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Review Article

Decisions to Transfer Nursing Home Residents to Emergency Departments: A Scoping Review of Contributing Factors and Staff Perspectives

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A B S T R A C T

Objectives: Nursing home (NH) residents are a frail and vulnerable population often faced with iatrogenic effects of hospital stays when transferred to emergency departments for acute changes in health status. Avoidable or unnecessary transfers of care need to be identified and defined to prevent unintended harm. The aim of this scoping review was to identify characteristics of avoidable or unnecessary transitions of NH residents to emergency departments, and examine factors influencing decision-making by NH staff, residents, and their family members to transfer nursing home residents to emergency departments.

Methods: The search strategy began with 5 electronic databases, and a hand search of gray literature. Published qualitative and quantitative studies were included that examined the definition of avoidable or unnecessary transfers, and/or reported factors associated with decision-making to transfer NH residents to emergency departments. Methods included quality assessments, data extraction, and synthesis using content analysis.

Results: A total of 783 titles and abstracts were retrieved and screened resulting in 19 included studies. Results describing "avoidable" or "unnecessary" transfers were grouped into 3 dimensions of factors: management of early-acute or low-acuity symptoms and chronic disease management in NHs, ambulatory care–sensitive indicators, and use of post hoc assessments. Five categories of factors contributing to decision-making to transfer were identified: nursing factors, physician factors, facility/resource factors, NH resident/family factors, and health system factors. A consensus on the definition of "avoidable" or "unnecessary" transfers was not found.

Conclusion: Findings suggest that transfers of NH residents to emergency departments may be avoided with increased care capacity within NHs. The decision-making process involved in the transfer is influenced by many factors, with intentions of both improving clinical outcomes and maintaining quality of life for the NH resident. Acute changes in health status are contextually specific and decisions must consider not only the resident's acute condition, but also resources available in the NH, and resident and family members' preferences for care. A definition of "avoidable" or "unnecessary" transfer must include reliable measurement, yet remain flexible enough to be generalizable to various care facilities to meet the needs of NH residents and manage required care safely within the NH. Robust research aimed at improving the primary care of NH residents is essential to informing health policy reform and education of those providing care in NHs.

Quality-driven health care initiatives aim to improve population health and existing care services by ensuring optimal efficiency while simultaneously reducing cost. Health care expenditure is a growing concern in today's global economy, and strategies to reduce use of costly acute care services is gaining attention in local and federal politics internationally. There is increasing examination of how to

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reduce costly acute care visits by the vulnerable, frail, and elderly populations living in nursing homes (NHs). NH residents comprise a growing percentage of populations in developed nations, and are dependent on supportive nursing care.[1–4] Acute health status changes in this vulnerable population often result in transfer to an emergency department (ED). ED crowding due to inadequate resources to meet patient volume demands is a well-described phenomenon in the literature.[5,6] Although the NH resident population represents a very small proportion of that volume, 0.4% to 2.4%,[7] the risk involved with transferring physically frail, often cognitively impaired older adults into the ED environment is high. The iatrogenic effects of ED transfers on NH residents indicate morbidity and mortality significantly increases due to loss of functional abilities and emotional distress.[8,9] Reducing acute care transfers of NH residents to EDs is not only a fiscal concern, but also a quality-of-care and safety issue.

A growing body of literature reports on what constitutes an "avoidable" or "unnecessary" transfer of the NH resident to ED; however, no consensus exists on a definition of either.[1–3,10–18] The concept of "avoidable" is complex and multifactorial, and the decision-making process includes dilemmas of resource availability and utilization,[7,19,20] NH resident and family member preferences of care,[7,17,21,22] and macro health system issues of scope of practice and accreditation standards.[18] The current standard of practice, based on the theoretical approach to "unavoidable" or "unnecessary" transfers, is to transfer NH residents to the ED when the care they require exceeds the resources of the NH facility.[18,23]

The purpose of this scoping review was to identify characteristics of avoidable or unnecessary transitions of NH residents to EDs, and factors influencing decision-making by NH clinicians (including nurses and physicians), NH residents and their family members when applicable, to transfer residents to EDs for care. This scoping review had 2 objectives: (1) to aggregate existing evidence for decisions to transfer NH residents to EDs, including rationale, motivations, barriers to care in the NH, and NH staff perspectives, and (2) determine what constitutes "avoidable" or "unnecessary" transitions to acute care.

