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REVIEW OPEN ACCESS

Barriers to an Effective and Efficient Intra- and Inter-Establishment Transfer of Elderly Patients in Healthcare: A Scoping Review

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Abstract

Introduction: An estimated 80% of consequential medical oversights originate from communication errors during patient hand-offs between clinical providers during inter-facility transfer. During the transfer, patients are at risk of receiving low quality, fragmented care plagued with inadequate communication and coordination across settings. Effective and efficient inter-establishment transfers are thus pivotal to safeguard the quality of care received by patients, thereby optimizing patient outcomes.

Methods: To inform the limited literature on the barriers to an effective and efficient intra- and inter-establishment transfer of elderly patients in health care, a scoping review specific to the geriatric context was undertaken. Searches of three electronic databases (MEDLINE, CINAHL, and Scopus) were conducted between 15th September to 1st November 2021. 18 peer-reviewed English-written articles published between 2011 and 2021 were included in this review. The Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist and Arksey and O'Malley's (2005) methodological approach for scoping reviews informed the writing of this review.

Results: This review identified a total of 18 articles that discussed barriers to an effective and efficient inter-establishment transfer of elderly patients in healthcare. Three categories of barriers: individual-level, healthcare provider-level, and organizational-level were identified.

Discussion: In the current literature, most studies pertain to the transition of older patients from hospital to home, there is a dearth in research elucidating the barriers related to intra- and inter-facility transfer of elderly patients. Of the barriers that we found, communication barriers were present in all three levels: individual, healthcare provider, and organizational. Limitations are presented.

Conclusion: This review found several areas that should be improved for safer care transitions of elderly patients between facilities. The efficient and effective intra- and inter-establishment transfer of elderly patients in health care is impeded by a range of barriers, most importantly a lack of communication, which is found in every three levels of barriers. By categorizing the barriers to an efficient and effective transition of elderly patients into three levels: individual, health professional, and organizational, this scoping review hopes to present current research in a structured way for future research.

Keywords: patient transfer; patient hand-off; patient transition; effective; efficacy; barrier; problem

Introduction

An estimated 80% of consequential medical oversights originate from communication errors during patient hand-offs between clinical providers during inter-facility transfer [1]. Inter-facility transfer refers to when a patient is transferred from one care facility to another after initial evaluation and stabilization [2]. During the transfer, patients are at risk of receiving low quality, fragmented care plagued with inadequate communication and coordination across settings [3]. Effective and efficient inter-establishment transfer are thus pivotal to safeguard the quality of care received by patients, thereby optimizing patient outcomes [4]. In this article, we will adapt the Institute of Medicine's six domains of health care quality definition of effective and efficient as "providing services based on scientific knowledge to all who could benefit and refraining from providing services to those not likely to benefit" and "avoiding waste, including waste of equipment, supplies, ideas, and energy", respectively [5]. An efficient and effective transition should ideally be a well-coordinated and organized process that protects continuity of care while minimizing pernicious events [6,7].

According to an estimation by the U.S. Census Bureau, the number of people aged 65 and over in the United States is projected to reach 80 million by the year 2050 [8]. Transitions of care is a common occurrence for older patients, who often fall victim to a diverse set of comorbidities requiring a complex interdisciplinary group of healthcare providers across various disciplines and care settings [9]. To complicate matters, such transitions are often unplanned events that occur when an acute condition is unexpectedly presented or when there is a worsening of an underlying condition [9]. With the number of elderly patients requiring medical care set to increase [10], the issue of an effective and efficient transition of care for geriatric patients is a pressing concern central in the long-term survival outcomes of aging populations [11].

A quick glance at the current literature found that most studies on geriatric transfer of care focus on the various models of care transition and the repercussions of fragmented care. There is a dearth in the literature elucidating the barriers to an effective and efficient transfer of elderly patients in health care. Thus, our study aims to fill this knowledge gap. By mapping the barriers to an effective and efficient inter-establishment transfer of elderly patients in healthcare, we hope to organize the identified barriers in a way that is more contextualized and understandable to readers, thus opening new avenues to facilitate future systematic reviews by researchers.

Methods

We have conducted a scoping review of primary and secondary research articles surrounding pediatric care transition barriers. The search strategy began with a keyword search through the PubMed database, followed by a reference list search of the bibliographies of the found studies until a saturation point was reached. The inclusion criteria comprised the following keywords: pediatric transition to adult care, transition barriers, and transition safety. Studies that are not peer-reviewed will be excluded. Selected articles will underwent a full-text review.

