

## **Title of Systematic Review Protocol**

*A Systematic Review of Continuity of care and its role in patient satisfaction and decreased hospital admissions in the adult patient receiving home care services*

## **Reviewers**

Gwendolyn D. Costantini MS, RN, FNP-BC, DNPc<sup>1</sup>, Michele McDermott MS, RN, FNP-BC, DNPc<sup>2</sup>, Denise Primiano MS, RN, FNP-BC, DNPc<sup>3</sup>, Michelle Santomassino MS, RN, FNP-BC, DNPc<sup>4</sup>, Jason T. Slyer DNP, RN, FNP-BC<sup>5</sup> and Joanne K. Singleton PhD, RN, FNP-BC, FNAP<sup>5</sup>

<sup>1</sup>Pace University, New York, NY. Contact: [gc01264p@pace.edu](mailto:gc01264p@pace.edu)

<sup>2</sup>Pace University, New York, NY. Contact: [mm77309n@pace.edu](mailto:mm77309n@pace.edu)

<sup>3</sup>Pace University, New York, NY. Contact: [dp70377p@pace.edu](mailto:dp70377p@pace.edu)

<sup>4</sup>Pace University, New York, NY. Contact: [ms92753p@pace.edu](mailto:ms92753p@pace.edu)

<sup>5</sup>Pace University, New York, NY; The New Jersey Center for Evidence Based Nursing: A collaborating Centre of the Joanna Briggs Institute at the University of Medicine and Dentistry of New Jersey.

Contact:

[jsingleton@pace.edu](mailto:jsingleton@pace.edu)

## **Centres submitting review**

Pace University, College of Health Professions, Lienhard School of Nursing and New Jersey Center for Evidence Based Practice at UMDNJ School of Nursing; A Collaborating Centre of the Joanna Briggs Institute

## **Review question/objective**

The overall objective of this systematic review is to determine the best available evidence related to the effectiveness of continuity of care interventions on patient outcomes.

The specific review questions to be asked are:

- What continuity of care interventions are most effective in improving patient satisfaction in adult patients receiving home care services?
- What continuity of care interventions are most effective in reducing all-cause hospital readmission rates among adults receiving home care services?

## Background

Over the past several years, international efforts have heightened to ensure the delivery of high quality patient care and simultaneously curtail health expenditures. In order to determine which current practices would benefit from improvement and to further identify effective interventions, outcome measures must be analysed. Two outcomes that are employed worldwide as measures of success include patient satisfaction and hospital readmission rates.

Patient satisfaction is recognised as the patient's perception of the care he is receiving. Providers have come to believe that this is an important indicator of health care quality. Many practices provide their clients with satisfaction surveys, which are then analysed in order to learn where changes might be made. Health care has become a competitive market and Internet technology has empowered patients, which has led them to be identified as health care consumers. Their satisfaction is crucial to positive outcomes as it is linked to patient trust<sup>1</sup>. A patient who trusts his clinician is more likely to: seek guidance from that provider; follow pertinent advice; and report symptom improvement<sup>2</sup>. These are all essential elements to maintaining an optimal health status and decreasing the use of hospitals and emergency rooms.

Hospital readmission rates are identified as the number of recurrent hospitalisations by a single patient over a specific timeframe. The exorbitant cost of a hospitalisation is without question and it has been evidenced that a proportion of readmissions are avoidable<sup>3</sup>. The United States government has now imposed payment regulations on health care institutions when a patient with Medicare insurance is brought back into the hospital within 30 days of discharge. Not only are the hospitals not being reimbursed for this patient population, they are also subject to fines. Readmissions give insight into quality so providers are beginning to look beyond the 30-day timeframe imposed by Medicare and realising that recurrent admissions within longer time periods are also an issue. This has been a major driving force behind prioritisation of this outcome.

Continuity of care is a concept that is being explored internationally. It describes the connection and coordination of care between patients and providers across time and settings<sup>4</sup>. Numerous studies have evidenced a positive correlation between continuity and patient outcomes including health care utilisation and patient satisfaction<sup>5,6</sup>. A systematic review consisting of 139 English language retrospective cohort and cross-sectional design studies from the years 2000 to 2005, that investigated the exploration between continuity of care and outcomes identified that health care utilisation is decreased and patients are happier when continuity of care is present<sup>5</sup>. In a literature review consisting of 32 English language clinical trials taking place between the years of 1996 and 2005; that looked at continuity of care in the chronically ill patient, a positive correlation was also noted<sup>6</sup>. It has been evidenced when looking at patient satisfaction alone, results were not consistently linked to high continuity<sup>1</sup>. In a systematic review consisting of 12 English language studies of various designs; that explored this variable singularly, it was ascertained that satisfaction was dependent on the patient's perception of continuity<sup>1</sup>. Therefore, it would appear that there is connection between high levels of patient satisfaction and continuity of care that needs to be explored.

