TOURANGEAU OUTCOMES RESEARCH

SUMMARY REPORT

Examining the Impact of Home Care Nurse Staffing, Work Environments and Collaboration on Patient Outcomes:
A Scoping Literature Review

Open Full Review

Overview

In Canada, it is estimated that up to 80% of paid home care services are provided by unregulated care providers (UCP)[1]. UCPs are not licensed or regulated by a professional or regulatory body and there is significant variation in the education and expectations of these providers nationally and internationally. Further, the home care work environment is unique, as providers usually work alone to provide care in the patients' home. Compared to institutional healthcare settings, home care is delivered in unpredictable, complex environments. Minimal research examining home care work environments in Ontario, Canada exists and little is known about the structures and processes of home care delivery, including how nursing care activities are delegated, taught and assigned to UCPs. This literature review aimed to examine existing research related to the structures, processes and outcomes of home-based nursing care with a focus on the delegation, teaching and supervision of nursing care activities by UCPs.

Methods

A scoping review was undertaken to address three broad research questions:

1. What are the structures of care in the home care sector?
2. What are the processes of care in the home care sector?
3. What are important outcomes in the home care sector?

To address these broad questions, seven specific research questions were posed and answered. As few articles were located for some of the questions, certain questions were answered together.

Results

Which nursing care activities are provided by Registered Nurses (RNs), Registered Practical Nurses (RPNs) and Unregulated Care Providers (UCPs) in home care?

The majority of home-based care provided by nurses falls into three categories 1) assessment, 2) intervention, and 3) teaching / patient education. In the literature, nurses were found to cover a wide range of activities in the home including highly technical activities such as dialysis and wound care as well as personal care such as bathing and toileting. More often, nurses provide complex care such as colostomy and wound care, monitoring blood glucose, administering injections, medication administration and management and palliative care. While no research was located examining the differences in care activities performed by RNs and RPNs, RNs are expected to demonstrate greater breadth of knowledge and skills that include patient assessments, care coordination and developing care plans[2]. RPNs, on the other hand, provide more direct patient care and labour intensive activities[3].

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[2] Armstrong-Stassen, M., and Cameron, S.J. (2005). Concerns, satisfaction, and retention of Canadian community health nurses, *Journal of Community Health Nursing,* 22(4), 181-194.
[3] Williams, A.M., (2006). Restructuring home care in the 1990s: Geographical differentiation in Ontario, *Canada. Health & Place,* 12(2), 222-238.

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As patients at home require increasingly complex care, the role of UCPs has expanded and frequently includes patient care, traditionally performed by nurses. These care activities are delegated or taught and include urinary intermittent catheterization, injections and medication administration. In addition to care being provided by nurses and UCPs, a large proportion of informal caregivers are providing help with increasingly complex nursing tasks such as care for pressure ulcers, urinary catheters and colostomies. Key findings from this synthesis include:

- ✓ There is little consensus on what components of care constitutes "nursing care activities" due evolving provider roles. Care activities once considered nursing care are now being performed by UCPs.
- ✓ UCPs are increasingly performing controlled nursing acts in home care. In Ontario, this care is being delegated to UCPs or taught and assigned when care is considered an activity of daily living.
- ✓ In addition to nurses and UCPs, patient care activities as well as nursing care activities are performed by family members and other unpaid caregivers who also need to be considered when teaching and assigning care.

What is the relationship between care provider type and patient outcomes in home care? What is the relationship between care provider mix and patient outcomes in home care?

Much of the existing home care literature fails to focus on care provider type and mix related to patient outcomes making it difficult to draw definitive conclusions around the relationships between care provider type/skill mix and home care patient outcomes. Findings suggest there is benefit to offering increased intensity of care services utilizing a home care staffing model with highly educated and experienced nurses working in collaborative multi-disciplinary healthcare teams[4],[5]. The positive impact of nurse level of education and years of experience[6] on patient outcomes has implications for the allocation of nursing resources for home care patients.