Arksey and O'Malley's (2005) methodological approach for scoping reviews [12] provided the guiding framework for this review. The Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist [13] was employed to structure the format of this review. The review was undertaken by two researchers.

Step 1: Identify the Research Question

The key question that informed the literature review was: What are the barriers to an effective and efficient inter-establishment transfer of elderly patients in health care? For the purpose of this paper, barriers loosely refer to any impediments to the process of transferring elderly patients between establishments (hospital to any facilities other than home, such as long-term care home, hospice care, institutionalized care). Example of barriers include miscommunications between health care providers and patients about care plan, poorly constructed transfer papers, and a lack of standardization in communication methods between establishments.

Step 2: Identify the Relevant Studies

Balancing our desire for breadth of the scoping review with the time frame and resources of the research project, three databases were utilized. MEDLINE (Medical Literature Analysis and Retrieval System Online) was selected because it covers a wide range of health disciplines. CINAHL (Cumulated Index to Nursing and Allied Health Literature) was chosen as it is one of the most frequently used online search databases for nursing and allied health literature. Scopus was used because of its wide interdisciplinary nature. Boolean connectors (AND, OR) were utilized to combine four search terms: ("patient transfer" OR "patient handoff" OR "patient transition") AND ("effective" OR "efficient") AND ("interhospital" OR "inter-facility") AND ("barrier" OR "challenge" OR "problem"). For all four search categories, only studies published between 2011 to 2021 (inclusive) were included, and the search was restricted to the age category of 65 years and older. Only English publications were included.

Step 3: Study Selection

Following agreement on the preliminary inclusion and exclusion criteria, the initial search yielded 178 records (Figure 1). A review of the title, abstract, and keywords by the two authors indicated a significant number of studies focused on definitions. The title/abstract screening was done by both authors together via video conferencing, and settled any disagreements together. As this review concentrated on the barriers, the exclusion criteria were revised to exclude articles detailing definitions with no primary research conducted. After removing 5 duplicates and 1 inaccessible record, 172 journal articles were read in full by the two authors to assess for eligibility. A further 154 articles were removed. Both authors approved these 18 articles for final inclusion (Figure 1).

Step 4: Charting the Data

Meetings were held biweekly during the period of September to November 2021 (inclusive) to refine the review process. A template (excel spreadsheet) was developed by the research team to record the data. Selected data (author/year and key barriers) were charted (Table 1). Both authors extracted and charted the data together via video conferencing, and settled any disagreements together.