The World Health Organization, an agency responsible for providing leadership in global health matters, is involved in a number of continuity of care projects across various disciplines around the world. They support the idea of patient-centred care and believe that continuity is a provider's responsibility in ensuring this provision<sup>7</sup>. The Joint Commission International has identified continuity in their hospital standards for accreditation that focus on continuity as a factor to ensure patient safety<sup>8</sup>.

Continuity of care has different meanings to different stakeholders. In a multidisciplinary review of the concept of continuity of care, various perceptions were identified. In primary care, continuity is viewed as the relationship between one patient and one clinician. In the field of acute care nursing, continuity is viewed as communication between nurses, and in mental health it is viewed as a consistent relationship between a patient and a team of clinicians with accessibility playing a key role<sup>9</sup>. As noted earlier, the two fundamental elements to continuity, regardless of setting, are care of a patient and care over time. Three types of continuity exist in every discipline; informational, management and relational<sup>9</sup>. Information continuity focuses on communication between providers over time and is concerned with more than just medical data but important personal knowledge that is necessary for caregivers to form a trusting bond with the patient. Management continuity focuses on the care of the patient with multiple co-morbidities who is managed by multiple providers. It centres around the importance of shared management plans so that all clinicians are working together to optimise the patient's health. Relational continuity bridges care across the past, present and future. There exists a set of core providers who establishes predictability for the patient<sup>9</sup>. The context of care determines which of these three types of continuity are employed.

As is evidenced from the literature, continuity of care is important to improved patient outcomes, which is the reason for efforts around the world to focus on practice improvement in this area<sup>5,6</sup>. These efforts include continued research on practice changes to support continuity as well as clinician education on this concept. Numerous sectors of the health care industry have created position statements to stress the value of prioritising strategies to improve continuity in the provision of cost-effective high quality care. Examples of organisations include the American Medical Association and the Alberta Association of Professional Nurses<sup>10,11</sup>.

Home care is a critical segment of patient care where continuity is fundamental to the patient's ability to achieve optimal health goals. Clinicians in this field provide care to patients with multiple co-morbidities. The clients receive regular visits by a health care provider, ensure that patients have and are taking their medications and have the ability to identify issues that may result in hospital readmissions. The goal of home care is to provide a trusting relationship between patient and providers as well as open access to health care. At present a policy statement does not exist for this sector but there is strong interest in exploring the concept of continuity and planning improvement strategies to positively impact care. A preliminary search of Medline, CINAHL, JBI Library of Systematic Reviews was performed and no existing or ongoing systematic review on this topic was identified.

## **Inclusion Criteria**

### **Types of participants**

The review will consider studies that include all adults, male and female (aged 18 years old and above) receiving home care services, regardless of diagnosis, stage or severity of disease, co-morbidities, and previous treatment received.

### **Types of interventions/phenomena of interest**

This review will consider studies that evaluate all models/types of interventions for continuity of care of adult patients delivered by registered nurses in home care settings.

**Comparator:** no intervention

### **Types of outcome measures**

This review will consider studies that include the following outcome measure, but not limited to:

- All-cause hospital readmissions measured as patients who experience an unplanned admission to the same hospital, a different hospital, or another acute care facility for the same diagnosis or for a different diagnosis.
- Patient satisfaction measured by patient self-report.

### **Types of studies**

The review will consider randomised controlled trials. In the absence of randomised control trials other research designs, such as non-randomised controlled trials, quasi-experimental studies, and before and after studies will be considered for inclusion to enable the identification of current best evidence.

## **Search strategy**

The search strategies used will seek published and unpublished full text studies written in the English language from the inception of the databases to the current date. A three-step strategy will be used in this review. An initial limited search of MEDLINE and CINAHL using EBSCOhost will be undertaken followed by an analysis of the text contained in the title and abstract, as well as the index terms used to describe the article. A second search using all of the identified keywords and index terms will be undertaken across all included databases. Thirdly, the reference list of all identified reports and articles will be searched for additional studies. Studies identified through reference list searches will be assessed for relevance based on the study title.

The databases that will be used include but are not limited to: Academic Search Premiere, CINAHL, Clin-eguide, Embase, ERIC, Health Reference Center, Health Source Nursing Academic, MEDLINE, Nursing & Allied Health Source, Ovid, ProQuest Health Management, and PsycINFO.

Grey literature sites to be explored are: Dissertation Abstracts online, Google scholar, government health department websites, Institute of Medicine, UpToDate.com, the Virginia Henderson Library of Sigma Theta Tau International and any relevant home care web sites.

In employing the search strategy of reviewing the reference list of relevant articles, a hand search of appropriate journals (e.g. Journal for Healthcare Quality, Journal of Health Services Research and Policy, Journal of the American Geriatrics Society, Home Healthcare Nurse, Home Health Care Management and Practice) will be done as well. The references of chosen studies will be searched to find the entire texted document for studies that meet the inclusion criteria.