Methods

Search Strategy, Data Sources, and Screening

The systematic search used 5 electronic health databases: CINAHL (1984–present), MEDLINE (1948–present), EMBASE (1974–present), SCOPUS, and Proquest Dissertations and Theses Full Test. In addition, a search through the gray literature via Google Scholar, and a hand search of selected bibliographies were completed. A health sciences librarian assisted in the development of the search strategy and database searches. The specific search strategy was based on the following; ("long term care" or "nursing home*" or "extended care facility*" or "continuing care facility*" or residential w2care or "assisted living facility*" or "supportive living facility*" or "homes for the aged") AND ("emergency department*" or ed or TI emergency or SU emergency) AND ("transfer* or transition*" or referral* or admission), to identify literature published between January 2000 and December 2014.

Inclusion Criteria

Titles, abstracts, and manuscripts were included if they met all inclusion criteria: (1) described the decision-making process, including nurses and physicians, NH residents and/or their family perspectives, involved with transferring residents to EDs, and (2) contributes to a comprehensive understanding of an operational definition of "avoidable" or "unnecessary" transfers to EDs. Studies in English language only were retrieved due to language proficiency of the authors.

Screening

The primary author followed a 3-step process to identify studies for inclusion. A second reviewer assisted in a calibration of the screening process. A random selection of 100 article abstracts from the initial search was reviewed independently by both reviewers, to ensure reliability of selections, yielding a 97% agreement rate. The primary author completed abstract selection, followed by screening full-text articles using inclusion criteria.

Quality Review

Each article was reviewed twice for methodological quality by the primary author. Two quality assessment tools were used based on study design. Qualitative studies were assessed using the Critical Appraisal Skills Programme (CASP) tool[24] (Appendix 1). Quantitative correlational studies were assessed using the Quality Assessment and Validity tool for Correlational Studies (Appendix 2).[25–27] Quantitative studies were analyzed for the following components: research design, sampling, measurement, and statistical analysis. Based on a possible 14 assessment points, each study was classified as high (10–14), medium (5–9), or low (0–4) quality. The qualitative studies were examined for appropriateness of methodological approach, data collection, ethical issues, data analysis, and synthesis to determine rigor, comprehensiveness, and clinical usefulness of the study results. No summary score was calculated for each qualitative study, and therefore with no threshold score, all qualitative studies were retained.

Data Extraction

The following data elements were extracted from included studies: author(s), year of publication, journal, sample and methodology, country of study, decision-maker information factors associated with transfers from NH to ED, definitions of "avoidable" or "unnecessary" transfers, and identified gaps in knowledge.

Data Synthesis

Using content analysis, extracted data were synthesized to identify dimensions of factors contributing to the decision to transfer to ED, and to find commonalities in definitions and descriptions of "avoidable" or "unnecessary" transfers to ED.

Results

Search Results

Electronic health database searches yielded 850 titles and abstracts, and following removal of duplicates, 783 titles and abstracts were screened using inclusion criteria. Of these, 54 full-text articles met inclusion criteria and were retrieved for full review. Of these, 19 articles were included and underwent quality review and assessment. See Figure 1 for search results. No articles were excluded after quality review, as the purpose of the scoping review was to map the key concepts available in the literature and to identify what was known and not known in extent knowledge.[28,29] There were no duplicate articles arising from single studies. Eleven of the 19 articles used quantitative methodology. All 19 articles were published in the past 14 years, with most published after 2009. Seven studies were published in the United States, 5 were from Canada, 4 from Australia, and the remaining from Ireland, Norway, and Sweden. See Table 1 for included studies and their characteristics.

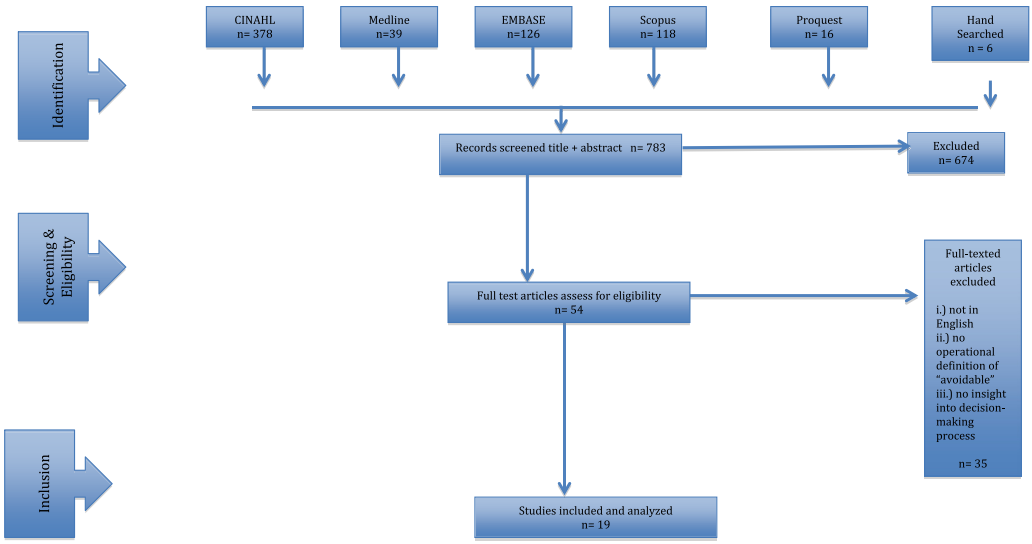

Fig. 1. Search strategy and screening process.