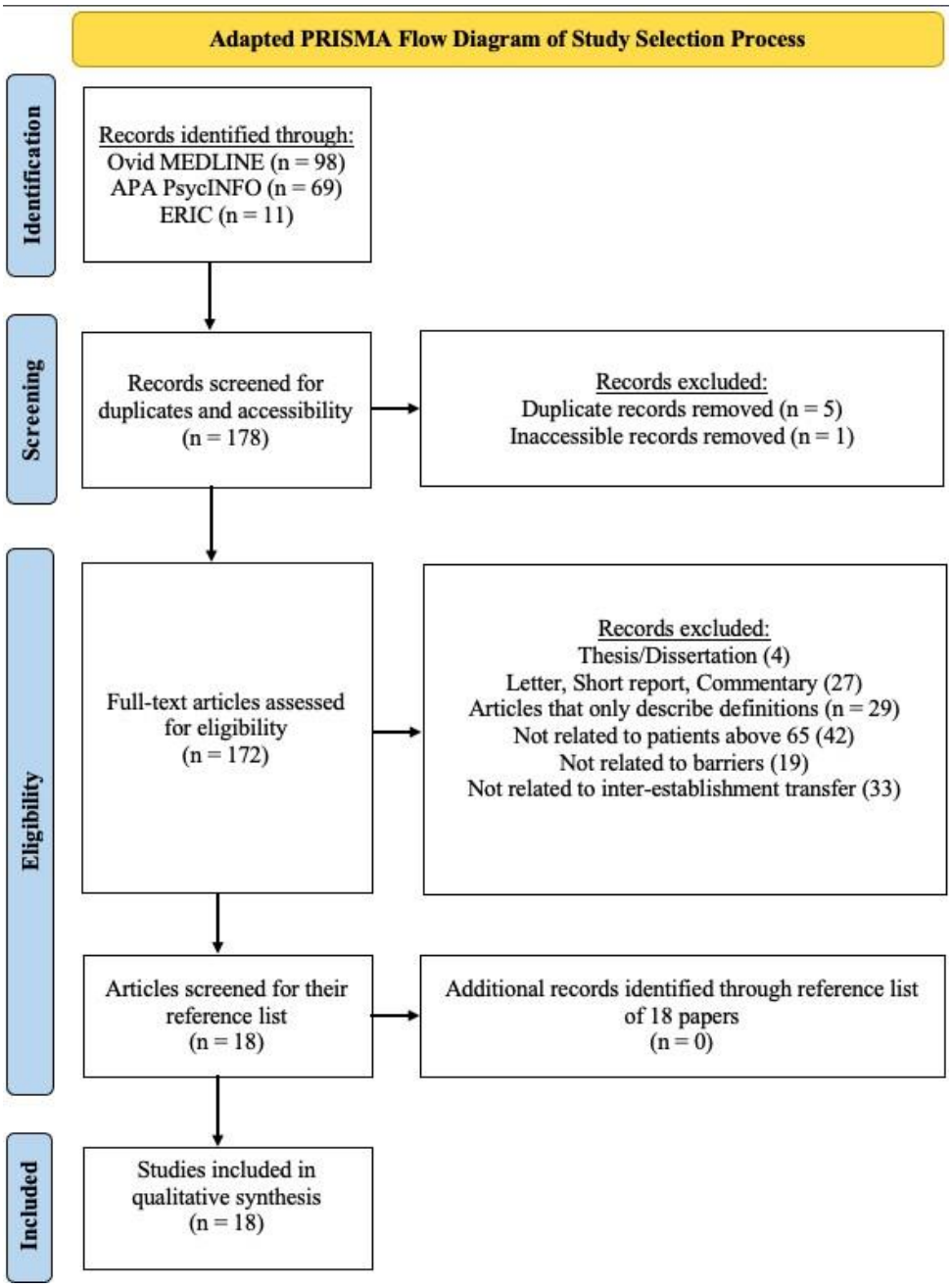

Figure 1. Adapted PRISMA flow diagram [31] of study selection process

Results

To elucidate barriers to an effective and efficient intra- and inter-establishment transfer of elderly patients in healthcare, a scoping review was performed using Arksey and O'Malley's framework.

Barriers found were mostly communication difficulties at three different levels: individual, healthcare-provider, and organizational. As most studies in the current literature pertain to the transition of older patients from hospital to home care, this study fills a knowledge gap in the literature.

This review identified a total of 18 articles (Figure 1) that discussed barriers to an effective and efficient inter-establishment transfer of elderly patients in healthcare. In some of the articles, barriers were phrased as necessary aspects for an effective and efficient transfer as shown in (Table 1). Most of the barriers cited were healthcare provider level barriers [14–25]. The remaining barriers were split between individual level [14–16,22,26–29] and organizational level barriers [14–17,22,23,25,30]. An overview of the 18 articles follows.

Table 1. Data Charting

Author/Year	Key Barrier	Necessary aspects for Effective/Efficient Transfer
Ouslander et al. 2020	Preventable readmissions: Medication management and adverse effects; better care in skilled nursing facility; premature hospital discharge; need for better pain management; arrangements for outpatient transfusion could have prevented hospitalization; physician readmitted patient for weight gain with no other signs of decompensated heart failure. Possibly preventable readmissions: Delay in follow-up care or need for higher level of care; better advance care planning might have avoided hospitalization; discharge should have been to higher level of care; hypoglycemia occurred in skilled nursing facility associated with altered mental status, emesis, and pneumonia.	None reported
O'Reilly et al. 2019	None reported	Transfer document containing (a) existing transfer documentation; (b) design framework; and (c) essentials of care.
Jeffs et al. 2017	(1) Having no clue what the care plan is, (2) being told and notified about the plan and (3) experiencing challenges absorbing information such as difficulties with recalling follow up appointments such as difficulties with recalling follow up appointments.	None reported
Robinson et al. 2012	None reported	Knowing the resident; critical geriatric knowledge and skilled assessment; positive relationships; effective communication; and timeliness.
Lyhne et al. 2012	Inefficiency in the handover: duplication of information, utilization of multiple communication modes and information sources, and lack of standardization.	None reported
Callinan and Brandt, 2015	Communication barriers with nurse (lack of motivation, control or knowledge), patient (lack of understanding, ability to communicate, or entitlement), caregiver (lack of encouragement or entitlement), interprofessional communication (lack of accessibility or confidence, different views), organization (lack of resources or staff continuity, unclear responsibilities, inappropriate routines and policies).	None reported
Olsen et al. 2013	Barriers associated with the nurse (lack of motivation, lack of control, lack of knowledge); barriers associated with interpersonal processes (lack of accessibility, different views, lack of confidence); and barriers associated with the organisation (lack of resources, unclear responsibilities, lack of staff continuity, inappropriate routines and policies)	None reported

