



Barriers and Challenges in Implementing Clinical Pathway of Sectio Caesarea for Health Workers in a Private Hospital

Ika Novianna Wardani¹, Betta Kurniawan², Bayu Anggileo Pramesona³

^{1,2,3} Master of Public Health Program, Faculty of Medicine, Universitas Lampung

Jl. Soemantri Brodjonegoro, Gd. Meneng, Bandar Lampung, 35145, Lampung, Indonesia

ABSTRACT: Clinical pathway (CP) is one of the requirements required in hospital accreditation standards. It has an important role in controlling quality, and costs and supporting patient safety, especially in cases that have the potential to consume large amounts of resources, one of which is a sectio caesarea (SC). Apart from being able to reduce maternal mortality due to normal childbirth, SC procedures can also cause post-operative injuries. This research explores the barriers and challenges to implementing the sectio caesarea clinical pathway among health workers in hospitals. This qualitative case study research recruited 10 informants consisting of 3 obstetricians, 2 executive nurses, the head of the inpatient room, the head of the operating room, the deputy director of medical services, and 2 patients who had undergone SC at the hospital purposively. In-depth interviews were conducted in March 2024 at a private hospital in Bandar Lampung, Indonesia. Thematic analysis was used for data analysis. Several themes emerged as obstacles to the implementation of CP SC in this research, namely: 1) individuals, 2) patients, 3) infrastructure, and 4) hospital management support. Apart from that, the challenges faced include the need to carry out socialization, monitoring, and evaluation activities, as well as collaborative activities between health workers and hospitals to share experiences to increase compliance in implementing CP SC. Hospital management is expected to provide regular outreach, training, and personal approaches to health workers regarding the implementation of CP SC. Collaboration between professionals and hospitals is also needed to share experiences regarding the implementation of sectio caesarea clinical pathways in hospitals.

KEYWORDS: Clinical pathway, challenges, hospital, health workers, sectio caesarea.

INTRODUCTION

A clinical pathway (CP), or what can be called a clinical pathway, is a standard treatment model for managing medical practice. Unlike clinical guidelines and protocols, clinical pathways detail every important stage in health services, from patient admission to discharge. Apart from that, the existence of a clinical pathway can encourage a strong commitment to providing services, avoid confusion and miscommunication between staff regarding their roles and responsibilities, and create good coordination (Helzainka, 2021). The implementation of clinical pathways is one of the service standards required in hospital accreditation standards that focuses on how patients can control quality, and costs and support patient safety. Quality control through the application of CP is also a requirement for cost control, especially in cases that have the potential to consume large amounts of resources (Bryan *et al.*, 2017). However, in reality, the implementation of CP in Indonesia has major challenges, which are grouped into 5 parts, namely: human resource issues, hospital leadership, and management, facilities, and infrastructure that support CP, and monitoring and evaluation of CP and CP form formats. Apart from that, there are not many studies related to CP available in the form of articles or research journals, so studies related to CP are interesting to study (Helzainka, 2021).

Sectio caesarea, commonly known as sectio caesarea is an operation to remove a baby by making an incision in the abdomen and uterine wall, provided that the uterus is healthy and the fetus weighs more than 500 grams (Wiknjastro, 2009). Apart from that, another aim of implementing sectio caesarea is to reduce the number of maternal deaths due to normal childbirth. Several predisposing factors for cesarean delivery include premature labor, placenta previa, position abnormalities, severe preeclampsia, and others (Aprina, 2016). However, because sectio caesarea results in post-operative wounds, the negative effects also include restrictions on mobilization, disruption of the bonding attachment between mother and baby, and disruption of the mother's activity of daily living (ADL), all of which can delay the delivery of breast milk to the baby and ultimately result in a lack of nutrition for babies as well as have an effect on their immune systems (Afifah, 2009).



Through the implementation of CP, hospitals can control efficiency, which leads to operational losses (Sutoto, 2018). The impact of implementing clinical pathways on reducing the length of stay (LOS) in SC cases, namely from 4.99 days to 4.04 days (Ismail *et al.*, 2016). Apart from that, clinical pathway compliance also has an impact on the incidence of surgical wound infections in SC patients (Haninditya, Andayani and Yasin, 2019). This means that quality control efforts that include LOS and surgical wound infections require CP SC. Meanwhile, in implementing clinical pathways, the results of the hospital's medical committee audit found that compliance was still low in filling out CP sheets. With this explanation, it is necessary to study in depth the obstacles and challenges in implementing CP SC in this hospital, which need to be studied as a positive input in improving quality control efforts. This research explores the barriers and challenges to implementing CP of SC among health workers in hospitals.