Summary of Quality Review

All qualitative studies (n = 8) were assessed as moderate to high quality, each providing some insight into the body of knowledge in this subject (Table 2). The research aims of each qualitative study were well stated and supported clear theoretical connections to build clinically useful relationships to the data. Ethical standards were met in all studies and no ethical concerns were identified by researchers in the conduct of the research. Ten of 11 quantitative studies were assessed as low quality (scores ≤ 4) (Table 3). Most studies were weak in all categories, including design, sample, measurement, and statistical analysis. All study designs used convenience sampling and none used probability sampling or a control group. However, given their exploratory and descriptive research goals, this is not unexpected.

Interpretations of "Avoidable" or "Unnecessary" Transfers from NH to ED

Seven articles provided explicit theoretical definitions of "avoidable" and "unnecessary" transfer, where the terms were used interchangeably.[2,10–14,31] The common concepts in these definitions centered on early detection and management in the NH, balance between need and resources, and professional judgment about ability to provide timely, safe, quality care within immediate context of resources, family/resident preferences, and professional competence. No consensus on a theoretical definition was found, although commonalities can be inferred through common factors identified as associated with avoidable transfers.

Eleven of 19 included studies provided a description of factors contributing to "avoidable" or "unnecessary" transfers of NH residents to EDs. Three dimensions of the factors related to "avoidable" or "unnecessary" transfers emerged, including the following: management of early-acute or low-acuity symptoms and chronic disease management in the NH; ambulatory care–sensitive indicators (ACSI); and use of a post hoc evaluation tool to assess avoidability (Table 4).

Management of Early-Acute or Low-Acuity Symptoms and Chronic Disease Management in the NH

Some authors suggested many ED presentations were preventable if timely and appropriate care had first been initiated in the NH. They further delineate "unnecessary" transfers as those that resulted in direct transfer back from the ED, no hospital admission required.[1,2,13,30] Other authors suggested high rates of hospitalization occur because early-acute care interventions and strategies to maintain premorbid health status were inadequate.[15] Early management of acute health changes in the NH had impact on hospital admission and readmission rates, and also 30-day mortality rates.[31]

Ambulatory Care–Sensitive Indicators

A list of diagnoses that use the International Statistical Classification of Diseases and Related Health Problems (ICD-9 codes), known as ACSI, conditions in which hospitalization is generally considered unnecessary if adequate preventive care is available,[20,21] were used as a possible defining component of "avoidable" transfers of NH residents to EDs. The underlying premise was that an ED visit is not required to treat these ailments with good clinical outcomes if it is managed in a timely manner within the NH.[11,14]

Use of Post Hoc Evaluation Tool to Assess Avoidability

Implicit reviews are considered the gold standard for rating comprehensive quality of care in other patient populations.[16] The Structured Implicit Review (SIR)[22] is a retrospective evaluation tool used to identify potential factors contributing to transfers of NH residents to ED, and has been validated by others.[8] Categories of "avoidable" versus "unavoidable" are based on baseline health status, advanced directives, acute illness signs and symptoms (including severity), known interventions, response to NH-based therapy, components of resource availability (including physician and NH staff–based services), and quality of care within the NH compared with services available and quality of care available in external services.[16]

Factors Contributing to NH Residents' Transfer to EDs

Fourteen of the 19 included studies investigated factors that contribute to NH resident transfer to ED. Five categories of factors were identified: nursing, facility/resources, physician/nurse practitioner (NP), NH resident and family, and health system factors (Table 5).

