HOSPITAL EMERGENCY DEPARTMENT SERVICE MANAGEMENT FOR ELDERLY: A SCOPING REVIEW

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ABSTRACT
The increase in the number and changes in population structure are the main factors influencing changes in global emergencies, where the increasing number of elderly patient visits to the emergency department (ED) must be followed up in improving ED service policies. This study aims to examine ED management for the elderly in hospitals using the scoping review method. The articles were obtained from several databases including the Cumulative Index to Nursing and Allied Health Literature (CINAHL), Google Scholar, ProQuest and PubMed between 2016 and 2021. Based on the results of the analysis, there are at least 3 main topics that are the reasons why emergency management enhancements for the elderly in hospitals are important, namely (1) the elderly as ED service users who need extra services, (2) Efforts to improve the quality of emergency services by management, and (3) the use of information technology as a way to improve emergency services for the elderly. Nurses need to consider developing strategies to improve the quality of care in the ED for the elderly given that there are significant differences in the profile of the age group visiting the ED, where the elderly are a relatively vulnerable group.

Keywords*: Elderly; Management; Hospital; Emergency Department*

INTRODUCTION

A significant increase in the elderly population in a country can have an impact on the aging population. Asian countries including Indonesia have entered the era of aging population, where the number of elderly population is more than 7% (a country is said to have an old structure if the number of elderly people is more than 7%) since 2015. 50% of the world's elderly (400 million people) are known are in Asia, While the number of elderly people in Indonesia is estimated at 26,230,882 (9.8%) in 2016. The number of elderly people in Indonesia has

also experienced significant growth over the last few years, data summarized from Infodatin Elderly 2016 stated that the increase in the percentage of Indonesia's elderly population increased by 8.9% in 2013 to 21.4% in 2050 and 41% in 2100 (Kementerian Kesehatan RI, 2017).

The high number of elderly population can be a problem to maintain the health status and welfare of the population if there are still inequalities of rights obtained in carrying out their lives (Pradana, Sahar, & Permatasari, 2021). Aging has become the most significant risk factor for the emergence of chronic diseases, including cardiovascular disease, diabetes mellitus, cancer, and cognitive disease. The disease has become comorbidity in the elderly, which makes them more susceptible to other infectious diseases. Therefore, health workers must give special attention to providing health services on a regular basis through several means such as tele-medicine, long-term prescription drugs, and regular home visits (Nasution, Pradana, & Casman, 2021).

The increase in the number and changes in population structure are major factors in global emergencies, where the aging process is one of the main reasons for the transformation in it. To overcome these problems, the development of a pro-active emergency management system has become a fundamental thing in a country (Yongmei Tao, 2021). Along with the development of the elderly population in Asian countries, the use of electronic health services to support emergency services for the elderly in the community is one of the key problems that exist, however several factors such as limited resources and infrastructure are the biggest factors that hinder the development of these services (Sukkird & Shirahada, 2018).

Emergency Department (ED) needs to be prepared to manage crises and disasters both in the short and long term. The pandemic condition is known to be one of the factors that cause the need for a quick overhaul of some emergency services in response to continuous change. Several things that are done in the ED such as patient screening, patient referral processes, use of personal protective equipment, placement of the ED team, and communication between the ED and departments are things that need to be adjusted due to changes that occur (E.Schreyer et al., 2020). Three main keys that can be developed in ED when facing emerging challenges include (1) Reviewing the existing emergency management process with the current emergency conditions, (2) Conducting networking, and (3) Performing human resource capacity development which exists (Bosomworth, Owen, & Curnin, 2017).

The results of the study showed that ED nurses had higher levels of fatigue, burnout, and emotional stress than other nurses. The importance ED nurses trying to regulate emotions and stabilize work is one of the important factors in the quality of services provided in the ED (Nespereira-Campuzano & Vázquez-Campo, 2017). Job stress has been a problem affecting health among nurses for decades. ED nurses are often faced with job stress in their workplaces; in particular, they face stressful situations and unexpected events. These findings can be used by hospital management to help them adopt effective strategies, such as support programs involving colleagues/supervisors, to reduce work stress among ED nurses (Yuwanich, Sandmark, & Akhavan, 2016).

Work stress on nurses can reduce productivity, mental and physical fatigue, and service. Therefore, recognizing the severity and its destructive effect in various hospitals, due to its high importance will be effective in improving mental health and the quality of services provided by nurses. Several factors that significantly affect the quality of services provided include the lack

of nurse preparation, problems with coworkers, workload, patients, and their families (Shareinia, Khuniki, Beydokhti, Zeynabad, & Hosseini, 2018).

The head nurse in the ED is often responsible for making an early response when a major problem occurs. To be able to take on this responsibility, the head nurse and the nursing team in the ED need to receive training in order to be able to make an effective quick response. The process carried out routinely for nurses is known to increase their self-efficacy, which in turn can have a positive impact on their performance in the ED (Jonson, Pettersson, Rybing, Nilsson, & Prytz, 2017). The research conducted shows that the management needs to create an environment that is able to help ED nurses to be able to perform their clinical skills well (Connolly, Jacobs, & Scott, 2018).

