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Safety in home care: a broadened perspective of patient safety

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Abstract

Background. Home care is the most rapidly growing segment of the Canadian healthcare system. Overwhelmingly, research on patient safety has been conducted within institutional settings, resulting in a significant knowledge gap about safety in homecare. Given the dramatic increase in the amount, acuity and complexity of health care being provided in the home and community, it is essential to develop our understanding of safety in this sector.

Objective. The objective of this paper is to describe the landscape of safety in home care in Canada.

Method. This pan-Canadian initiative included three phases: a literature review, 20 key informant interviews and an invitational roundtable. Data were synthesized using a content analysis approach.

Results. Patient safety is a failure of systems rather than of humans; there are many change processes required to create safe environments; organizational culture and workplace factors are critical. Patients have a key role to play in their care and thus must be part of the patient safety discourse. Themes central to safety in home care are: the inextricably linked relationships and communication among clients/families and caregivers/providers; unregulated and uncontrolled settings, autonomy and isolation; the multidimensionality of safety (physical, emotional, social, functional); a diminishing focus on prevention, health promotion and chronic care; challenges of human resources and maintenance of competence.

Conclusion. Addressing safety in home care and mitigating the risks presents unique challenges and requires a major rethink of underlying institutionally oriented assumptions and guiding frameworks.

Keywords: home care, home healthcare, home nursing, patient safety, safety

In Canada, the demand for home and community care services has increased substantially in recent years [1]. Home care provides the necessary health supports for medically fragile children and older adults, individuals with chronic diseases, disabilities or terminal illness, enabling them to live independently in their own homes close to their loved ones, family and community. This demand has grown primarily as a result of medical and technological advances, combined with health care cost pressures leading to fewer hospital beds, as well as a movement towards earlier patient discharge. Approximately 850 000 Canadians received home care services in 2002 [1].

At the provincial and territorial level, many jurisdictions have been relatively successful in implementing and coordinating home and community care services. However, home care falls outside the directives of the Canada Health Act, so there is no comprehensive policy framework for aligning services, and no assurance of transferability or equality of services among regions. Consequently, the services provided across the country differ dramatically in terms of service models and funding structures [2]. In an effort to address these fragmented services, the First Ministers committed to a 10-year plan [3] for the provinces and territories to provide first-dollar coverage for short-term post-hospital acute care, mental health care and palliative care.

Despite the increasing shift of medical care from hospital to home, the patient safety literature continues to focus on institutionalized settings. Although patient safety remains an important concern in hospitals, there is an urgent need to examine this issue in the unregulated home care environment. A strong research base is necessary to provide direction for evidence-informed safety initiatives in the home care sector.

Methods

A literature review and national consultation were undertaken to identify and explore central issues regarding safety in home care. The consultation involved a series of key informant interviews and an invitational roundtable. An advisory committee composed of both decision-makers and

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researchers working in the fields of safety and home care, provided guidance and feedback throughout the project.

Literature review

A search, limited to years 1995–2006, was conducted in MEDLINE, Cochrane Library and CINAHL to identify articles related to safety, risk mitigation, adverse events and home care. Grey literature was also retrieved. The websites and reports of patient safety institutes in Canada, UK, Australia and USA were examined [4–9]. Examples of patient safety definitions and safety-related concepts, conceptual frameworks and underlying assumptions that have influenced research on patient safety were reviewed.

Key informant interviews

Individuals who were well positioned to provide observations and expertise on the subject of safety in home care were identified in consultation with the advisory committee. Twenty key informants participated in individual 45 min, semi-structured, audio-taped telephone interviews with the lead author. Audio-tapes were transcribed. Participants were asked to: (i) define safety in home care, (ii) consider how safety issues differ between home care and hospitals/institutions, (iii) identify factors in the home that impact safety, (iv) describe gaps in knowledge and (v) propose research priorities.

Invitational roundtable discussion

The core team wrote a background paper summarizing the preliminary findings from the literature review and key informant interviews [10]. This paper was provided to participants of the roundtable held in Edmonton (Canada) to stimulate discussion on several topics: (i) key factors affecting safety in home care in Canada; (ii) evidence describing these factors and related knowledge gaps and (iii) ensuring continued dialogue and future work on patient safety in home care. The discussion was audio-taped and transcribed.

Data analysis

The key informant interviews and the roundtable transcripts were reviewed and coded by the researchers through content analysis. Common themes from the key informant interview and roundtable discussion data were then examined in light of findings from the literature. Emergent themes, which extend the dominant focus of patient safety in acute care settings, are presented here.