METHODS

This is qualitative research with a case study approach. By conducting interviews, data collection took place in March 2024 at a private hospital in Bandar Lampung, Indonesia. The participant is the person who is directly involved and knows best about the care for SC patients, and the health workers in this participants are officers who are still on duty at this hospital except nurses who are still in the on-the-job training period. Participants were taken using purposive sampling, and 10 informants were obtained, including 3 obstetricians, 2 in-patient department (IPD) nurses, the head of the IPD, the head of the operating room, the deputy director of medical services, and 2 patients who had undergone SC procedures in September–November 2023 at this hospital. This interview was conducted at the hospital, with an interview duration of 30 to 40 minutes for each participants. After conducting interviews, data processing was carried out using triangulation of sources, theories, and methods, then continued with thematic analysis.

RESULTS

Based on the characteristics of the participants, it is known that a total of 10 people consisting of 8 health workers and 2 patients had performed SC at this hospital in September–November 2023 (Table 1).

Table 1. Themes related to obstacles and challenges based on participant responses

Code	Age	Gender	Education	Job position	Work (years)	Tenure
P1	56	Female	Master	Deputy director of medical services	2	
P2	36	Male	Diploma	Head of room	8	
P3	37	Female	Diploma	Frontline nurse	6	
P4	29	Female	Bachelor	Frontline nurse	2	
P5	43	Female	Medical specialist	Obstetrician specialist	8	
P6	40	Female	Diploma	Head of in-patient department	3	
P7	37	Female	Medical specialist	Obstetrician specialist	1	
P8	66	Male	Medical specialist	Obstetrician specialist	3	
P9	32	Female	-	Patient	-	
P10	30	Female	-	Patient	-	

*P = Participant

As a result of this study, six main themes emerged as barriers and challenges to implementing CP of SC. These are 1) differences in how people understand CP of SC; 2) differences in how people understand how to implement CP of SC; 3) differences in how people think CP compliance affects LOS and surgical site infections; 4) differences in how satisfied patients are with SC services; 5) differences in how people think barriers to implementing CP of SC are perceived; and 6) efforts that need to be made to make things better. In this study, researchers categorized informant responses according to emerging themes and summarized them in Table 2.



Table 2. Themes related to obstacles and challenges based on participant responses

Theme	Participant responses	Quotes
The obstacles faced include: 1. Individual factors	- Lack of compliance by health workers in implementing CP of SC	Q1: "Resistance or non-compliance from medical staff who cannot implement this CP compliance" (P1) Q2: "Lack of understanding about CP and obstacles in monitoring and evaluation" (P1) Q3: "Lack of socialization from hospital management, because not everyone gets socialization, some know but don't do it or don't get socialization" (P4) Q4: "Usually when there are a lot of patients, there are probably some who are too late to write the CP" (P3) Q5: "Well, the problem is when we do cyto surgery, the important thing is to get to the patient first" (P2)
	- Lack of knowledge of health workers regarding the implementation of CP of SC	Q6: "Starting from the planning stage, and there is a multidisciplinary team from nurses from each unit, duty doctors, specialist doctors, case managers are also involved" (P1) Q7: "Lack of understanding about CP and obstacles in monitoring and evaluation" (P1) Q8: "Lack of socialization from hospital management, because not everyone has received socialization, some know but don't carry out or not reach socialization" (P4) Q9: "It's quite implemented, it's pretty good in this hospital" (P2) Q10: "If CP of SC is an indication, look again at the doctor's diagnosis" (P3) Q11: "It is carried out actively so that the patient's length of stay in hospital can be reduced" (P4) Q12: "There is no difference between general patients and insurance" (P5) Q13: "Initial admission can be from a Comprehensive Emergency Neonatal Obstetric Services, emergency room or from outpatient clinic" (P6).
	- Lack of knowledge of health workers regarding identification of CP of SC	Q16: "After establishing a diagnosis from the doctor in charge of the service (DPJP)" (P1) Q17: "Based on operations report" (P2) Q18: "When the doctor diagnoses during ultrasound" (P3) Q19: "When accepting new patients" (P6) Q20: "Usually patients are checked at the polyclinic" (P7)
	- Lack of knowledge of health workers regarding providing education to patients, as well as clarity of information on preparing patients to go home	Q20: "You were told how to get the breast milk out quickly and how to breastfeed, and how to clean the umbilical cord, and the mother's feminine area must be cleaned" (P9)