Table 1
Characteristics of Included Studies

Authors	Year	Journal	Sample and Methodology	Country	Factors Associated With Decision to Transfer	Description of "Avoidable" or "Unnecessary" Transfers	Future Research Considerations
A. Qualitative studies							
Arendts et al[7]	2013	*Geriatrics, Gerontology International*	n = 11 Systematic Review	AUS	Themes: (1) transfers occur with expectation that they will yield better resident outcome or support resident QOL, (2) transfer with no expectation of the resident because of external outcomes or QOL (i) lack of facility resources (ii) lack of confidence in care provided in the facility (iii) inadequate planning and communication (iv) bureaucratic and legal (v) conflicting stakeholder preferences		What factors assist nurses to have the confidence in decisions to not transfer
Arendts et al[23]	2010	*Australian Journal on Ageing*	n = 33, divided into 3 groups, then n = 9 for semistructured interviews	USA	(1) Staffing and skills mix (2) Treatment options (3) End-of-life care (4) Communication (5) Bureaucratic requirements		Use of mobile clinical team to reduce demand for ED services
Bottrell et al[21]	2001	*Geriatric Nursing*	n = 13, focus groups	USA	(1) Knowing the resident and family (2) Interactions with physicians (3) Nursing home resources (4) Personal and institutional liability		
Jablonski et al[19]	2007	*Journal of Nursing Scholarship*	n = 42, hermeneutics phenomenology	USA	(1) Consensus: interpretation of severity of problem, medical evaluation, and are unavailable in the NH (2) Conflict: legal and financial ramifications, lack of diagnostic tools, difference in interpretation of severity and acuity (3) Cogency: nurse interpretation assessment skills, knowledge "Targeted Communication": tailoring of messages to physicians to obtain their desired outcome, ie, safety managing the issue		
Lamb et al[17]	2011	*Journal of the American Geriatrics Society*	n = 26, n = 1347; mixed methods	USA	(1) Missed opportunity for preventing transfers (2) Resident or family insists on transfer	Uses ambulatory care −sensitive indicators (ACSI)	

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Table 1 (*continued*)

Authors	Year	Journal	Sample and Methodology	Country	Factors Associated With Decision to Transfer	Description of "Avoidable" or "Unnecessary" Transfers	Future Research Considerations
					(3) Communication gap (4) Advanced directives not in place or followed (5) Gaps in staff knowledge and skill (6) Level of acuity requires transfer (7) Primary care physician orders transfer (8) Facility capacity		
McCloskey[18]	2011	*Journal of the American Geriatrics Society*	n = 24; institutional ethnography	CAN	Government regulations restricting the nature and scope of care of NH staff can provide, which leaves them often no choice but to transfer to ED when care needs change	"Avoidable" is examined from 3 perspectives, societal, meso-level, and micro-level, with an understanding to do what is best for the patient, while maintaining efficiency. Suggests "unavoidable" is a misnomer, and a complex issue due to many factors associated with care (funding, responsibility, roles)	
O'Connell et al[15]	2013	*Contemporary Nurse*	n = 3094; n = 7 mixed methods	AUS	(1) Level of staff competency (2) Availability of general practitioners (3) Lack of equipment in RACF (4) Resident and family member requests (5) Communication difficulties (6) Poor attitudes toward RACF staff	Strong intentions: a need to focus on strategies that detect deteriorating residents promptly so that their conditions can be managed safely in the facility	
Robinson[22]	2012	*Journal of Aging Studies*	n = 27, n = 44 interpretative description	CAN	(1) Knowing the resident (2) Critical geriatric knowledge and skilled assessment (3) Positive relationships: (i) family provider relationships, (ii) relationships among HCPs, (iii) conversation (4) Communication of information: (i) notification, (ii) explanation, (iii) conversation		Does advanced geriatric knowledge and skills contribute to appropriateness of transfers?
Quantitative Studies							
Ashcraft and Owen[30]	2014	*Geriatric Nursing*	n = 118; Descriptive survey	USA	Maximized facility's capability of care; had already "stabilized" patient by hydration, oxygenation, antibiotics, medications, symptom management, and providing additional physical assistance		
Briggs et al[2]	2013	*QJM*	n = 116, prospective chart review	IRE		"Potentially avoidable" is one that may have been avoided if optimal management of an	

						existing condition was available in the NH at an earlier stage "Low-acuity" = not requiring inpatient management resulting in direct discharge from ED (1) Assessment and simple wound dressing or closure required – no sutures (2) Assessment and simple suturing required – no significant nerve, vessel, or tendon damage (3) Uncomplicated urinary tract infection (UTI) with abnormalities of urinalysis consistent with UTI presentation (4) Soft tissue injury (STI) – nil radiology (5) STI – radiology required in hours (6) Replacement of gastrostomy tube (7) Replacement of IDC (8) Suspected nonmajor fracture suitable for backslab and outpatient appointment (9) Dehydration – potentially treatable with oral or subcutaneous fluid (10) Noncritical diagnosis – assess in RACF appropriate (11) ACDs in place	
Codde et al[1]	2010	*Australian Journal on Aging*	n = 235, chart review	AUS			
Grunier et al[31]	2010	*Journal of American Nursing Society*	n = 64, 589 Retrospective chart review	CAN		"Potentially preventable" are visits that may have been avoided if an existing condition had been adequately managed through primary care services at an earlier-stage ACSI; "low-acuity" is rated at or less than nonurgent CTAS 4 or 5 and resulted in the resident returning directly to the NH without inpatient hospital care	Effective early management strategies ED alternative access
Jensen et al[10]	2009	*Canadian Family Physician*	n = 2473	CAN	The standard practice is to transfer patients to hospital when their care needs exceed the resources of the facility	"Appropriateness of referral" is a balance of issues: timeliness, availability of diagnostic and treatment resources IV, oxygen, pharmaceuticals), timely test results, MD availability and expertise, advance directives,	Evidence-based measurement of appropriateness of transfer and use of global assessments