Keywords contained within the title will be used to narrow relevant articles. The initial keywords that will guide this initial review are: continuity of care, patient satisfaction, admissions, adult and home care

A full list of keywords to be used will be developed following the first stage of searching (as detailed above), and are thought to contain: continuity of care, patient satisfaction, decreased hospital admissions, continuity, continuity of patient care, care pathways, integrated care, home care, home care services, hospital, hospital admissions, readmissions, patient care, patient outcomes, acute care, acute patient care, and post-discharge.

All material identified as being relevant to the review objectives will be examined. If the material from the search is deemed to be relevant then full text articles of the studies will be retrieved, and then assessed to determine if they meet the inclusion and exclusion criteria.

### **Assessment of methodological quality**

Quantitative papers selected for retrieval will be assessed by two independent reviewers for methodological validity prior to inclusion in the review using standardised critical appraisal instruments from the Joanna Briggs Institute Meta Analysis of Statistics Assessment and Review Instrument (JBI-MAStARI) (Appendix I). Any disagreements that arise between the reviewers will be resolved through discussion, or with a third reviewer.

### **Data collection**

Quantitative data will be extracted from papers included in the review using the standardised data extraction tool from JBI-MAStARI (Appendix II). The data extracted will include specific details about the interventions, populations, study methods and outcomes of significance to the review question and specific objectives.

If necessary, the reviewers may contact the principal investigators for data clarification.

### **Data synthesis**

Quantitative papers will, where possible be pooled in statistical meta-analysis using JBI-MAStARI. All results will be subject to double data entry. Effect sizes expressed as odds ratio (for categorical data) and weighted mean differences (for continuous data) and their 95% confidence intervals will be calculated for analysis. Heterogeneity will be assessed statistically using the standard Chi-square and also explored using subgroup analyses based on the different

quantitative study designs included in this review. Where statistical pooling is not possible the findings will be presented in narrative form including tables and figures to aid in data presentation where appropriate.

### **Conflicts of Interest**

There are no conflicts of interest regarding this systematic review

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## Appendix I – JBI Appraisal instruments



### MAStARI - Meta Analysis of Statistics Assessment and Review Instrument

Reviews
Study
Logout
About

Select

Detail

Assessment

Extraction

Results

Meta-Analysis

**Assessment for : Author - Journal (2011)**

Type: Primary  
 User: catalin1  
 Design: Randomised Control Trial / Pseudo-randomised Trial

Criteria	Yes	No	Unclear	Not Applicable	Comment
1) Was the assignment to treatment groups truly random?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input style="width: 100%;" type="text"/>
2) Were participants blinded to treatment allocation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input style="width: 100%;" type="text"/>
3) Was allocation to treatment groups concealed from the allocator?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input style="width: 100%;" type="text"/>
4) Were the outcomes of people who withdrew described and included in the analysis ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input style="width: 100%;" type="text"/>
5) Were those assessing outcomes blind to the treatment allocation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input style="width: 100%;" type="text"/>
6) Were the control and treatment groups comparable at entry?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input style="width: 100%;" type="text"/>
7) Were groups treated identically other than for the named interventions?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input style="width: 100%;" type="text"/>
8) Were outcomes measured in the same way for all groups?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input style="width: 100%;" type="text"/>
9) Were outcomes measured in a reliable way?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input style="width: 100%;" type="text"/>
10) Was appropriate statistical analysis used?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input style="width: 100%;" type="text"/>

Include Undefined

Reason


Update
Undo
Cancel

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## Appendix II – JBI Data extraction instruments

### MAStARI data extraction instrument



**MAStARI - Meta Analysis of Statistics Assessment and Review Instrument**

Reviews Study Logout About

Select  
Detail  
Assessment  
Extraction  
Results  
Meta-Analysis

**Extraction Details: Author - Journal (2011) - Randomised Control Trial / Pseudo-randomised Trial**  
**Study Information**

\* denotes field which will appear in report appendix

Method \*

Setting

Participants \*

# Participants Group A:  Group B:

Interventions Interventions A: \*

Interventions B: \*

Authors Conclusion

Reviewers Comments \*

Complete Yes

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- Select
- Detail
- Assessment
- Extraction
- Results
- Meta-Analysis

Dichotomous Results for: Author - Journal (2011)

Intervention	Result	
	n	N
New Abbreviation	<input type="text"/>	<input type="text"/>
<b>V</b>		
New Abbreviation	<input type="text"/>	<input type="text"/>

[< back](#) [DBL Data Entry](#) [Delete Results](#)



- Select
- Detail
- Assessment
- Extraction
- Results
- Meta-Analysis

Continuous Results for: Author - Journal (2011)

Intervention	Result		
	Mean	SD	N
New Abbreviation	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>V</b>			
New Abbreviation	<input type="text"/>	<input type="text"/>	<input type="text"/>

[< back](#) [DBL Data Entry](#) [Delete Results](#)