As home care providers usually work alone, the literature suggests that it may be important for all patients to be cared for by a combination of RNs and RPNs as well as new and experienced nursing care providers[7]. Further, the positive impact of multi-disciplinary healthcare teams emphasizes the importance of care provider collaboration as opposed to the delegation or substitution of one type of care provider for another[8]. While the existing research begins to address care provider type, further research examining skill mix in the home care setting is needed. In general, home care patients showed improved health status when receiving increased care services from a combination of nurses and UCPs. Conclusions drawn from this synthesis include:

- ✓ Findings suggest there is benefit to offering increased intensity of care services with highly educated experienced nurses working in collaborative multi-disciplinary healthcare teams.

[4] Cucinotta, D., Savorani, G., Piscaglia, F., Galletti, L., Petazzoni, E., & Bolondi, L. (2004). The chronically ill elderly patients discharged from the hospital: Interim report from a controlled study of home care attendance. *Archives of Gerontology and Geriatrics,* Suppl. 9: 103-108.
[5] Seow, H., Barbera, L., Howell, D., & Sydney, M. (2010). Using more end-of-life homecare services is associated with using fewer acute care services. *Medical Care*, 48(2): 118-124
[6] O'Brien-Pallas, L-L., Doran, D. I., Murray, M., Cockerill, R., Sidani, S., Laurie-Shaw, B., & Lochhaas-Gerlach, J. (2002). Evaluation of a client care delivery model, part 2: Variablity in client outcomes in community home nursing. *Nursing Economics*, 20(1): 13-36.
[7] O'Brien-Pallas, L-L., Doran, D. I., Murray, M., Cockerill, R., Sidani, S., Laurie-Shaw, B., & Lochhaas-Gerlach, J. (2002). Evaluation of a client care delivery model, part 2: Variablity in client outcomes in community home nursing. *Nursing Economics*, 20(1): 13-36.
[8] Vetter, J.V., Bristow, L., & Ahrens, J. (2004). A model for home care clinician and home health aide collaboration. *Home Healthcare Nurse*, 22(9): 645-648.

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- ✓ Literature suggest that increased service intensity results in improved patient health status however additional research is needed to better understand how the intensity of nurses versus UCPs impact home care patient outcomes.

What is the relationship between continuity of care provider and patient outcomes in home care?

Maintaining continuity of care can be especially challenging with the home care population as various care providers and organizations are responsible for the provision of integrated care. This review defined continuity of care as ongoing care provided by the same care providers to patients in their homes and examined how continuity related to patient outcomes. Although the existing literature begins to provide insight into the relationship between continuity of home health services and subsequent healthcare utilization, results may not generalize to specific patient outcomes and to the current Canadian home care setting. Additionally, while the existing literature examines continuity of nursing care, continuity of other care provider types such as personal support workers was not located.

Two studies were found to support a positive relationship between continuity of care and home care patient outcomes[9],[10]. Patients receiving poor continuity of care were more likely to be hospitalized and to visit the emergency department than those with high levels of continuity of care. From these publications, the following conclusions have been made:

- ✓ Home care patient outcomes are positively associated with continuity of care provider.
- ✓ Continuity of care decreases utilization of additional health care services (i.e., hospitalization and emergency department visits).
- ✓ Existing literature focuses on continuity of nurses, continuity of other types of providers is not examined.

What is the relationship between nurse substitution, healthcare cost, and patient outcomes?

This review sought to examine the relationship between nurse substitution (by UCPs), healthcare costs, and patient outcomes in home care. However, no research was located examining these concepts in the context of home care. Rather, available literature focuses on nursing skill mix in institutional settings (e.g., hospitals, long-term care facilities, etc.). Increased use of UCPs in institutional settings has been associated with decreased quality of care, increased absenteeism, higher overtime, increased RN workloads, and greater turnover of UCPs[11],[12]. Additionally, employing a higher proportion of nurses has been found to increase patient satisfaction, improve recovery rates, increase quality of care, improve patient knowledge and compliance with treatment, increase staff productivity and reduce absenteeism as well as sick time, turnover, and overtime[13]. Conclusions from this synthesis include:

[9] Russell, D., Rosati, R.J., Rosenfeld, P. & Marren, J.M. (2011). Continuity in home health care: Is consistency in nursing personnel associated with better patient outcomes? *Journal for Healthcare Quality* 33(6):33-39.
[10] D'Errico, E. M. & Lewis, M. A. (2010). RN continuity in home health: Does it make a difference? *Home Health Care Management & Practice, 22*(6): 427-434.
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[12] McKenna, H. P. (1995). Nursing skill mix substitutions and quality of care: an exploration of assumptions from the research literature. *Journal of Advanced Nursing, 21,* 452-459.
[13] McKenna, H. P. (1995). Nursing skill mix substitutions and quality of care: an exploration of assumptions from the research literature. *Journal of Advanced Nursing, 21,* 452-459.

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- ✓ No literature examining nurse substitution in relation to cost and patient outcomes in the home care context was located. Rather, available literature focuses on nursing skill mix in institutional settings.
- ✓ Evidence about the relationship between skill mix, cost, and patient outcomes was found to be limited and of poor quality.
- ✓ No conclusive evidence was found to support the cost effectiveness of nurse substitution.
- ✓ Existing evidence supports the use of higher proportions of RNs to achieve improved patient outcomes.

How are nursing care activities delegated in home care? What are nursing and PSW perceptions around delegated care?

While there is ample literature to suggest that UCPs are performing delegated tasks in the home, we were unable to locate any literature that describes the process of how or how often this occurs. There are provincial regulations[14] and professional practice guidelines[15] surrounding when and how nursing care activities can be delegated in Ontario, however, how these policies translate into practice in the home care setting is unclear.

Few studies were found that directly examined nurses' perceptions around delegated care in the home. International literature suggests that nurses are comfortable delegating routine care to UCPs, but are not always able to differentiate what is routine and what is not. Nurses felt it was appropriate and often necessary to delegate 'established' care to UCPs, yet they agreed this is not always easy to achieve as patient care needs are continuously evolving[16]. Nurses reported feeling forced to delegate and expressed concern over the level of competence and skill of UCPs to perform controlled nursing tasks[17].

Literature examining how UCPs perceiving delegated care is lacking. There are mixed perceptions from UCPs where some felt positively about the transfer of skills through delegation while a small number of UCPs felt delegation may negatively affect intention to remain employed, specifically due to reimbursement not reflecting the complexity of tasks they are asked to perform. Conclusions from this synthesis include:

- ✓ No literature was found examining the process of how delegation occurs in the home care setting.
- ✓ Evidence about the perceptions of nurses and UCPs around delegated care was scarce and focused mainly on nurses.
- ✓ Evidence found was from international studies and may not be useful to draw direct conclusions about home care in Ontario.

Conclusion

Limited literature was located to address each of the seven research questions posed for this review. While ample literature exists examining skill mix, continuity of care, and delegation of nursing care in institutional settings, few studies were located examining these concepts in home care. Further, skill mix, continuity of care and delegation were seldom examined in relation to important home care patient outcomes. This review of the literature highlights the need for additional research examining home care patient outcomes in Ontario and the impact of changing skill mix, increasing delegation, and maintaining continuity of care.

[14] Ontario Regulation 268/13. (2013). Made under the Nursing Act, 1991. Retrieved from Service Ontario e-laws: http://www.e-laws.gov.on.ca/html/source/regs/english/2013/elaws_src_regs_r13268_e.htm

[15] College of Nurses of Ontario (CNO). (2013). *Practice guideline: Working with unregulated care providers.* Toronto, ON

[16] Carr, S. & Pearson, P. (2005). Delegation: perception and practice in community nursing. *Primary Health Care Research and Development,* 6, 72-81.

[17] Bystedt, M., Eriksson, M. & Wilde-Larsson, B. (2011). Delegation within municipal health care. *Journal of Nursing Management*, 19, 534-541

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