(*continued on next page*)

Table 1 (*continued*)

Authors	Year	Journal	Sample and Methodology	Country	Factors Associated With Decision to Transfer	Description of "Avoidable" or "Unnecessary" Transfers	Future Research Considerations
						respect for patient or family wishes, availability of medical information and premorbid health status	
Kirsebom et al[11]	2014	*Archives of Gerontology and Geriatrics*	n = 594, Retrospective descriptive design	SWED	(1) Availability of primary care (2) Structured transfer checklists (3) Advanced care directives not always followed (4) Policy to not always treat acute illness (5) RN staffing ratios (6) RN competence (7) RN willingness to accept liability issues	"Avoidable" was defined by SALAR indicating some chronic conditions can be treated with favorable results in primary care, as well as some acute conditions if given adequate and timely treatment	
Ouslander et al[12]	2009	*Journal of American Medical Directors Association*	Baseline n = 105 Pilot intervention n = 32 Pre-post QI test	USA	(1) The same benefits could have been achieved at a lower level of care (2) The NH should have been able to do everything done by the hospital (3) The quality of care in the NH by the MD or physician extender (4) The MD visit could have avoided the transfer (5) Quality of care by the NH staff (6) Better quality of care would have prevented or decreased severity of acute changes (7) Better advanced care planning would have prevented the transfer (8) The resident's overall condition limited his/her ability to benefit from the transfer (9) Resident/family did not want hospitalization (10) Family or proxy insisted on transfer	Based on Saliba et al[16] SIR tool and using ACSI	
Renom-Guiteras et al[32]	2014	*BMC Geriatrics*	n = 29 systematic review		Assessment Tools (16) look at a variety of aspects, few take into consideration multiple determinants into the definition of "avoidable" (1) Specific medical diagnosis (2) Acuteness of severity of symptoms at time of transition (3) Resident's characteristics before admission to hospital	Evidence-based comprehensive and generalizable tool is needed	

					(4) Resource availability/ requirements (5) Resident's/family wishes (6) Information on the existence of a care plan		
Saliba et al[16]	2000	*Journal of the American Geriatrics Society*	n = 128 retrospective review	USA	Staff attitudes competing with needs of other residents Real versus perceived staffing deficiencies Day-to-day variation in available resources Transportation barriers Relative absence of physicians or NPs in the NH	Avoidable transfers are when a patient could have been cared for safely in their NH. Developed post hoc assessment tool (Structured Implicit Review [SIR]) to assess factors contributing to avoidability (1) Baseline characteristics including advanced directives and preferences (2) Baseline health status (3) Characteristics of the acute illness including signs and symptoms (4) Levels of sickness (5) Known interventions, response to treatment (6) Evaluation of treatment requiring physician or physician-extender services (7) Skilled nursing facility (SNF)-based services or are services only available outside SNF (8) Nursing facility quality of acute care	
Vossius et al[13]	2013	*Scandinavian Journal of Public Health*	n = 940 retrospective review	NOR		Appropriate medical care or diagnosis means at the NH are assumed insufficient and specialist care is necessary Intermediate cases: more resources at the NH or better decision processes might have avoided referral to the hospital Inappropriate: criteria indicating wasteful use of specialist care or harm to the patient	
Walker et al[14]	2009	*Medical Care*	n = 8885 retrospective review	CAN		Uses the ACSI concept to define "potentially avoidable hospitalizations" New criteria for Canada includes septicemia and falls as "preventable"	Preventive care and chronic disease management in long-term care settings Facility factors and standards of care to be studied

ACDs, advanced care directives; HCPs, health care providers; IDC, indwelling catheter; QI, quality improvement; RACF, residential aged care facility; SALAR, Swedish Association of Local Authorities and Regions.

