PATIENT-CENTERED CARE TO REDUCE SURGICAL SITE INFECTION

in Geriatric Patients: A Scoping Review Protocol

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ABSTRACT

Objective: The objectives of this scoping review are to i) analysis of Patient-Centered Care (PCC) implementation on Surgical Site Infection (SSI) reduction in geriatric patients and ii) analysis of the incidence of SSI after PCC performed in the hospital in geriatric patients. These scooping review results expected to provide information related to PCC's implementation to reduce the incidence of SSI in geriatric patients.

Introduction: SSI is associated with increased morbidity and mortality, the incidence of repeated operations, rehabilitation, and prolonged antibiotic therapy, and is also related to loss of individual productivity. Age is confirmed as a risk factor for SSI after surgery. Currently, the geriatric population is increasing rapidly throughout the world. The advancement of health care is an essential factor in efforts to prolong life. This phenomenon in turn, becomes a challenge for the health service system. Health workers who are in charge of caring for patients required to provide good health services. Currently, PCC is emerging as the primary approach to inpatient care.

Inclusion criteria: The review will include published papers that discuss the reduction in SSI incidence in geriatrics by applying PCC.

Methods: Search will be carried out to identify literature published between 2016 and 2020. The databases that will be used to search for related journals are PubMed, Scopus, and ProQuest. The PRISMA protocol will be used in this study. Literature is selected by the inclusion criteria and then will be critical appraisal and analyzed.

Keywords: Patient-centered care, surgical site infection, geriatric patients

I. INTRODUCTION

SSI is the most studied infection and the most common infection in developing countries associated with health care. SSI is associated with increased morbidity and mortality, the occurrence of repeat operations, rehabilitation, and prolonged antibiotic therapy, and is also related to loss of individual productivity (Curcio et al., 2019).

There are at least 234 million operations every year, with the frequency of occurrence of SSI reaching more than 20% in the world. During the last decade, SSI incidence has increased each year very rapidly, with about 500,000 patients experiencing SSI (Weiser et al., 2008). A survey conducted by the Centers for Disease Control and Prevention (CDC) estimated that 110,800 SSI incidents were associated with surgical inpatients in 2015 (“9 Surgical Site Infection (SSI) Event,” 2020). The World Health Organization (WHO) reports that SSI was found in many developing countries with 11.8 incidents out of 100 surgical procedures. However, as many as 66% of developing countries do not have precise data available regarding SSI (Berríos-Torres et al., 2017).

There are several factors associated with SSI, aging (Afenigus, n.d.). Age has been confirmed as an independent risk factor for SSI after surgery (Liu et al., 2019). The difference in healing outcomes in children and geriatrics is
also not in doubt. Biological-anatomical factors cause this. The water content, collagen, other connecting proteins and the fat content of the skin change with age (Franzese et al., 2020). Currently the geriatric population is increasing rapidly throughout the world. The advancement of health care is an essential factor in efforts to prolong life. This phenomenon in turn, becomes a challenge for the health service system (Ren et al., 2019).

Patients with SSI require a more extended hospital stay, require longer wound care, and may require costs for further surgeries and repeated treatments at the hospital. The combination of additional charges due to the service required is very high. SSI is the type of HAIs that costs the most, with an estimated annual cost of up to 3.3 billion dollars ("9 Surgical Site Infection (SSI) Event,” 2020). SSI has a negative impact both physically and psychologically on patients, increasing morbidity, mortality, and patient income while undergoing treatment in the hospital. Stress due to SSI experienced by patients and their families is associated with longer treatment periods so that patients cannot work, thereby reducing the quality of life of patients (Badia et al., 2017; Urban, 2006).

The high incidence of SSI in postoperative patients makes health workers in charge of caring for patients required to provide adequate health services (Curcio et al., 2019). Currently, Patient-Centered Care (PCC) is emerging as the main approach inpatient care. This approach emphasizes the partnership between the patient and healthcare professionals. PCC is an important part in forming a superior health service system. In addition, PCC is also important to increase cooperation between health service providers (Jo Delaney, 2018). PCC actively involves patients in decision making. The occurrence of system changes can improve service outcomes and also increase patient satisfaction with health workers. PCC also provides benefits for patients, patients can take good care of themselves when they are well educated. In addition, the PCC approach significantly reduces the need for patients to see specialist doctors and reduces the length of stay at the hospital (Jo Delaney, 2018).

However, the complexity of the PCC concept has difficult implications for the implementation of PCC (McCance et al., N.d.). Meanwhile, there is little information regarding the PCC regarding the SSI incident, so there is still little clear guidance in its application.