- Lack of understanding by health workers about the impact of implementing CP of SC on LOS rates and surgical site infections

Q24: "With CP, we agree to determine how long the hospitalization is, and whether there is a rate of surgical site infections" (P1)

Q25: "In operating room you cannot see surgical site infections or LOS. Because after the operation we go to inpatient care" (P2)

Q26: "With CP we can reduce the length of stay and wound infections" (P3)

Q27: "If done obediently and consistently, length of stay and infection rate will also be reduced" (P4)

Q28: "There is no relationship because it depends on the patient's condition" (P5)

Q29: "The impact of days of care has been controlled. If wound care and nutrition are good, infection is unlikely to occur" (P6)

Q30: "surgical site infections itself is usually influenced by the patient" (P7)

Q31: "If you have agreed to CP, hopefully the number of surgical site infections will be less and the LOS itself will be more efficient and effective" (P8)

- Differences in experience and work styles of health workers

Q32: "Each individual has a slightly different work style and work experience" (P8)

2. Patients factor	- Differences in patient experiences during hospitalization	Q33: "During the treatment I was happy, the room was comfortable, not too noisy. The nurse comes quickly when called" (P6) Q34: "The longest thing was confirmation to go home, there were so many obstacles. And usually hospital bags come with a brand... this is no brand... The cost is too expensive, luckily I have insurance. (P7)
3. Facilities	Limited facilities	Q35: "Other obstacles, for example logistical problems such as limitations regarding resources and infrastructure as well" (P1)
4. Hospital management support	Lack of socialization	Q36: "Lack of socialization from hospital management, because not everyone gets socialization, some know but don't do it or don't get socialization" (P4)
Challenges faced include:	- It is necessary to carry out socialization or training and an individual approach regarding the implementation of CP of SC continuously and comprehensively for all health workers	Q37: "Routine evaluation, outreach, training and staff education. "Then we also need feedback from staff, and collaboration with related institutions and exchange of experiences with other hospitals" (P1) Q38: "There is a need to disseminate individual approaches to all health workers" (P4)
1. Socialization activities, training and individual approaches		
2. Monitoring and evaluation activities		
3. Collaboration between		



professionals and hospitals	- Monitoring and evaluation activities need to be carried out, such as unit meetings, staff input and discussions with attention to evidence based	Q39: "In evaluating the shortcomings, we will improve them" (P3) Q40: "Discuss again with existing notes and evidence, so that later it can be re-evaluated" (P8) Q41: "Each staff provides input to the Medical Committee, later the Medical Committee will determine changes or development of the CP SC" (P5)
	- There needs to be collaboration between institutions and hospitals to share experiences about CP of SC	Q42: "We have a unit meeting, so there we will share what the obstacles are" (P3) Q43: "Routine evaluation, outreach, training and staff education. Then we also need feedback from staff, and collaboration with related institutions and exchange of experiences with other hospitals" (P1)

*Q = Quote; P = Participant

Thematic Analysis

a. Barriers

1) Individual factor

Some health workers who were informants in this study had low compliance with implementing the CP of SC. This occurs due to a lack of knowledge and understanding of health workers about CP of SC itself, such as how to apply CP of SC, identify CP of SC, the impact of CP of SC on LOS and surgery site infection, how to provide education to patients, clarity of information on preparing patients to return home from hospitalization. , as well as different work styles and work experiences for each health worker. Most of the basic sources of obstacles for each health worker are ineffective socialization (Quote 1-32).

2) Patients' factor

There are different perceptions between the two patients based on the experiences they had when receiving treatment during SC at this hospital. It was found that one patient felt happy and some patients felt less happy with the SC services at this hospital (Quotations 33-34).