Table 2
Summary of Quality Assessment Based on CASP Tool*: 8 Included Qualitative Studies

Criteria	n = Studies	
	Yes	No
Design		
Aim of research clear?	8	0
Appropriate methodology?	8	0
Sample		
Recruitment strategy appropriate?	8	0
Data Collection and Analysis		
Appropriate data collection?	7	1
Data analysis rigorous?	7	1
Ethics		
Is the relationship between the researcher and participants considered?	0	8
Are ethical issues clearly considered?	5	3
Findings		
Are the findings clearly stated and clinically useful?	7	1

*CASP tool.[24]

Nursing Factors

Nursing factors influencing transfer of NH residents were described in 7 studies. Nursing assessment skills, knowledge and interpretation of findings, and presentation were significant for capacity to persuade primary care physicians to approve transfer.[17,19,21] Other authors described missed opportunities for preventing transfer of NH residents.[17] This included knowledge and skills that were inadequate to detect early-acute changes in the NH resident's status.[11,12,15,17,22] Nursing staff levels of competency[15] coupled with knowing the resident and having positive relationships with residents, families, and their primary care providers were associated with successful transfers.[21,22]

Facility/Resource Factors

Facility and resource–related factors were reported in 9 studies. There was variability in available resources needed to treat acute health changes in residents, including diagnostic tools and equipment. Lack of resources in NH facilities was a significant barrier in providing timely and high-quality care.[7,19,20] This phenomenon triggered policies to not-treat and to transfer because the resident's acuity outweighed the NH's capacity to care for them.[7,8,10,11,15,17,23]

Table 3
Summary of Quality Assessment*: 11 Included Quantitative Studies

Criteria	n = Studies	
	Yes	No
Design		
Prospective studies	1	10
Used probability sampling	0	11
Sample		
Appropriately justified sample size	1	10
Sample drawn from >1 site	0	11
Anonymity protected	11	0
Response rate >60%	1	10
Measurement		
Reliable measure of contributing factors	4	7
Valid tool used to make decisions to transfer	3	8
Observed vs self-reported	0	11
Internal consistency >/0.7?	2	9
Theoretical model/framework used?	0	11
Statistical Analysis		
Correlations analyzed	1	10
Outlier managed	0	11

*Adapted from Cummings et al.[33]

Table 4
Descriptions of "Avoidable" or "Unnecessary" Transfers

Definition of "Avoidable" or "Unnecessary"
A. Management of Early-Acute of Low-Acuity Symptoms and CDM in NH • "potentially avoidable" → one that may have been avoided if optimal management of an existing condition was available in the NH at an earlier stage[1,2] • "low-acuity" → not requiring inpatient management resulting in direct discharge from ED, CTAS 4–5[31] • focus on strategies for early detection of acute health changes and prompt, timely care to address symptoms[10] • becomes "unavoidable" if specialist care is required[13] • end-of-life care, transfers made in contradiction to advanced care directives, or without clear clinical benefit to the NH resident[11] • is a balance of issues including timeliness and availability of diagnostic and treatment resources with physician/NP expertise and accessibility, premorbid condition of the NH resident and respect for NH resident and family wishes[32] • highly dependent on availability of and accessibility of primary care provider, diagnostic and therapeutic means[11,32]
B. Ambulatory Care–Sensitive Indicators • based on medical diagnosis and ICD-9 codes, anemia, angina pectoris, asthma, bleeding ulcers, cellulitis, chronic obstructive pulmonary disease, congestive heart failure, dehydration, diabetes mellitus complications, gastroenteritis, seizure disorders, hypertension, kidney/urinary tract infections, and pneumonia[11,12,14] • new to Canadian inclusion criteria: injuries from falls/fractures and septicemia[14]
C. Post Hoc Assessment of Factors Contributing to Avoidability[12,16] • Use of the SIR: retrospective in nature, guiding research and clinical recommendations Considers the following: (1) NH resident's baseline status, including demographic characteristics and care preferences (2) acute illness signs and symptoms, including severity, known interventions, urgency of need for further examination and response to NH treatments (3) required clinical resources to manage the acute illness (4) quality of acute care provided in the NH

CDM, chronic disease management; ICD, International Classification of Diseases; CTAS, Canadian Triage Acuity Scale; SIR, structured implicit review.

Physician/NP Factors

Physician/NP factors influencing resident transfer to EDs were explored in 8 studies. The most common finding was the relative absence of a primary care provider in the NH facility,[11,12,15–17,19] which suggests that 1 visit by a physician or NP could potentially prevent an unnecessary transfer. NH physicians experienced frustration with lack of objective information obtained from NH staff, thereby increasing likelihood of ordering transfers.[21] Presence of a physician or NP in the facility, with high level of geriatric expertise, improved NH clinical outcomes and limited risk of personal liability incurred when assessment was not possible.[1,12,19,22]