Results

Literature review

Six major reports [4–9] on patient safety and over 30 research articles were reviewed. Key findings are reported elsewhere [11].

Patient safety definitions emanate from acute care contexts; a definition specifically within the context of home care was not found. Definitions contained common elements of error reduction, risk mitigation, avoidance, management and treatment of unsafe acts and management of culminations of systemic failures [5–9, 12, 13].

Several key assumptions appeared to underlie the patient safety research in acute care settings. First, the term 'system' was most often used to mean an intra-organizational system rather than an inter-organizational system. These are regulated systems designed for providing health care with credentialed professionals and support staff who are guided by supervisors and administrators. Although the literature focuses predominantly on the physical safety of patients in acute care settings, there has been a shift towards recognizing the complexity of the system and how it affects patient safety, while moving away from the culture of blame. Second, it is assumed that those providing patient care are paid employees and/or work under the auspices of a 'supervising institution' [14]. Using such a model, administrators are expected to have the capacity and resources to shape the institutional environment socially (i.e. providing leadership for a change in the safety culture), organizationally (i.e. changing accountability and reporting structures for safety, ensuring continuity of care) and physically (i.e. providing the infrastructure required for assembling performance indicators on safety and managing technology). Third, patients admitted to a hospital provide consent for treatment by professionals working within that institution. As such, the environment for the delivery of care can be modified to provide protection for employees and patients [15].

Some of the emergent shifts in thinking that have taken place in the patient safety literature are pertinent to home care. These include the views that patient safety is now largely seen as a failure of systems rather than a failure of humans [2, 5], there are many change processes required to create safe environments [6], organizational culture and workplace factors affect patient safety [15] and patients have a key role to play in their care and thus must be part of the patient safety discourse [16].

Key informant interviews and roundtable discussion

The 20 key informants and the 40 roundtable participants (some of whom were the key informants) were from diverse disciplines (i.e. nursing, medicine, pharmacy, medical engineering), held a variety of positions (i.e. executive directors, presidents, academic researchers) and worked in different types of organizations (i.e. academic institutions, healthcare organizations, health authorities, professional associations). They were geographically based on seven Canadian provinces and one US state.

Despite their diverse profiles, there was considerable convergence in their perspectives. In general, informants agreed that the conventional institutional patient safety perspective does not fit well within the context of home care. Several core themes emerged from the interviews and discussions.

Safety of the client, family, caregiver and provider is inextricably linked. Clients are cared for in their homes and within the context of their family. Their health concerns are superimposed on their 'daily life' (i.e. family dynamics, finances, employment, health conditions of others etc.). Caregivers are a particularly vulnerable group with an increased risk for burnout, fatigue and depression. Providers are 'guests in people's homes' such that:

> '. . .The nurse is there for a very short period of time. . . .and needs to not only understand the patient and the family experience, but also to actually help families be active care participants. . . What you can't do. . . is treat family like furniture.'

Further to this, the safety challenges that providers face (i.e. uniqueness of physical home environments, excessive workloads, breadth and immediacy of knowledge required) also impacts the quality and appropriateness of the care they provide, and ultimately, the risks for themselves and for the care.

> 'I find it difficult to define patient safety as if it is something different than provider safety. . .if the provider (paid or unpaid) is not feeling safe, then the client, likely, is not safe. . . if I look at mobility issues for a client, [they also] tend to be mobility issues for providers. . .'

'Unregulated and uncontrolled settings, autonomy and isolation' are variables that impact on safety in home care. There is a distinct lack of uniformity in home care settings. Homes are not designed for healthcare. For example,

> '. . .factors that are often underestimated [are] the architectural obstacles. Not all houses are similar and because of those variations, some [homes] are not adaptable . . .to technology. . .we tend to assume that technology is what makes it possible and we don't necessarily look at how it also creates constraints.'

There are no national standards regarding the physical environment in which home care services are provided, a stark contrast to requirements for healthcare institutions.

A unique aspect in home care, which happens on clients' 'home turf', is that client/family/caregiver autonomy and choice are inevitably at the forefront. The provider can offer health education and recommend suggestions for care, but ultimately the clients/caregivers will decide. Thus, ethical care by providers must be closely aligned with the values, needs and decision-making of the clients and those around them. '[E]thics around balancing a safety agenda with quality of life and personal autonomy... [leads to] huge issues around trying to address safety in the absence of other considerations.'

Isolation is also a factor as many home care clients are elderly and live alone. This issue is heightened by difficulties in accessing professional support when the need arises and frequently results in clients/families having to access other urgent acute care resources instead. Providers are also relatively isolated in their work. They travel alone to places that can be challenging to access, they work predominantly without the proximal supervisory or collegial support of coworkers, and they often do not have timely and easy access to needed medical supplies, equipment and other resources.