The high workload of nurses in the ED based on emergency service assistance by groups that require special attention can cause an increase in workload and a decrease in outcomes in the ED this is why the authors plan to conduct a review on ED management in hospitals for the elderly.

METHOD

This study aims to examine ED management for the elderly in hospitals using the scoping review method. The articles were obtained from several databases including the Cumulative Index to Nursing and Allied Health Literature (CINAHL), Google Scholar, ProQuest and PubMed between 2016 and 2021. The keywords used are combinations of several words, including "emergency department", "emergency management", "elderly", "older adults", and "hospital". The total number of articles related to keywords obtained was 105 journal articles. The inclusion criteria used included: (1) articles in Indonesian and English, (2) articles related to ED management for the elderly in hospital, (3) articles consisting of original articles and review articles. From a total of 105 journal articles obtained, there were 10 articles that met the inclusion criteria and passed the screening process using the PRISMA diagram (Figure 1).

RESULTS AND DISCUSSION

Based on the results of the analysis carried out, at least 3 main topics were found which were the reasons why the development of ED management for the elderly in hospitals was important, namely (1) The elderly as ED service users who need extra services, (2) Efforts to improve the quality of emergency services by management, and (3) The use of information technology as a way to improve emergency services for the elderly. The description of the contents of the 10 articles found can be seen in table 1.
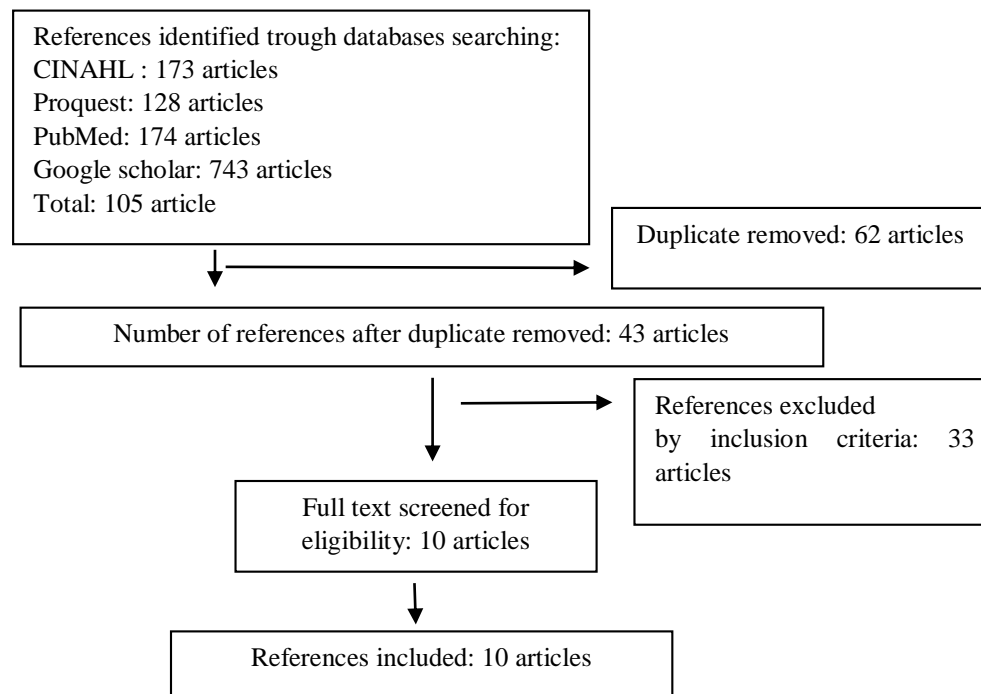
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│ References identified trough databases   │
│ searching:                               │
│ CINAHL : 173 articles                    │
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Figure 1. PRISMA Diagram

Table 1 Characteristics of Research Articles

Main Finding	References
The elderly as ED service users who need extra services.	(Legramante et al., 2016); (Martín-Sánchez et al., 2016); (Nam, Han, & Yoo, 2016); (Matsuyama et al., 2017); (Preston et al., 2017).
Efforts to improve the quality of emergency services by management.	(Legramante et al., 2016); (Ballham et al., 2017); (Miller I.T., Boyle S., Kopolovich H., Shah A., 2020); (Bhagoria et al., 2021).
The use of information technology as a way to improve emergency services for the elderly	(Lee & Cho, 2017); (Tun, Madanian, & Mirza, 2020).

Emergency management of the elderly in hospitals is one of the important things that must be done considering the increase in the elderly population has an impact on operational costs and resources of the global health care system. The increasing number of elderly population will have an impact on the number of dependence and higher visits of this group to existing health services. Emergency conditions in the elderly caused by an increase in chronic diseases and accidents experienced the need for an effective and responsive response from health workers. In the elderly, disturbances in communicating their health conditions during the emergency phase can be an inhibiting factor in the management by health workers which can lead in death (Lee & Cho, 2017). Providing efficient emergency services is one of the keys needed in planning emergency services for the elderly (Nam et al., 2016).