3) Facilities

The hospital infrastructure factor has limitations in resources and infrastructure which hinder the implementation of CP SC (Quote 35).

4) Hospital management support

There is a lack of outreach activities that have been carried out, and they are less effective in reaching all health workers, so the understanding of each health worker is different and can have an impact on the implementation of CP SC in hospitals (Quote 36).

b. Challenges

The challenges faced by this hospital can be seen in the themes of improvement efforts that need to be made, these themes include the following:

1) Socialization activities, training, and individual approaches

It is necessary to carry out activities in the form of socialization or training and an individual approach regarding the implementation of CP of SC continuously and effectively to all health workers (Quote 37-38).

2) Monitoring and evaluation activities

Monitoring and evaluation activities need to be carried out, such as unit meetings, which can discuss not only the obstacles to implementing CP of SC but each health worker can provide input and then discuss it by considering evidence-based aspects of SC services at this hospital (Quotations 39-42).

3) Collaboration between institutions and hospitals



There needs to be a collaboration between institutions and hospitals to share insights and experiences regarding the implementation of CP SC. This step can also be a learning and improvement effort to overcome obstacles that arise when implementing CP of SC in hospitals (Quote 43).

DISCUSSION

1. Barriers

a) Individual factor

Most of the informants in this study had a poor understanding of how to implement CP of SC, identification of CP of SC, patient education, and clarity of information on patient discharge preparation. Some of the causes include a lack of socialization so that the knowledge of each health worker is not good and creates differences in information. This finding is consistent with several previous studies which found that there was a lack of knowledge regarding the importance of CP due to socialization not being provided properly and low compliance with CP documentation (Astuti, Dewi and Arini, 2017), lack of understanding of health workers in implementing CP SC which needs to be emphasized through the learning process ongoing activities such as socialization (Sastrawan and Wardhani, 2021), as well as the low knowledge of health workers regarding the implementation of CP, indicated by not all nurses understanding the impact of implementing CP on service efficiency, and not fully understanding the implementation of CP in quality and cost control (Fatmawati *et al.*, 2024). Low knowledge of health workers in implementing CP of SC can cause failure in health workers' compliance in implementing CP of SC. Therefore, hospitals must make efforts to improve compliance and the number of surgical site infections can be reduced by increasing continuous and intensive socialization and approaches to all health workers so that they are aware and compliant in implementing CP of SC.

b) Patients' factor

The two informants were patients who had undergone SC at this hospital, and each had different experiences while receiving inpatient treatment. One of the patients was happy, and some patients were unhappy with the SC services at this hospital. This difference arises due to differences in the knowledge and understanding of each health worker in implementing CP of SC. As per Nurliawati's research (2018), health workers do not provide comprehensive education to patients. This causes a lack of service and results in a lack of patient satisfaction (Nurliawati, 2018). Putri (2023) strengthens this research by finding that intensive education and communication are needed to ensure that CP can run well (Putri, Girsang and Mutia, 2023). From several of these studies, it can be concluded that the education of health workers to patients is very necessary to ensure that the implementation of CP can run well. Therefore, hospitals need to increase intensive education and communication with patients through ongoing and intensive outreach activities.

c) Facilities

There are limited resources and infrastructure which are one of the obstacles in implementing CP SC in this hospital. Astuti's research (2017) states that there is a shortage of medical equipment in quantity which still does not meet the required standards (Astuti, Dewi and Arini, 2017). Good medical and non-medical infrastructure must meet quality service standards, safety, and security and be used according to patient indications and use and maintenance carried out by officers who are competent in their fields (Nurliawati, 2018). Thus, it can be concluded that the facilities and infrastructure really support the successful process of healing and treating disease safely and with quality by prioritizing patient safety by the service standards applicable in hospitals. Therefore, hospitals must provide facilities and infrastructure to support the quality of SC services by CP.

d) Hospital management support

The lack of implementation of socialization activities and the ineffectiveness of the hospital management are some of the obstacles to implementing CP SC in this hospital. Likewise, the most frequently reported obstacles to implementing CP in several hospitals in Indonesia are the lack of socialization and training related to the implementation of CP in hospitals and the lack of compliance of officers in implementing CP (Thahirah, Rachmawaty and Refina, 2023), lack of knowledge of the importance of CP because Socialization is not provided well and there is low compliance with CP documentation (Astuti, Dewi and Arini, 2017), and low knowledge of health workers about CP implementation, such as the impact of CP implementation on service efficiency, quality control and costs (Fatmawati *et al.*, 2024). Apart from being obliged to provide



outreach to health workers, management must also carefully monitor and evaluate their institutional situation as a determining factor in the effectiveness of CP (Astuti, Dewi and Arini, 2017). Management must provide support in ensuring that socialization is provided comprehensively to all health workers and carry out monitoring and evaluation so that all health workers can implement and comply with the CP.