NH Resident/Family Factors

Seven studies described resident factors. NH residents were transferred with the expectation that transfer would provide better clinical outcomes and increased quality of life.[7] The decision to transfer ideally is based on the "knowing" the resident, the resident's preferences and goals of care.[21,22] Controversy was reported when NH residents and/or family members lacked confidence in the care provided in the NH,[7] or requested transfer when otherwise not indicated by primary care providers[12,15] or when advanced directives were not followed.[11,17,21]

Health System Factors

Five studies described health system factors. The influence of government in terms of legislating the nature and scope of practice of

Table 5
Factors Contributing to Transfer From NH to ED

A. Nursing Factors
- knowledge/competence related to recognizing and managing acute changes in the NH resident[11,15,17,19,22]
- deficient skills related to caring for acutely ill NH residents[12,15,19,22]
- communication barriers between nursing and care staff and physicians/NPs[15,17,22]
- personal liability[11,19,21]
- knowing the NH resident's needs and preferences[12,21,22]
- positive relationship with NH resident, family, and physician/NP[21,22]
- missed opportunities to prevent transfers related to knowledge, assessment skills, and confidence to seek physician/NP consult[11,17]
- inadequate planning of care[12]
- inadequate staffing and skills mix for NH resident health need[11]
- perceived and real workload and safety[11]

B. Physician/NP Factors
- unavailability to assess and consult[15,16,19]
- end-of-life decision-making[11,12,22]
- liability related to decision making and treatment, therefore orders transfer to ED[17,19,21]
- specialized skill and knowledge for geriatric medicine[12,22]
- positive communication and professional relationships with NH staff for care planning with NH staff[22]
- quality care–related physician visits in the NH could prevent transfers[21]

C. Facility/Resource Factors
- advanced directives not in place or followed[11,12,17,23,31]
- lack of diagnostic tools and equipment in NH[15,19,23]
- variability and lack of nursing home resources to treat acute health changes[7,23]
- limited treatment options available in NH and inability to stabilize acute changes before transfer in a timely manner[30]
- policy to treat/not-treat specific to each NH[11]
- level of acuity requires transfer[17]
- capacity to provide for resident's increased needs are exceeded[17]
- timelines for care[12]
- availability of primary care within NH or access to community resources[12]
- institutional liability issues with acute care treatment[7,19]
- financial burden of provision of acute care treatment[7,19]
- structured transfer check lists to improve facility communication[11]

D. NH Residents/Family Factors
- preference of care and requests conflicting with ideals of care[7,12,15,17,21,22]
- advanced directives not in place or not followed when faced with reality of end-of-life care[11,12,17,21,22]
- lack of confidence in care at NH[11,12,22]
- increased quality of life with transfers and expected increased clinical outcomes[7]

E. Health System Factors
- bureaucratic issues/requirements limiting care in NH[7,23]
- government restricting nature and scope of practice of NH staff[18]
- poor attitudes toward NH staff from physicians and ED staff[15]
- inability to access community resources due to transportation barriers[16]

NH staff[18] and other bureaucratic issues related to accreditation,[7,23] influences flexibility of care and increases pressure to transfer residents to EDs to receive higher levels of care. Other system-wide factors included inability of NH facilities to access community resources for laboratory and diagnostic evaluations due to transportation barriers,[16] and perceived lack of respect for NH staff from other health care providers[22] based on assumptions about scope and competence of care provided.[15]

Discussion

Integrated findings of the 19 studies in this scoping review provide a rich understanding of the complex interplay of factors and processes involved in decision-making to transfer a NH resident to an ED. However, a consensus on the definition of "avoidable" or "unnecessary" transfers was not found. Our findings describe factors related to avoidable transfers and some common concepts in definitions (early detection and management in the NH, balance between need and resources, and professional judgment about ability to provide timely, safe, quality care within immediate context of resources, family/resident preferences, and professional competence) without specifically defining "avoidable." The lack of consensus in theoretical definitions reflects the complexity required to integrate various perspectives; those of NH clinicians,[11,12,15,17,19,21–23] administrators, family/residents,[7,15,17,21,22] political policy,[7,23] and economic views,[7,18,23] each of which present specific expectations, values, and assumptions about appropriateness, quality, and safety of care services within the NH. Acute changes in health status that require transfer to ED are contextually specific and must consider not only the acute condition for which the transfer is "necessary,"[1,2,10,31] but also resources available to the NH,[20] and the resident's and family members' preferences for care.[32] The definition of "avoidable" or "unnecessary" transfer must use reliable measurement yet remain flexible enough to be generalizable to various care facilities to meet NH residents' needs and manage required care safely within the NH.[11,32]