Author/Year	Key Barrier	Necessary aspects for Effective/Efficient Transfer
Caleres et al. 2018	Transfer of information was often deficient and the discharge summaries were insufficiently used. Many discharge summaries were lost, an insufficient proportion of medication lists were updated and patient chart entries were often lacking. These findings may increase the risk of medication errors and drug-related problems for elderly in care transitions.	None reported
Baillie et al. 2014	Frustrations about communicating with acute hospital staff, for example: difficulty contacting professionals, inadequate or illegible information on referral documents, and different computer patient record systems used in different settings and by different professionals. Community hospital staff and community healthcare teams also expressed that acute ward staff lacked understanding about their resources, and about patients' home circumstances and others expressed that acute staff were not confident about community healthcare. Time pressures, communication with patients and families were sometimes lacking.	None reported
McAiney et al. 2017	The integration and coordination of care across health sectors such as lack of timely follow up and continous monitoring, lack of knowledge provided regarding health condition and medication	None reported
Storm et al. 2014	Difficulties related to information exchange between health care professionals	None reported
Bagge et al. 2014	Patients were unaware of medication details, some were confused, older patients might not think it is acceptable for them to ask direct questions of staff members.	None reported
Gadbois et al. 2018	Patients did not feel they were appropriately prepared or educated about their post-acute needs, and experienced transitions that felt chaotic, with complications associated with timing and medications. Hospital and SNF staff expressed similar opinions, stating that transitions were rushed, there were problems with the timing of the discharge, with information transfer and medication reconciliation, and that patients were not appropriately prepared for the transition.	None reported
Rustad et al. 2016	Transition seems challenging, confusion about medication information transferred between institutions.	None reported
Wong et al. 2016	Uncertainty of discharge plans as well as medication confusion.	None reported
Hvidt et al. 2014	Older patients had hard time remembering correct medication information.	None reported
Blennerhasset et al. 2011	Lack of knowledge and lack of interpreter services and translated educational materials.	None reported

Individual-level Barriers

One of the major individual-level barriers faced by elderly patients is the lack of communication [20,22,26,28,29]. One avenue in which communication was lacking, as found in two Canadian studies, patient misunderstandings regarding their care plan and confusion pertaining the proceedings of their transfer procedure [26,28]. The lack of active transference of information between healthcare professionals and patients or their caregivers about the details of post-discharge life played hinders a successful and efficient inter-establishment transfer. Another avenue in which communication was lacking, according to three additional publications, from New Zealand, the United States and Canada, is the dearth of patient knowledge regarding their medical details [20,28,29]. In our review, we found that many elderly patients were unsure about their prescriptions [28], when they should take their medications, and the post-discharge requirements and services accessible to them [20]. This lack of communication could be brought about by time constraints, in which some health professionals acknowledge that the lack of sufficient time allocated to each patient's discharge prevented them from communicating with the patient and their family members [22].

Furthermore, the second barrier noted in two of the articles, from Denmark and Canada, is the inability of elderly patients to assimilate knowledge [26,32]. Elderly individuals were unable to collect information about their health and treatment plan, even when it was offered to them, due to comorbidities impacting their health [26] and trouble memorising things [32]. Many elderly patients often forget follow-up visits, which creates a barrier to care continuity [26]. This problem was exacerbated for non-English speakers due to a lack of interpretation services and instructional materials in their native language at facilities [27].

Healthcare Provider-level Barriers

In eight of all publications analyzed, from the United States, Australia, the United Kingdom, Sweden, Canada, Norway, poor communication between health professionals in different facilities is a major barrier to transition care [14,16,18,19,21,23–25]. Inadequate, unclear, and disorganized transfer data [14,20,23–25,30] and invalid medication lists [24] contributed to confusion among facilities regarding the handling of patients' medication information [19] and discharge papers [21]. In studies conducted in the United States, it was found that some healthcare practitioners did not educate patients about self-management and resources available to help them in their post-discharge life [14], thus failing to appropriately prepare patients for their care transition [20]. Factors such as early hospital release [15] and a lack of post-discharge follow-up and health monitoring [14,15] have been found to disrupt continuity of care.