2. Challenges

a) Socialization activities, training and individual approaches

Activities in the form of socialization, training, and individual approaches regarding the implementation of CP of SC continuously and effectively need to be carried out for all health workers because they relate to aspects of their knowledge, skills, and competence in implementing and complying with CP. Knowledge, attitudes, competencies, cooperation, commitment, policies, and infrastructure are factors that support the implementation of CP so that it runs well (Wardhana, Rahayu and Triguno, 2019). Another obstacle that can affect the level of knowledge and competence of each health worker, for example, the hospital has made socialization efforts, but there are still many staff who are not present during the CP socialization so many of them do not understand the importance of implementing CP to improve quality (Nurliawati, A. D. and Idawati., 2019). Apart from that, the implementation of CP is not yet optimal, and more continuous and intense socialization regarding the implementation of CP is needed (Fatmawati et al., 2024). Socialization is generally seen as a formality during the hospital accreditation process (Paat, Kristanto and Kalalo, 2017). Therefore, hospitals need to be careful and consistent in ensuring that socialization activities are continuous and intense with an individual approach to all health workers so that they have good knowledge and competence in implementing and complying with CP effectively.

b) Monitoring and evaluation activities

Monitoring and evaluation activities, such as unit meetings which can discuss not only obstacles to the implementation of CP of SC but each health worker can provide input and then discuss it by involving all healthcare professionals in the hospital and considering the resources available in the hospital, current practices, evidence-based aspects, and behavior in implementing CP of SC (Sastrawan and Wardhani, 2021). Efforts to improve compliance with CP implementation require outreach, training, regular evaluation, and facilitators (Fitri and Sundari, 2018). If routine evaluations and follow-ups from management are not carried out periodically, it can cause obstacles in implementing CP (Rosalina *et al.*, 2018; Nurliawati, A. D. and Idawati., 2019). Usually, there is rarely an evaluation of compliance with CP implementation, and the results of the evaluation are not communicated back to all staff involved (Rosalina *et al.*, 2018). With the continuation of monitoring and evaluation activities, it is hoped that it can produce a positive culture of openness. This is the main key in a continuous learning process to achieve good quality control and cost efficiency.

c) Inter-professional collaboration

Identifying the effectiveness of CP on interprofessional collaboration and quality of health services (Asmirajanti, Syuhaimie Hamid and Hariyati, 2018) and implementing an effective inter-professional collaboration model to improve patient safety (Keumalasari, Yetti and Hariyati, 2021). The use of CP that has been agreed upon by healthcare providers in collaborative practice between health professionals from various professional backgrounds is very necessary to provide the best quality of service (Irawati *et al.*, 2022). With good collaboration between healthcare providers institutions and hospitals, this not only applies to the learning process but can also become a forum for improving and increasing the compliance of health workers in implementing CP of SC in this hospital.

CONCLUSION

The obstacles that this hospital has in implementing CP OF SC include differences in the understanding of health workers regarding the implementation of CP of SC, namely based on individual factors of health workers, patients, infrastructure, and hospital management support. The challenges faced by this hospital in implementing CP of SC include: activities need to be held in the form of socialization or training and individual approaches regarding the implementation of CP of SC continuously and effectively for all health workers, monitoring and evaluation activities need to be carried out, as well as collaboration between institutions and hospitals.



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Cite this Article: Ika Novianna Wardani, Betta Kurniawan, Bayu Anggileo Pramesona (2024). Barriers and Challenges in Implementing Clinical Pathway of Sectio Caesarea for Health Workers in a Private Hospital. International Journal of Current Science Research and Review, 7(6), 4514-4521