Economic pressures to reduce health care spending on costly acute care services call for promotion of health care policy aimed at improving the health of populations, thereby preventing hospitalizations. Avoiding transfer to EDs in the NH resident population with limited access to primary care services is challenging.[13,31] The quality improvement–derived philosophical ideology of having the right patient in the right place at the right time[34] begs to have health resources allocated and structured differently. Transferring NH residents to EDs for highly specialized, acute care services is an important aspect of safe and necessary quality care with the expectation of better clinical outcomes for the NH resident.[7,31] However, the literature is clear about the lengthy list of negative effects that hospitalization has on NH residents, including increased confusion, delirium, exposure to and acquisition of infections, incontinence, and incidence of falls and related injuries.[16,35]

With goals of sustaining quality of life for NH residents, and avoiding transfers of care to EDs, the challenge is to balance the structure and organizational cultures of a social, supportive model of care within the NH[18] with a primarily medical model of care focused on diagnosis and treatment of curable disease processes.[11,12,14,16] Nurse staffing levels, including skill mix ratios, are concerning, as are the levels of competence at detecting early-acute changes in health status of NH residents leading to missed opportunities for early intervention.[11,17,23] Diagnostic means to guide treatment decisions are also visibly lacking in NH settings,[7,15] with little access to primary care providers.[12] These visible barriers to providing timely and efficient primary care within the NH support policy to transfer the NH resident to the ED when care needs exceed the capacity of the facility.

Considering the complexity of barriers to providing primary care within the NH, "avoidable" or "unnecessary" transfers become even more difficult to define in terms of both measurable items and clinically relevant ones. The use of ambulatory care–sensitive indicators to define potentially "avoidable" transfers is based solely on medical diagnoses,[11,12,14] and does not account for the numerous organizational and system factors reported in the literature that effect the decision-making process.[7,15,16,18,23] Therefore, these indicators may not be directly applicable in the NH setting during the transfer decision-making process. In recognition of the numerous barriers facing safe and timely care of NH residents, and the health system mandate to reduce ED use and subsequent hospitalizations, actions targeting development of health policy and resource allocation are required.

Future research could explore using ambulatory care–sensitive indicators as a foundation with implementation of systematic support and support for early identification of symptoms by NH staff to avoid transitions to the ED. Development of safe intervention protocols to

treat common acute conditions affecting the NH resident population can aim resources at programs to be piloted, measured, and funded if they demonstrate a significant effect on ED transfers. Some early interventions include point-of-care testing and building partnerships with community diagnostic organizations to expedite treatment, access to clinical nurse specialists,[36] NPs,[37] communication protocols for handover of information,[38] telemedicine,[39] and symptom alert systems for front-line NH care aide staff.[40] As more than 50% of NH-ED transfers lead to hospital admissions, interventions to reduce ED admissions are highly relevant. Improving quality care must consider the multiple factors contributing to decision-making, and involve all stakeholders, including NH and ED administration, nurses and physicians, emergency medical services, and residents/family caregivers to build partnerships in providing appropriate levels of care required for these initiatives. Education and support for primary care providers, nursing, and care aide staff is necessary to improve skills mix and competence, and to foster a downstream effect of decreased workload with advanced preparedness to care for acute health changes. Improving on-site access to primary care providers is an appropriate incentive for providers to engage in active treatment, also serving to support nursing staff to improve care,[41] and ameliorating confidence of NH residents and their family members that the care provided is safe and effective.[7]

Limitations

This scoping review captured many of factors influencing decisions to transfer NH residents to the ED and examined components of definitions of "avoidable" or "unnecessary" transfers. Although the literature search was comprehensive, the search strategy and inclusion criteria did not include "unavoidable" transfers. Some additional information may have been captured from examination of literature from this perspective. Additionally, double-counting of data related to factors associated with transfers and in the definition of "avoidable" or "unnecessary" may have occurred because a systematic review was included in this review. Careful analysis of data in the summary charts mitigated this potential of overemphasized contributing factors. In addition, despite low-quality ratings, these studies offer valuable information about factors contributing to decision-making processes in transferring NH residents to EDs and for the purposes of a scoping review, were retained in the review.

Conclusion

Reducing the use of acute care services, such as EDs, is essential in maintaining accountability and fiscal responsibility of the health care system, even for NH residents who are a highly vulnerable and frail population. The care needs of NH residents are supportive in nature, but can quickly escalate to encompass complex, multifactorial situations when acute health changes occur. Access to acute care remains an essential aspect of care; however, delivery of these care needs and the effectiveness of interventions can significantly impact what we commonly refer to as "avoidable" transfers of care. Large-scale health policy initiatives aimed at building capacity within NHs should be a priority, including improving education and training, and increasing the scope of practice of health care providers with commitment to access timely use of diagnostic equipment, and the presence of primary care providers, to ensure the highest quality and continuity of care for the NH resident is achieved.

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Supplementary Data

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