An additional two publications from Canada and Norway suggested that certain characteristics in healthcare professionals, such as limited knowledge of patients and critical geriatrics [17,18], inability to have a positive relationship with patients and effective communication, and a lack of motivation for their work [18], are important factors that led to ineffective and inefficient care transition.

Organizational-level Barriers

Organizational level barriers relate to coordination errors during care transitions between discharging and receiving facilities [14]. Organizational level barriers were cited in 8 of the 18 articles [14–17,22,23,25,30]. Barriers in in organizational discharge planning were cited in five articles [14,15,17,25,30]. Ideally, it is the responsibility of the discharging facility to place the patient in the most medically appropriate setting and to organize the discharge process with the receiving facility [14]. However, many errors occur in discharge arrangements that reflect poor planning—one such error highlighted by Ouslander et al. (2020) is the inappropriate discharge of the patient to a lower level of care when the discharge should have been to a facility with a higher level of care. Another error that reflects poor organizational discharge planning is the lack of a comprehensive discharge document that contains transfer documentation details, design framework, and the essentials of care [30].

Another frequently cited barrier—in of the four articles [16,17,22,25]—is communication barriers between organizations. Callinan and Brandt (2015) highlighted possible avenues for communication errors, including the lack of confidence in the handover process, the lack of staff continuity and differing views between professionals in different organizations, as well as unclear transference of responsibilities, routines, and policies between organizations. Communication barriers are evident when staff lack an understanding of their responsibilities due to a dearth in well-articulated communication and information continuity [17,22,25].

A third barrier lies in the inefficiency of inter-organization hand-offs—this is cited in one article [25]. Such inefficiency is demonstrated in the frequent information duplication and the lack of standardization in communication and information resources between discharging and receiving facilities [25].

Discussion

This scoping review categorizes barriers to an efficient and effective transition of elderly patients into three levels: individual, health professional, and organizational, to present current literature in a structured way for readers to easily understand and future researchers to dig deeper into each category.

According to our observations, most elderly patients find the transition process stressful and difficult, and they

frequently do not feel prepared for it [20], and all other existing impediments exacerbate the situation.

Our analysis of eighteen articles identified several individual-level barriers that obstruct the efficient and successful transition process. While it is critical for patients and their caregivers to understand their care plan or how the whole transition process will take place, a lack of understanding and uncertainty regarding their discharge and post-discharge care plans is one of the most significant barriers to a successful transition [26,28]. Many patients were also uninformed of their health state, changes in their health condition and medications, transition plans, and some were even unclear why the transition was essential, according to our findings [20,28,29]. Patients do not engage in an active dialogue even when healthcare professionals inform them [26], since they merely listen to what healthcare professionals have to say about medicine, follow-up visits, and, in certain circumstances, required equipment [26]. Based on one particular research study, many elderly individuals think it is unacceptable to question or distrust the activities of staff members, therefore they refrain from asking inquiries and learning about their own health situations [29]. This asymmetry of understanding frequently leads to communication gaps, which inhibit the smoother transition of elderly patients. According to a study, many elderly patients were unable to accurately explain their diagnosis or recall the follow-up visits that were scheduled for them [26,32] and it justifies that a lack of communication is the major obstacle to an effective transfer. This was due to a variety of factors, including other health issues and pharmaceutical dependency, which made them less competent at times and hinder their ability to process information provided to them directly [32]. Because they are uninformed, they are unable to make health-related decisions concerning their post-discharge lives. This problem is exacerbated for elderly individuals who do not speak English. Our findings reveal that non-English speaking patients struggle to comprehend their health, medicine, and transition plan, and that they suffer significantly more because of language barriers and the lack of services and documents in their native language [27].

In terms of healthcare provider-level barriers, even within a single facility, it is common to see a lack of clarity and coordination between healthcare providers [14]. For example, communication barriers with nurses [16] within a facility arise in part due to poor information transfer in a rushed environment [20]. In addition, due to the biomedical paradigm with a focus on treating acute conditions, there is a lack of understanding among healthcare providers of patients' home circumstances [22], leading to inappropriate discharges [15]. Another study cited the unidirectional information transfer from healthcare provider to patient and/or caregiver as a barrier for an effective care transition as patients/caregivers felt that their inputs were not being listened to [26]. Another avenue contributing to healthcare provider-level barriers were the lack of training [21]. A study found that physicians working in emergency departments were ill-equipped to deal with admission transitions due to a lack of training [21]. To exacerbate matters, many hospitals are fraught with staffing issues such as heavy workloads and low staffing levels, preventing the hospital and its healthcare providers from accommodating each patient with the appropriate time to understand their individual circumstances and navigate an effective and efficient care transition [21].