In recent years, the number of elderly patients who come to emergency services has increased, this is one of the important reasons for improving the quality of

emergency care for the elderly by nurses (Miller I.T., Boyle S., Kopolovich H., Shah A., 2020). Studies show that the elderly aged up to 75 years contribute to 20% of the total number of patients who come to the ED, where the percentage becomes higher when added to those aged 75 years and over. The elderly group is 10 times more likely to experience re-admission and are more likely to be hospitalized longer than those who are much younger (Ballham et al., 2017). The elderly often experience hospitalization due to the absence of the appropriate assessment level of vulnerability in the community, especially in people who live in the community which does not have sustainable health care, continuous observation by health services, system development for the elderly who have the greatest risk when visiting the ED and monitoring of the vulnerable elderly (Ballham et al., 2017). Research conducted showed factors related to the difficulty of elderly patients in getting services in the ED such as relatively old age, difficulty in contacting the ED, weekends/holidays have a significant influence (Matsuyama et al., 2017).

The emergency department experienced a relatively high visitation rate due to the increasing aging population in the community. The aging population is one of the main challenges faced by the ED because the condition of vulnerability experienced by the elderly requires special treatment beyond the complaints of the disease experienced (Preston et al., 2017). The monitoring results show that although the elderly have received adequate treatment while in the ED, there is still a need for operational standards or regulations regarding screening for signs of aging such as cognitive status, risk of falls, and other geriatric syndromes. In addition, it is important that there are arrangements regarding training and updates on emergency handling of the elderly group for ED nurses

(Bhagoria et al., 2021). Several other efforts that can be made include (1) the implementation of screening for weakness, risk of falls, cognitive status in the elderly; (2) reducing delays in diagnosis and treatment; and (3) focus on disease-specific characteristics in the elderly presenting to the ED (Miller I.T., Boyle S., Kopolovich H., Shah A., 2020).

Nurses need to consider developing strategies to improve the quality of care in the ED for the elderly considering that there is a significant difference in the profile of the age group visiting the ED, where the elderly are a relatively vulnerable group (Martín-Sánchez et al., 2016). Recent studies have shown that multidisciplinary services (consisting of nurses, doctors, and physiotherapists), as well as comprehensive geriatric assessments in the ED, can increase positive outcomes including reduced re-admissions up to 30 days longer, shorter length of stay, lower costs, and increased satisfaction in elderly patients (Ballham et al., 2017). Improving emergency services for elderly patients is known to have benefits related to the possibility of hospitalization, length of stay, and survival in the elderly. In addition, conditions in the ED which are relatively crowded and have a higher risk of becoming a center of disease transmission, especially during a pandemic, need to be taken into consideration by nurses in preparing the right strategy (Pradana, Nasution, & Casman, 2021). To minimize the occurrence of transmission from patients to nurses, at least there are several things that can be developed in the ED, including through a triage process that can be done through the use of technology so as to minimize contact between health workers and patients, besides that this can increase the efficiency of ED services when ED's overcapacity conditions occur (Cao et al., 2020).

The use of the Internet of Things (IoT) and appropriate technology is one way to streamline the health care system, besides that the use of these technologies has the potential to improve the quality of life of the elderly and minimize the operational costs of the health care system. The use of advanced technology such as robotic technology, QR Code or fingerprint of elderly patients, and integrated applications can be a strategy that can be implemented in health services for the elderly (Tun et al., 2020). Beside that, the use of QR Codes and fingerprints on elderly patients who come to the ED is known to assist health workers in accessing the health history of the elderly in a relatively short time (Lee & Cho, 2017).

Internet technology has become a representation of new opportunities in managing individual health. Several factors that influence a person to access internet technology in maintaining their health condition include age, gender, socioeconomic status, and the use of existing technology. Regarding access to health technology by the elderly, there are several factors that influence decisions in the use of technology, including (1) Difficulty in determining credible sources of information, (2) Access to medical information, (3) Support and communication with friends, (4) Opportunities to achieve health services and (5) Confidentiality of data. These factors can be a guide for health workers and policymakers in hospitals in preparing access to information technology that is safe, easily accessible, and easily understood by the elderly (Ware et al., 2017).

CONCLUSION

Emergency management of the elderly in hospitals is one of the important things that must be done considering the increase in the elderly population has an impact on operational costs and resources of the global health care system. The increasing number of elderly population will have an impact on the number of dependence and visits of this group on existing health services. Nurses need to consider developing strategies to improve the quality of care in the ED for the elderly given that there are significant differences in the profile of the age group visiting the ED, where the elderly are a relatively vulnerable group. Multi-disciplinary services and the use of information technology can be some of the efforts that can be done.

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