Linking the Context of Home Care Work Environments, the Documentation of Best Practices, and Client Outcomes

Diane Doran, RN, PhD, FCAHS
Lawrence S. Bloomberg Faculty of Nursing
University of Toronto
Research Team

Dr. Diane Doran (PI, NHSRU at U of T)
Nancy Lefebre (Saint Elizabeth )
Dr. Carole Estabrooks (U of Alberta)
Dr. Linda O’Brien-Pallas (U of T)
Winnie Sun (PhD candidate, U of T)

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Attendee Objectives

- Describe contextual factors that influence client outcomes in home care settings
- Identify the relationship between the documentation of evidence-based interventions and specific client outcomes
Study Purpose

To investigate the relationship between documentation of evidence-based interventions and home care client outcomes, specifically pain, dyspnea, pressure ulcers and falls.

To describe contextual factors that influence client outcomes in home care settings.
Knowledge Gaps

- Lack of comprehensive understanding of how client, nurse, organizational factors, and implementation of BPGs impact client outcomes in home care.

- This information is critical to planning care delivery models and health human resources for nursing in the home care sector.
Knowledge Gaps

Application of evidence-based practice in the community is challenging.

Community nurses

- Are faced with heavy workloads
- Often work in isolation
- Do not consistently have timely access to current and relevant information to guide practice.
HOBIC Outcomes

Four HOBIC indicators (Ontario’s Health Outcomes for Better Information and Care) as tool for assessing client outcomes:

- Pain
- Dyspnea
- Pressure Ulcers
- Falls

- There are Best Practice Guidelines (BPGs) developed by the Registered Nurses’ Association of Ontario (RNAO) for each of these HOBIC outcomes.
- These outcomes were found to be relevant for clients with chronic diseases (Doran et al, 2006)
The study was guided by the Client Care Delivery Model (O’Brien-Pallas) based on open systems theory.

The process of nursing care delivery in home care is examined in light of these relationships:

- Inputs
- Throughputs
- Outcomes

## Client Care Delivery Model

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Research Design

A longitudinal mixed methods design used to collect data on the inputs, throughput, and outcome variables over 36 months:

- Focus groups
- Questionnaires
- Chart audits
- Administrative databases
Client-Specific Data

Sources of data (chart audits, organization administrative database)
- Client demographics, medical diagnosis and co-morbidities
- Length of nursing service
- # of nursing visits
- Consistency of care provider (% of visits by most frequent nurse)
- HOBIC outcomes (pain, dyspnea, falls, pressure ulcers): change between admission and discharge
Data on care delivery processes were collected by nurse questionnaires

- Attitude towards Research Scale (Lacey, 1994)
- Problem-Solving Inventory (Heppner, 1986)
- Burnout Inventory (MBI, 2006)
- Nurse Demographics
Organizational Characteristics

Source of data: Organizations’ admin databases and Nurse Questionnaire

- Size (total # nursing visits; # of nursing admissions)
- Alberta Context Tool (Estabrooks, 2008)
  - Organizational culture; Leadership; Feedback; Information sharing; Organizational processes and structural resources; Relationship with work
Study Setting

Study conducted at four home care organizations in Ontario

- Stratified multi-stage cluster sampling
- 18 sites were selected from 50 potential offices, rural and urban
- 5 sites excluded due to insufficient nursing participation
- Final sample: 13 sites (home care offices)
Study Sample

- All full-time and regular part time nurses (RNs and RPNs) at participating sites were eligible.
- 944 questionnaires distributed to sites
- 348 questionnaires completed
- Estimated response rate: 40%
Study Sample

978 chart audits were completed

Inclusion criteria
- Newly-admitted client who was expected to receive 3 or more nursing visits
- Age 18 or older
- HOBIC outcomes documented

Exclusion criteria
- Client had surgery during the course of care (could have impacted HOBIC outcomes)

Final data set: 939 chart audits
Audits were conducted by trained data abstractors (nurses) using audit tool developed by Doran et al (2007)

- Inter-rater reliability among auditors was assessed: ≥60% for majority of indicators
- Use of BPGs was rated on a scale ranging from:
  - Yes (documented BPG use)
  - Partial (part of recommendation followed)
  - No (no documentation of BPGs)
  - A score was created to indicate extent of BPG use by nurses
Data Analysis

Logistic and Linear Regression Analysis

- Factors affecting use of BPGs as evidenced in documentation
- Relationship between use of BPGs and difference in HOBIC outcomes between admission and discharge (improved at discharge vs. no change or deteriorated)
Sample Characteristics

Nurse Participants
• RNs: 56.3 %; RPNs: 43.7%
• Age 43.1 years
• Employed full-time: 62%
• BScN degree: 24.3 %
• Experience in nursing: 13 years

Client Characteristics
• Age 64 years
• 53% female
• average 3.4 diagnoses per client
51.2% of nurses reported use of research based practices when caring for clients 75% or more of the time.

- Opportunity to increase use of evidence-based practices in home care.
- Need to work with nurses to identify practice areas where use of more evidence-based practices could improve care.
For each additional year of nurses’ employment at an organization, there was a 24.1% decrease in likelihood of having evidence-based interventions documented, among clients who had COPD or dyspnea on admission.

Documentation of evidence-based interventions for dyspnea was associated with improved client outcomes:

- 111.4% higher odds of reduced dyspnea compared to clients whose charts did not include documentation of any intervention.
Pain

• Nurses documented *assessment-related* practice recommendations more often than nursing interventions:
  - Pain assessment completed on admission for 98.4% of clients
  - Side effects of opioids were monitored *and documented* in only 43.9% of cases.
• Non-pharmacological interventions for pain management, such as relaxation, imagery or music, were rarely documented.
Improvement in Pain Frequency Scores at Discharge Associated With

- Higher documentation of nursing interventions consistent with pain BPGs
- Younger client age
- Increase use of research to change practice in last 6 months
Falls

- Of 674 cases, 45 clients (6.3%) had experienced a fall during episode of care
- Organizational culture predicted the documentation of falls-prevention interventions:
  - Culture (Estabrooks et al, 2008)
    - Receiving recognition from others about nursing work
    - Balancing best practice and productivity
    - Being a member of a supportive work group
Improvement in Pressure Ulcer at Discharge Associated With:

- Higher documentation of pressure ulcer interventions consistent with BPGs
- Higher organizational support for innovative ideas
- Greater use of research to change practice in last 6 months
- Less organizational slack time and less likely to have used research on last typical day of work
Summary

- The longer the nurses work at an organization, the less likelihood of documentation of evidence-based interventions for clients who had COPD or dyspnea
- Higher documentation of nursing interventions consistent with BPGs were associated with dyspnea, pain, and pressure ulcer outcome
- Organizational culture was associated with evidence-based practice related to falls
Summary

Study Limitation

• There was limited documentation of nursing *interventions* in comparison to more documentation of nursing *assessments*. 
Implications

- Further research is needed to explore the relationship between evidence-based practice and client outcomes.
- It is unknown if some interventions were completed but not documented, therefore resulted in under-representation of use of BPGs in this study.
Implications

Documentation processes need to be streamlined so that home care nurses can efficiently document the care they provide.

- May benefit from structural resources in place to help nurses recall the use of “less-often used interventions”.
- Implementation of BPGs was enhanced when electronic documentation system was in place to prompt nurses about specific interventions (Higuchi et al, 2011)
- Over 75% of nurses “would use research more often if they could” presents an opportunity for employers.
Dr. Diane Doran, RN, PhD, FCAHS
diane.doran@utoronto.ca