of 10 Dm gangrene patients at the General Surgery Laboratory of RSUD RA Baoseni Gedeg Mojokerto with the interview method obtained data of 4 patients (40%) dissatisfied with the service received.

Clinical pathway is an integrated health care planning document that summarizes every step taken in patients from hospital admission to hospital based on medical service standards, nursing care standards, and other evidence-based health care standards that can be measured. Clinical pathway is a collaboration process of several multidisciplinary doctors, nurses and other health workers. Thus, it is expected that the application of clinical pathway can minimize waiting time for patient services with DM Gangren. The application of clinical pathway is to ensure that no important aspects of the service are forgotten. Clinical

pathway ensures all interventions are carried out in a timely manner by encouraging clinic staff to be proactive in service planning

Quality health services are health services that can satisfy every service user in accordance with the level of satisfaction of the average population and its implementation in accordance with the standards and codes of professional ethics that have been established (Azwar, 2011). The quality of service becomes important because it has a direct impact on the hospital. Good quality of service will be an advantage for the hospital. A hospital has got a positive value in the eyes of consumers, then the consumer will provide good feedback, and it is not impossible to be a regular customer or repeat buyer. Therefore, it is very important to consider aspects of customer satisfaction related to the quality of service provided. Types of services that can be provided for example in the form of convenience, speed, ability, and hospitality are shown through attitudes and direct actions to consumers. Therefore, the application of clinical pathway is one of the devices used to improve the service process. Clinical pathway made as a list of relics will serve as a reminder, and is an extension of a standard (Nurliawati, 2019)

Kotler (2012), in his book "Marketing Management" said that satisfaction is the feeling of pleasure or disappointment of a person arising from comparing the perceived performance of the product or results against the expectations of service users (consumers). Customer satisfaction becomes a goal for companies engaged in health services such as hospitals in order to maintain customers and stimulate the emergence of interest in referencing to the public. According to Kotler (2012) mentioned five dimensions of service quality that must be met, namely tangible, empathy, reliability, responsiveness, assurance. The dimension of the service affects patient satisfaction with the services received. Patient satisfaction as a response to the fulfillment of patient expectations and needs. This response is as a result of the patient's assessment that the services provided can meet the comfort of the patient. Fulfillment of comfort and hope of this patient can be more or less (Paparaya. 2009). According to Suradi (2011) a comprehensive satisfaction model with the main focus on goods and services services includes five dimensions of assessment, namely responsiveness, reliability, assurance, empathy (emphaty), direct evidence (tangible). It is this patient satisfaction that influences consumers to share their experiences with other potential customers. This action occurs because consumers feel comfortable in obtaining services, easy access to services and patients feel trust and honor in receiving services (Semovitz, 2012).

Efforts to improve the satisfaction of hospital patients, among others, the management needs to evaluate the quality of services that have been given, one of which is the evaluation in the implementation of clinical pathways and also the competence of the officers who provide services so that the health services provided can be satisfactory in order to increase the number of visits of new patients or old patients. In addition, it is expected that the management can improve supervision and supervision so that the performance of officers can be further improved to the maximum and health center facilities can be improved for the convenience and comfort of patients.

Based on this background, researchers are interested to conduct further research on "The Relationship of Clinical Pathway Implementation with the quality of service and patient satisfaction with dm gangrene in the General Surgery Poly at RSUD RA Basoeni Gedeg Mojokerto..

## **MATERIALS AND METHODS**

The design of this research is analytics with a crosssectional approach. The variables of this study are the application of clinical pathways as independent variables as well as quality of service and patient satisfaction as dependent variables. The study population of all dm gangrene patients at the General Surgery Poly of RSUD RA Basoeni Gedeg Mojokerto was 137 patients in February - March 2020. Samples were taken with simple random sampling techniques as many as 105 respondents. The data was collected with questionnaire instruments and processed using editing, coding, scoring and tabulating and tested with linear regression tests.

## RESULT

### 1. Bivariat Analysis

**Table 1 Partial liner regression analysis (t test) influence of Clinical Pathway Implementation and quality of service on patient satisfaction in General Surgery Poly At RA Basoeni Hospital of Mojokerto Regency in July 2020 (n=105)**

Criteria	Contingensi Coefficient	df	P value
Clinical Pathway Implementation with Service Quality	19,857	1	0.000
Clinical Pathway Implementation with patient satisfaction	25,287	1	0.000

Based on the results in table 1 shows that the second p value of coefficient contingency analysis results showed the value = 0.00 so that the value of p value < 0.05 then the results of bivariate analysis using chi square test showed that independent variables (clinical pathway implementation) affects dependent variables (service quality and patient satisfaction).