The results of this scoping review are expected to provide information related to the implementation of Patient-Centered Care (PCC) to reduce the incidence of Surgical Site Infection (SSI) in geriatric patients to hospitals, educational institutions and the community. Based on this information, the hospital can create a strategy to start implementing PCC in the service system, and can develop a strategy to overcome the obstacles that arise in the implementation of PCC in the field. The community, especially patients, will get many benefits if this strategy can be implemented in the hospital. One of the advantages of a successful PCC application is the reduced incidence of SSI in geriatric patients.

Review questions
Based on the background and objectives of the upcoming scoping review, the following review questions are formulated: how is the implementation of Patient-Centered Care (I) to reduce the incidence of Surgical Site Infection (O) in geriatric patients (P)?

Inclusion criteria
Participants

This review will include studies that discuss the reduction in the incidence of Surgical Site Infection in geriatric patients aged ≥65 years who performs the surgical procedure.

Concept
The studies will be selected if it is a paper that applies Patient-Centered Care. Patient-centered care (PCC) is a concept and standardization of health care systems. Today, PCC is a popular approach in many health care systems. PCC is a health service standard that ensures patients become the center of the health service itself (Mccance et al., n.d.; Natan, n.d.).

Context

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This review will include studies with a research area only in the hospital area, such as a public hospital, private hospital, teaching hospital or tertiary care hospital.

**Types of sources**

This scoping review will consider. This scoping review will consider quantitative, qualitative, and mixed methods study designs for inclusion. This review will include studies published in the last five years (2016-2020). Studies written in a language other than English will be excluded. Papers that discuss Healthcare-Associated Infections (HAIs) will not be included unless the paper specifically mentions Surgical Site Infection.

**II. METHODS**

The proposed scoping review will be conducted in accordance with the JBI methodology for scoping reviews (Peters et al., 2017).

**Search strategy**

Search strategy will start with developing keywords. This will be done through discussions conducted by researchers and experts, focusing on Surgical Site Infection incidents, Patient-Centered Care, and geriatric patients, to ensure the main points are adequately covered in the literature search. Boolean operators (eg AND, OR, NOT, or AND NOT) will be used to combine or exclude keywords in searches, resulting in more focused and relevant results. A list of keywords that will be used as the basis for a broader literature search will be detailed in Appendix I.

This review will include studies published in the last five years (2016-2020). Studies written in a language other than English will be excluded.

**Information sources**

Search will be carried out to identify literature published between 2016 and 2020 (the timeframe for the publication of research journals for the past five years). The databases that will be used to search for related journals are PubMed, Scopus, and ProQuest.

**Study selection**

Following the search, all identified citations will be collated and uploaded into Zotero and duplicate removed. Following a pilot test, titles and abstracts will then be screened by two independent reviewers (YDI and NMS) for assessment against the inclusion criteria for the review. Potentially relevant sources will be retrieved in full and their citation details imported into the JBI System for the Unified Management, Assessment and Review of Information (JBI SUMARI) (JBI, Adelaide, Australia) (Peters et al., 2017). The full text of selected citations will be assessed in detail against the inclusion criteria by two independent reviewers (YDI and NMS). Reasons for exclusion of sources of evidence at the full text that do not meet the inclusion criteria will be recorded and reported in the scoping review. Any disagreements that arise between the reviewers at each stage of the selection process will be resolved through discussion or with an additional reviewer/s. The results of the search and the study inclusion process will be reported in full in the final scoping review and presented in a Preferred Reporting Items for Systematic Reviews and Meta-analyses extension for scoping review (PRISMA-ScR) flow diagram (Moher et al., 2015).

**Data extraction**

Data will be extracted from papers included in the scoping review by two independent reviewers (YDI and NMS) using a data extraction tool developed by the reviewers (YDI and NMS). The data extracted will include specific details about the participants, concept, context, study methods and key findings relevant to the review question/s.

**Data presentation**

The literature selected according to the inclusion criteria will then be subjected to critical appraisal and analysis. Thematic analysis is used to analyze the literature that fits the inclusion criteria. Thematic analysis is a method of analysis that directs systematic insight into a pattern of meaning or theme. The collected literature will be categorized and summarized and then summarized systematically to answer the research problem (Snyder, 2019).

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REFERENCES

1. 9 Surgical Site Infection (SSI) Event, 2020. 36.

Appendix I: Keywords
1. “Patient centered care”
2. “Patient centered collaborative”
3. “Patient centered approach”
4. “Patient centered communication”
5. “Person centered care”
6. “Person centered approach”
7. “Patient centered health care”
8. “Family centered care”
9. “Patient focused care”
10. “Patient centered nursing”
11. OR 1-10
12. “Surgical site infection”
13. “Postoperative wound infection”
14. “Surgical wound infection”
15. “Surgical infection”
16. OR 12-15

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17. Geriatric
18. Gerontology
19. Elderly
20. Aged
21. Old
22. Degenerative
23. OR 17-22
24. 11 AND 16 AND 23