'Communication on multiple levels' can heighten or diminish safety risks.

> '. . .[T]he greater the number of caregivers, and the more diverse their background, the more potential for confusion and miscommunications. . . . I'm not sure that you could even start to deliver good home care if you don't have a completely wired and connected set of caregivers. And that means a full electronic health record and full connectivity of the health providers that are linked.'

Coordination and communication among different providers and across organizations and sectors is a complex issue, especially notable at the interfaces along the continuum of care. It is problematic that there is no central repository for sharing client/family information. Participants noted that this created a gap in processes to manage care plans.

Multiple dimensions of safety include physical, emotional, social and functional. The range of physical environments (i.e. location within the community, homes' physical layouts), the diversity of recipients and providers of care, as well as the relationships among them, support the need to expand the definition of safety to include emotional, social and functional factors. 'Emotional safety' refers to the psychological impact of receiving/providing services. It is often distressing for a client/family to cope with their health condition and the corresponding home care services (i.e. learning to manage medications, health status changes, treatments, medical technology). 'Social safety' concerns where the client lives in the community, who lives with the client, who visits the home, and the nature of the client's social support network. 'Functional safety' is about how the health condition, the aging process and the provision of care affect activities of daily living and family functioning.

'The focus on prevention, health promotion and chronic care' has been impacted by a shift in the profile of home care clientele. Although the number of clients receiving 'chronic' services continues to increase, there is an additional load of 'post-acute' clients also being added to the equation. As a result, there is a decreasing emphasis on and capacity for prevention, maintenance and health promotion, which permits the surfacing and exacerbation of safety risks for those clients/families, who had previously been attended to.

There are also challenges of human resources and maintenance of competence. Insufficient human resource is a persistent problem in home care. This issue is pertinent for both professionals and unregulated workers (i.e. personal support workers, homemakers etc.). Key informants identified other factors that contribute to depleting human resources such as: lower wages for home care providers than those in acute care; variability in environments and working conditions; isolation; job insecurity due to employers continually losing or restructuring their home care service contracts; and the lack of resources and time devoted to continuing education and staff development. Participants emphasized that maintaining a breadth of general and specific knowledge and

skill by home care providers poses a significant safety challenge due to the diversity and varied frequency of health conditions and treatments in home care.

> 'It's the competency of the nurses. . .I struggled with that a lot as a manager, even if you were only doing a blood transfusion, you might get one and then not (another patient requiring a transfusion) for six months. . . So how do we ensure that our nurses are safe to provide the care? Do we have repeat sessions? Do we have repeat testing?'

These issues are not only exclusive to providers, but also pertain to the clients and their families and caregivers who are charged with increasing volumes and complexity of care.

> 'The caregivers are often the ones left caring for the clients in the home. They don't have the proper equipment, they don't. . .necessarily have the proper training. They may not have the cognitive ability to take in whatever training they get. We have a home care system where the funder expects families to pick up this caregiving piece.'

Human resources and competency issues are heightened by: the trend for earlier discharge from hospitals and the corresponding increase in the acuity of clients receiving home care services; the lack of resources for continuing education and proficiencies; and the isolated nature of the practice of home care.

Additional deliberation regarding research priorities occurred at the roundtable. There was consensus on the need for a national survey to identify the main safety issues for home care as well as for qualitative studies to elicit the front-line stakeholders' (i.e. client, family, caregiver, provider) perceptions around safety. Concern was expressed about the urgency for successful knowledge transfer and exchange strategies. In particular, there are domains where high-level evidence exists (i.e. wound care, medication reconciliation and falls prevention) to inform appropriate risk-mitigating practice, yet this evidence is not consistently integrated across the continuum of care. The need for education and mentoring in home care was also raised—especially in terms of communication among providers. Infrastructures and resources to support evidence-informed practice were further issues of concern. Raising awareness of the issues of home care safety among policy- and decision-makers was seen as an essential strategy in furthering this safety agenda—because home care is often the 'invisible member of the healthcare sector.'

Discussion

Although the safety literature in the context of home care is limited, a broader field of research includes health promotion and chronic illness management interventions by home care providers. Although such studies do not directly address safety, they may generate further insights of relevance for research on safety in home care.

Shifts in perspectives on patient safety are reflected in major reports, research studies and institute programs that are leading this agenda. Patient safety is increasingly viewed as a failure of systems rather than of humans [2, 5]. This systems thinking has been fuelled by lessons learned from other sectors and disciplines with a history of addressing adverse events [17].