Lastly, organizational-level barriers are underscored by the lack of coordination during patient care transitions between discharging and receiving facilities [14]. This occurs in part due to unclear responsibilities and roles between providers from different facilities [14]. In addition, care transitions between organizations appeared to be detached from person-centred care, as patients complain about the lack of information transfer between organizations about the significance of their circumstances and background [30]. This impacted patients' perspective of a safe transition [30]. A study also cited the lack of accurate information transference between organizations, arising in part due to poorly written transfer documents that fail to contain essential patient information from the discharging facility to the receiving facility [30]. The lack of information standardization between the discharging and receiving facility is a significant impediment to an effective and efficient care transition as it affects the ability of nurses at the receiving facility to accurately triage patients [16].

Limitations of Examined Studies

We observed several limitations in nine of the eighteen publications examined [17,21–23,25,26,28,30,32]. To begin with, four of them claim that the sample size was too small and that the selection was not diverse enough to generalize the results [17,23,28,30]. Additionally, two of the publications stated that their findings are restricted to one setting [25,30], while the other two clearly state that their study was conducted in an urban context in two distinct nations, implying that the findings are not applicable to other regions of that specific country [21,26]. Furthermore, in one of the studies, elderly people from specified health conditions were only included [26]. As a result, the findings cannot be justified for elderly people with other illnesses [26]. Patients with unidentified cognitive deficits may have been included, according to one of the publications, which might have affected the outcome [32]. Several studies also revealed biases such as selection bias, in which patients who were distressed, terminally or seriously ill were excluded [22]. During interviews, social desirability biases and the presence of spouses with some elderly patients may also have an impact on their choices [26]. Finally, for one of the studies, only one reviewer completed the comprehension evaluations [32].

Limitations of Our Study

There are three main limitations to this scoping review. First, as a scoping review, it does not aim to appraise the

quality of the evidence in the 18 primary research articles [12]. It serves to provide a descriptive account of the available research literature, instead of assessing the evidence available. Second, time constraints, the number of articles examined were limited, thus failing to provide an extensive picture of the full range of barriers in inter- and intra-facility transfer of elderly patients and limiting our ability to draw conclusions. Third, as the research about care transitions is often focused on transition of older patients from hospital to home, there are limited articles pertaining to intra- and inter-facility transfer for our analysis. Given more time and resources, the second limitation could be addressed by doing a pilot study on a selected number of articles and testing the suitability of keywords before including more databases and relaxing our inclusion criteria by broadening our keywords in the final literature search.

Conclusions

This review found several areas that should be improved for safer care transitions of elderly patients between facilities. The efficient and effective intra- and inter-establishment transfer of elderly patients in health care is impeded by a range of barriers, most importantly a lack of communication, which is found in every three levels of barriers that we mention. For instance, in individual barriers, a lack of communication often leads to confusion about the entire transferring process, lack of understanding about their medical details, and additionally elderly patients' incapacity to integrate knowledge also acts as a barrier to an effective transfer. Therefore, all of these impediments must be considered to enable a successful transition. Barriers related to healthcare providers, such as poor communication with patients and caregivers, as well as among the healthcare team, failure to adequately prepare patients for the transfer and poor processing of discharge paperwork, must also be addressed. Lastly, barriers relating to organizations such as unclear responsibilities and roles between providers from different facilities and the lack in standardization in transfer documents between the discharging and receiving facility have significant implications in patient outcomes in the receiving facility and must thus be urgently taken into serious consideration to ensure an efficient and effective intra- and inter-establishment transfer of elderly patients. In the current literature, most studies pertain to the transition of older patients from hospital to home, future research is needed to fully elucidate the range of barriers relating to intra- and inter-facility transfer of elderly patients.

List of Abbreviations Used

MEDLINE: Medical Literature Analysis and Retrieval System Online
CINAHL: Cumulated Index to Nursing and Allied Health Literature

Conflicts of Interest

The authors declare that they have no conflict of interests.

Ethics Approval and/or Participant Consent

This study did not require ethics approval and/or participant consent.

Authors' Contributions

NPK: contributed to the conception and analysis of the review, drafted, and revised the content, and gave final approval of the version to be published.
IT: contributed to the conception and analysis of the review, drafted, and revised the content, and gave final approval of the version to be published.

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