### 2. Mutlivariat Analysis

**Tabel 2 Multivariate Analysis of the effect of Clinical Pathway Implementation on the quality of service and patient satisfaction in General Surgery Poly At RA Basoeni Hospital of Mojokerto Regency in July 2020 (n=105)**

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Pelayanan	4.802 <sup>a</sup>	1	4.802	24.021	.000
	Kepuasan	4.459 <sup>b</sup>	1	4.459	32.674	.000
Intercept	Pelayanan	96.840	1	96.840	484.460	.000
	Kepuasan	125.335	1	125.335	918.462	.000
Clinicalpathway	Pelayanan	4.802	1	4.802	24.021	.000
	Kepuasan	4.459	1	4.459	32.674	.000
Error	Pelayanan	20.589	103	.200		
	Kepuasan	14.056	103	.136		
Total	Pelayanan	291.000	105			
	Kepuasan	348.000	105			
Corrected Total	Pelayanan	25.390	104			
	Kepuasan	18.514	104			

a. R Squared = .189 (Adjusted R Squared = .181)

b. R Squared = .241 (Adjusted R Squared = .233)

c. Computed using alpha = .05

Based on the results in table 2 shows that the significance value shows a value = 0.000 which means less than 0.05 so that it can be stated dependent variables (quality of service and patient satisfaction) can be influenced by independent variables (application of clinical pathways). Table 4.5 explains that the R Square (R<sup>2</sup>) value is 0.189 or 18.9% which indicates the contribution of independent variables (clinical pathway application to service quality dependent variables. While the remaining 74.2% was influenced by other factors that were not in the model of this study. While at R Square (R<sup>2</sup>) value of

0.241 or 24.1% which shows the contribution of independent variables (application of clinical pathway) to dependent variables of patient satisfaction. While the remaining 75.9% were influenced by other factors that were not in the model of this study

## DISCUSSION

### A. Implementation of clinical pathway of DM gangrene patients in General Surgery Of RSUD RA Basoeni Gedeg Mojokerto

Characteristics of service quality obtained data almost entirely the application of clinical pathways carried out in DM patients in the General Surgery Department of RSUD RA Basoeni Mojokerto as many as 90 respondents (98.65%) and a small percentage was not applied as many as 15 respondents (14%).

Clinical pathway is a mapping of clinical actions for certain diagnoses in a certain time that is the best clinical practice and not just clinical practice now. Clinical pathways that are well applied can be a "tool" of quality control of hospital health services. On the other hand, in the JKN era implemented by BPJS Kesehatan now, the application of clinical pathways can be one of the cost control efforts. Costs incurred from the patient can be calculated based on clinical pathways and compared to the established INA CBG rate. So, if the cost of services provided to patients exceeds the rate of INA CBG's that have been applied then the hospital can immediately seek efficiency, without the need to commit Fraud (Putri, 2019). The results of this study are supported by Reskiki research (2017) which shows that Based on the results of data analysis, it can be said that the hypothesis received is that the group given treatment in the form of nursing clinical pathway is shortened the length of the day of treatment is 5.25 days compared to the group who were not treated nursing clinical pathway that is for 6.94 days. Statistical results obtained p value = 0.001 which means there is a significant influence between the length of the day of treatment of non-hemorrhagic stroke patients who are given nursing clinical pathway treatment and those who are not given treatment.

The results of this study showed that the application of clinical pathways has been applied well by health workers in the General Surgery Poly of RSUD RA Basoeni Mojokerto Regency. This happens because officers have obtained education and training from hospital management to be able to provide services to patients to the maximum, one of which is by applying comprehensive care services to patients, namely the application of clinical pathways. The application of care is made with the aim of patients can get maximum service in accordance with the needs comprehensively so that the process of implementing treatment in patients becomes more effective and efficient.

### B. Quality of service at General Surgery Hospital RA Basoeni Gedeg Mojokerto

The results of research conducted at the General Surgery Police of RSUD RA Basoeni Mojokerto obtained data Characteristics of service quality obtained data of most respondents stated the quality of hospital services including good service as many as 62 respondents (59%) and a small percentage stated the quality of service including poor quality as many as 43 respondents (41%)

Quality of service is the goal of an institution or institution. The quality or quality of services provided through a good management approach becomes the main requirement that should not be ignored if service providers want to continue to be able to progress and develop, increasingly tight competition today makes a service provider or service provider strive to provide services or services to consumers with excellent and best service (Assauri, 2013). Quality of service is an activity carried out to evaluate the suitability of services provided by service providers to the expectations of consumers (Lewis and Bloom in Krisna Naik, 2013). The implications of service quality, both poor service quality depend on the ability of service providers to meet the expectations of their customers consistently. To be able to manage products or services with quality, the company must pay attention to five gaps related to the cause of the company's failure (Lupiyoadi, 2013).

