STRUCTURES OF POST-ACUTE HOME CARE SERVICE DELIVERY AND EXTENDED HOME CARE LENGTH OF STAY AMONG ONTARIO SENIORS

What is this project about?

Patients discharged from hospital utilize a variety of post-acute home care services to support their recovery in the community. However, little is known about the impact of the structures of post-acute home care delivery on patient outcomes. As a result, home care agencies are forced to make decisions about the optimal mix and pattern of home care visits based on tradition and availability of services, rather than evidence.

What did we do?

To identify which structures of home care impact length of stay for seniors receiving post-acute home care, administrative data were analyzed using multivariate logistic regression. Data from the Discharge Abstract Database, the Home Care Database, and the Registered Persons Database were linked to create the dataset. Seniors aged 65 years and older who received post-acute home care services between April 1st, 2009 and March 31st, 2012 were included in the study.

Age, sex, case mix group, hospital length of stay, previous home care utilization and the number of hospitalizations in the past 30 days were included in the analysis to control for some of the known sources of variation related to patient acuity.

To examine the impact of the volume and pattern of visits from home care providers, we included nursing visit intensity, case management visit intensity, receipt of allied health visits, receipt of personal support visits and frontloading of nursing visits. The geographical region of care provision, month of admission and wait time for service were also included in the model.

Findings

Sample characteristics and the structures of post-acute home care are summarized in Table 1 and 2.

Table 1: Patient Characteristics

	N = 15,298
Mean age in years (SD)	74.1 (6.6)
Percent female	37.8%
Hospital length of stay in days (SD)	6.0 (7.2)
Previous home care utilization	5.2%
Hospitalizations within 30 days	
One hospitalization	96.7%
Two hospitalizations	2.9%
Three + hospitalizations	0.4%

Table 2: Structures of Care

	N = 15,298
Average nursing visits per week (SD)	2.18 (1.7)
Nursing visits per week	
• Zero to 2 visits	56.2%
• 2 to 5 visits	36.2%
• More than 5 visits	7.7%
Wait time for first visit	
• Less than 1 day	85.3%
• 2 to 5 days	13.1%
• More than 5 days	1.6%

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Allied health visit	
• No allied health visit	85.4%
• Received allied health visit(s)	14.6%
Care coordinator visit	
• No care coordinator visit	63.1%
• Received one visit	28.6%
• Received more than one visit	8.4%
Personal Support and Homemaking Services	
• No personal support or homemaking	95.5%
• Received personal support and/or homemaking visit(s)	4.6%
Frontloaded pattern of nursing visits	73.0%

Higher intensity of nursing visits, not receiving a frontloaded pattern of nursing visits, receiving allied health visits, receiving case management services, receiving home support services, being admitted at the start of the fiscal year and receiving care in 7 of the 14 Local Health Integration Networks predicted home care stays lasting greater than 60 days.

How can you use this information?

Likely results partially reflect patient acuity and need with sicker patients receiving more care from a wider range of providers. However, frontloading of nursing visits is a concept that warrants further investigation. Frontloading of nursing visits was defined as providing 60% or more of the total visits within the first two weeks of admission. Earlier studies of frontloading home care visits demonstrated that this visit pattern significantly reduced length of stay and total number of visits[1]. Similarly, in our study, a frontloaded visit pattern significantly reduced the risk of extended length of stay.

Frontloading nursing visits may help post-acute home care patients adjust to the reduction in formal care from the hospital environment to the home environment. Additionally, any potential difficulties with discharge instructions and teaching may be addressed early on in the post-acute period. As patients report the first week following hospital discharge to be the most difficult[2] and with re-hospitalization occurring most frequently during the first few weeks of care[3], finding effective visit patterns that can assist patients in the transition back to the community is of great importance.

About the Researchers:

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Where can you find more information about this project?

Information regarding this project and other resources is available on www.tourangeauresearch.com and www.nhsru.com

[1] Rogers, Perlic, & Madigan (2007). The Effect of Frontloading Visits on Patient Outcomes. Home Healthcare Nurse, 25(2): 103-109

[2] Simon, Showers, Blumenfield, Holden & Wu (1995). Delivery of Home Care Services After Discharge: What really happens. Health and Social Work, 20 (1): 5-14

[3] Madigan, Schott & Matthews (2001). Rehospitalization among home healthcare patients with heart failure. Home Healthcare Nurse, 19: 298-305

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