The importance of workplace factors (i.e. leadership, governance, employee fatigue, team communication) has gained more prominence [6]. However, a patient safety agenda in home care needs to consider a very different kind of workplace. Some salient characteristics of the home care work environment are the isolation from other colleagues and supervisors, the unique characteristics of each home setting and disjunctures in communication among professional and unregulated home care providers between the home care and acute care sectors. Furthermore, while the physical environment in institutionalized settings can be modified to provide protection and mitigate the risks for employees, this is much more difficult to address in home care. This pertains to the structural environment, technology (designed for hospitals but used in homes) and supplies that need to meet certain quality and safety standards. It also applies to existing policies and procedures [17, 18].

Although promoting patient safety cultures within organizations sets the tone for quality improvement [15]; it is unclear how readily this can be communicated to informal caregivers in the home care sector. Increasingly, clients are seen as playing a significant role in their care. It follows that they must also be part of the discourse on patient safety [16]. Key informants highlighted the importance of involving family members and caregivers in this consultative process as well.

It is recognized that creating a safer environment for patients involves 'multiple processes of change, including organizational and practice change' [6]. Some authors have identified the need for common frameworks, taxonomies and indicators to inform the development of complementary approaches for assessing and ensuring safety among healthcare organizations [14]. Although no framework specifically developed for home care safety was identified, there are frameworks that hold relevance and applicability within the home care context. The frameworks focus on relationships between law and patient safety [19], safe healthcare systems [15], components of effective system change strategy [4] and adverse events [20].

One promising 'school' of conceptual frameworks that has begun to inform some safety research subscribes to socio-ecological views of systems and communities [21, 22]. This type of framework supports a multidimensional perspective on safety as well as the need to address safety issues in home care from an inter-organizational context, which considers clients, family, caregivers and providers as key players in the 'system' [16, 17]. Unlike paid employees working under the auspices of a 'supervised institution', most of the care provided in the home is by family and/or caregivers under the indirect 'supervision' of a nurse or other health professional. In contrast to healthcare employees, clients, family members and caregivers are not bound by standards and do not report to a supervisor. As such, in the home, they ultimately have control and thus can choose to place their preferences ahead of the evidence. The fact that recipients and providers may

or may not agree on how to proceed also provides a unique set of challenges which differ from those in the hospital setting where the professionals predominantly direct and provide the care.

With such a framework in mind, research is urgently needed to advance our understanding of these issues and challenges in order to build on this foundational portrait of safety in home care. To this end, a summary of possible research questions arising from the synthesis of findings from the literature, key informant interviews and roundtable discussion has been developed (Table 1).

Conclusion

Home care is one of the most rapidly growing components of the Canadian health system which demands attention [23, 24]. Research on safety in home care is needed to identify: the types and patterns of safety concerns for clients, family members, caregivers and providers; how family involvement in care delivery affects safety; the challenges of regulating and controlling home care variables; how to attend to safety given that some variables cannot be regulated or controlled; the impact of advances in treatments, assistive devices, medications and technology on safety; the patterns and health/illness profiles of home care clientele; and the challenges of transitions, communication and continuity of care amongst an array of recipients as well as paid and unpaid providers. Addressing safety in home care presents unique challenges and requires a major rethink of underlying assumptions and guiding frameworks that have been used to examine patient safety in institutional settings. Leading edge research in this field will require inter-disciplinary teams of researchers, practitioners and decision- and policy-makers using a wide array of research and knowledge translation/exchange methods.

Table 1 Examples of proposed questions for future research about safety in home care

What are the major safety concerns (i.e. physical, emotional, functional and social) for clients, family, caregivers and providers?
What are some appropriate strategies for preventing and mitigating safety risks in the home?
What are the key elements for developing and evaluating a communication infrastructure? (in particular the electronic communication)
How can continuity across the continuum of care be facilitated so as to improve client safety?
What is the influence of the increased proportion of funding and services directed at post-acute care clients compared to funding aimed at prevention and health promotion for clients with chronic co-morbid health conditions?
What is the impact of caregiver burden on the physical, emotional, functional and social safety of clients, families, caregivers and providers?
What are the costs in terms of resources as well as health and well being of not attending to prevention, health promotion and mitigating safety risks (the 'cost of doing nothing')?
What are some effective strategies and initiatives to increase safety (mitigate risks) given the uniqueness and diversity of each home care situation (i.e. human factors principles)?
Which knowledge transfer strategies for evidence-based home care practice (i.e. medication reconciliation and wound care) are effective in this sector?

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