The results showed that many patients stated that the service they received was a good service. This happens because the respondents already understand enough about how the service should be done by hospital staff so that the patient feels the service received is good enough such as the officer can explain information about the condition of the disease experienced by the respondent and the actions taken by nurses or doctors in handling patients, so that patients can receive information clearly and can understand the information, in addition to officers are also quite friendly in conveying information or skilled in carrying out actions in accordance with their respective duties.

There are respondents who state that hospital services are still lacking in the dimension of reliability this happens because there are respondents who still consider officers less skilled and less friendly in providing services and officers are less clear in providing information to patients. In addition to the respondents who stated that the service process is less tepta occur because there is still a long and convoluted process of the hospital in the process of administration of patients, such as the administration of drugs that queue too long at the pharmacy

### **C. Satisfaction of DM gangrene patients at the General Surgery Polysurgery of RSUD RA Basoeni Gedeg Mojokerto**

Patient satisfaction characteristics showed that the majority of respondents were satisfied as many as 81 respondents (77%) and a small percentage were dissatisfied as many as 24 respondents (23%).

Customer satisfaction is central to the goal of marketing concepts. So that all marketing planning and programs of a company aims to satisfy customers. Because customers will pay attention to the quality of service provided by the company (Laurent, 2005). Satisfaction is the level of a person's feelings after comparing performance or perceived results in accordance with his expectations (Supranto, 2012).

The results of this study showed that many patients are satisfied with the form of service received by patients, especially on the skills of officers and the response provided by officers in responding to patient complaints, in addition officers are also friendly to patients so that patients feel comfortable in receiving services provided by officers. According to the patient officers at the General Surgery Police OF RSUD RAS Basoeni is always right in providing information and therapy to the patient and they do not wait for the patient to spend time to do re-visit and take medication. In addition, patients feel that the officers pay more attention to the patient for example they always invite the patient to talk when giving therapy so that the susaana becomes less tense and the provision of therapy becomes smooth. While in patients who feel dissatisfied occurs because there are still respondents who think there are officers who are less friendly and there are officers who distinguish the provision of services to patients from each other, when providing therapy they look rigid and the response given seems still long

### **D. Relationship of clinical pathway implementation with the quality of DM gangrene services at the General Surgery Poly hospital RA Basoeni Gedeg Mojokerto**

Based on the results in table 4.4 shows that the second p value of coefficient contingency analysis results showed a value = 0.00 so that the value of p value < 0.05 then the results of bivariate analysis using chi square test showed that independent variables (clinical pathway implementation) affects dependent variables (service quality and patient satisfaction).

The quality of service is very important in realizing customer satisfaction. In an increasingly competitive environment, health service agencies, especially puskesmas which is the first service to health problems in the community must be more aware of the importance in providing the best quality of service for its customers. Improvement of health services is very important to be done by health care providers such as health centers in order to improve patient satisfaction. Patient satisfaction is a person's level of feeling after comparing the performance the patient feels with the expectations that the patient wants when he/she wants to seek treatment. If the patient is satisfied, this greatly affects an action based on past experience where they will not easily switch services due to marketing stimulation (Yulfita, 2016). One form of manamene services that can improve the quality of service is the application of

clinical pathways. Clinical pathway (CP) is one of the disease management tools that can reduce the variation of "unnecessary" services, improve clinical outcomes, and also resource efficiency. Clinical pathways provide a way to develop and implement evidence-based medicine (EBM) into local protocols. With the clinical pathway, health care providers can provide the best health services based on clinical guidelines, so as to determine what clinical examination procedures can be used and the implementation, and set the standard for the duration of the day of treatment of a disease (LoS). In addition, with the implementation of clinical pathways, it can be done an assessment of the relationship between various stages of activities in clinical pathways, so that coordination between multidisciplinary involved based on patient service guidelines by all hospital employees. If clinical pathway is carried out properly, then the process of collecting important data needed by hospitals can be done easily, lower the burden of doctor documentation, and can increase patient satisfaction (Pertiwi, 2014)

The results of this study showed that the application of clinical pathways can affect the quality of services provided to patients in hospitals. The quality of service has the most influential and different dimensions of each patient. This happens because the dimensions of patient services are provided in different ways and the skills of officers in providing services are also different so that this affects the perception of patients in receiving health services. The quality of service that is still lacking lies in the dimension of reliability this happens because respondents still consider that officers are less skilled in carrying out actions, officers are less friendly in providing services and officers are less clear in providing information to patients.

#### **E. Relationship of Clinical Pathway Implementation with DM gangrene patient satisfaction at General Surgery Of RSUD RA Basoeni Gedeg Mojokerto**

Based on the results in table 4.4 shows that the second p value of coefficient contingency analysis results showed a value = 0.00 so that the value of p value < 0.05 then the results of bivariate analysis using chi square test showed that independent variables (clinical pathway implementation) affects dependent variables (service quality and patient satisfaction).

Consumer satisfaction is the goal of all business activities and is the easiest promotional advice to do (Kitapci, 2014). Consumer satisfaction is a defensive and offensive strategy, meaning as a defensive strategy because consumer satisfaction is the best way to hold consumers from the description of competitors and as an offensive strategy because consumer satisfaction will cause word of mouth and be able to attract new consumers (Supriyanto, 2007). One form of action that can be done by hospital management to increase patient satisfaction is to apply clinical pathways. Clinical pathways are collaborative guidelines for treating patients that focus on diagnosis, clinical problems, and stages of service. Clinical pathways combine the standards of care of each health worker systematically. The actions given are uniformed in a standard of care, but still pay attention to the individual aspects of the patient (Hendra, 2009).

Patient satisfaction is a top priority for a service, especially in hospital services. Because by fostering maximum satisfaction to the patient, the patient can tell or attract new patients to be able to make visits and examinations in the same place. With the application of clinical pathways comprehensively patients can feel the maximum form of service and in accordance with the needs of patients and services provided more effectively and efficiently.

#### **F. Effect of Clinical Pathway Implementation on Service Quality and Patient Satisfaction**

Based on the results in table 4.5 shows that the significance value shows a value = 0.000 which means less than 0.05 so that it can be stated dependent variables (quality of service and patient satisfaction) can be affected by independent variables (application of clinical pathways). Table 4.5 explains that the R Square (R<sup>2</sup>) value is 0.189 or 18.9% which indicates the contribution of independent variables (clinical pathway application to service quality dependent variables. While the remaining 74.2% was influenced by other factors that were not in the model of this study. While at R Square (R<sup>2</sup>) value of

0.241 or 24.1% which shows the contribution of independent variables (application of clinical pathway) to dependent variables of patient satisfaction. While the remaining 75.9% was influenced by other factors that were not in the model of this study. Chalmers (2016) in his research revealed the impact of clinical pathways include the quality and completeness of documentation, the incorporation of clinical guidelines and practices, the quality of patient information, communication between staff and patients. The review provides good evidence of the overall improvement in documentation standards resulting from the application of clinical pathways. The use of clinical pathways requires each professional staff to write down all forms of patient care in detail and make a patient's diary. quality and continuity of information goes well on patient care poses.

The results of this study show that with the application of clinical pathways, patients can know all forms of services that will be received from the beginning of the action until the patient returns home. Mechanism of application of clinical pathway will be a basis of communication that is built with good quality between hospital staff and patients so that patients will receive the maximum service and patients are satisfied with the service

## **CONCLUSION**

1. Application of clinical pathway in General Surgery Of RSUD RA Basoeni Mojokerto shows that almost all clinical pathway application is done in DM patients as many as 90 respondents (86%)
2. The quality of patient services at the General Surgery Department of RSUD RA Basoeni Mojokerto showed that most respondents stated the quality of hospital services including good service as many as 62 respondents (59%)
3. Patient satisfaction at the General Surgery Department of RSUD RA Basoeni Mojokerto showed that the majority of respondents were satisfied as many as 81 respondents (77%)
4. There is an influence on the application of clinical pathways on the quality of service and patient satisfaction with a p value  $< 0.05$
5. There is a joint influence on the application of clinical pathways on the quality of service and patient satisfaction with a p value  $< 0.05$ .

## **SUGGESTIONS**

1. For hospital management need to provide training, coaching and seminars to service personnel to improve and maintain good services, especially in the application of clinical pathways, and is also expected to supervise the head of service in motivating officers to continue a higher level of education in order to be able to provide comprehensive and quality services.
2. For the relevant Officers (Nutrition, Promkes, Village Nurses and Village Midwives) is expected to be able to provide officers need to increase understanding of how the application of clinical pathways can be implemented properly and how the form of good service, quality and appropriate that must be given to patients through participation in training, seminars and coaching as well as from reading books and more motivated in performing health services in patients
3. Further research should be done with a longer research implementation time so as to describe the circumstances and practices carried out by daily officers in applying clinical pathways and in providing services and finally the results of research can be obtained to the maximum and can help develop science and technology in the field of health.



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