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

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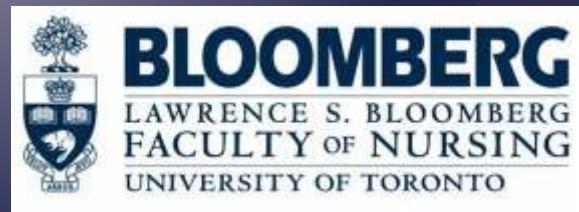
Research Team

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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)

Conceptual Framework

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

O'Brien-Pallas, L., Doran, D. I., Murray, M., & Cockerill, R. (2002). Evaluation of a client care delivery model, Part 2: Variability in client outcomes in community home nursing. Nursing Economics, 20(1), 13 - 21, 36.

Client Care Delivery Model

Input Factors	Throughput Processes	Nursing-Sensitive Outcomes (HOBIC indicators)
Client Nurse Organization Characteristics	Use of BPGs Consistency of Care Provider	Pain Dyspnea Pressure Ulcers Falls
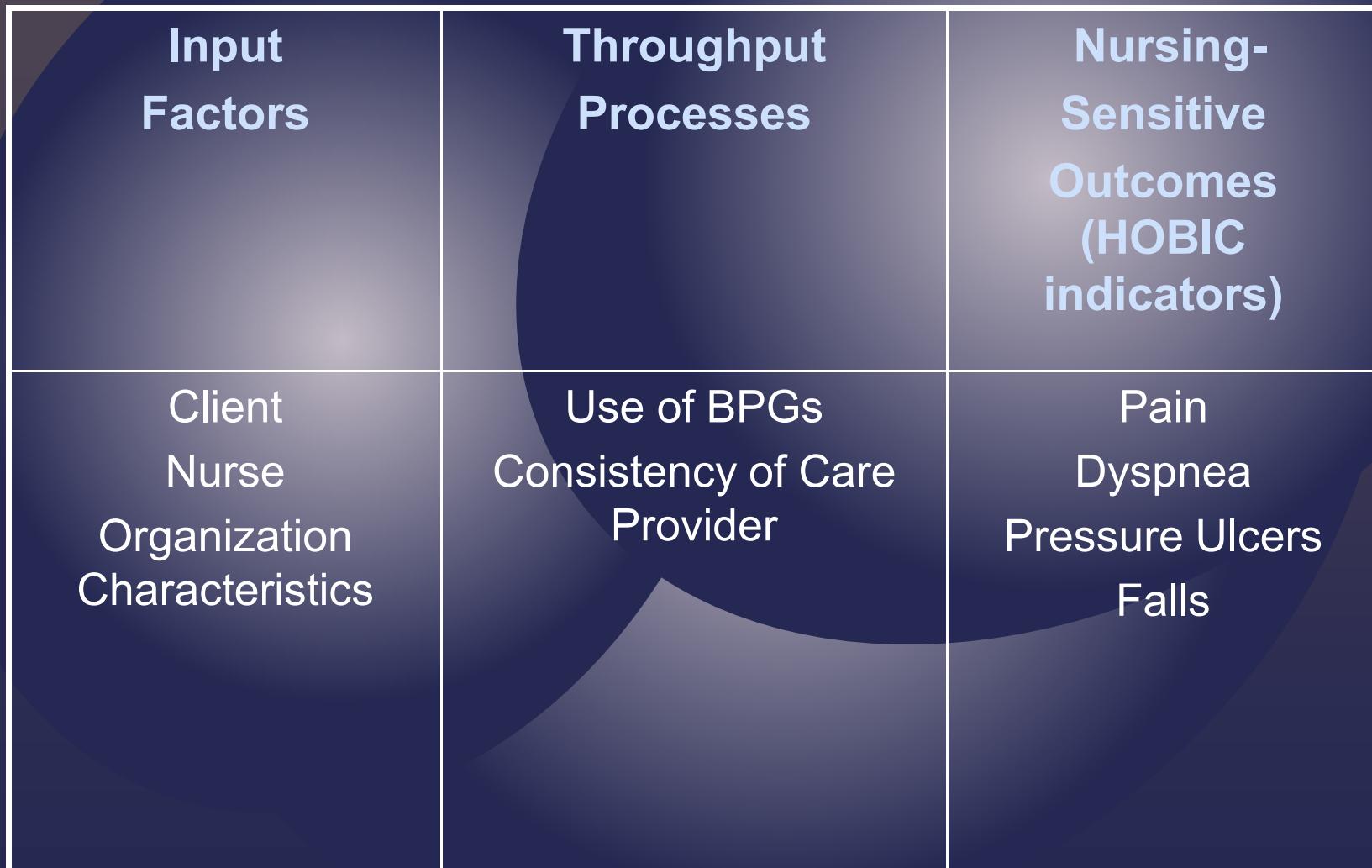
Research Design

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**

Nurse Data

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

Documentation of Evidence-Based Practice, Chart Audit

Audits were conducted by trained data abstractors (nurses) using audit tool developed by Doran et al (2007)

- Inter-rater reliability among auditors was assessed: $\geq$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

Research Utilization

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.

Research

Dyspnea

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.

CONCLUSION
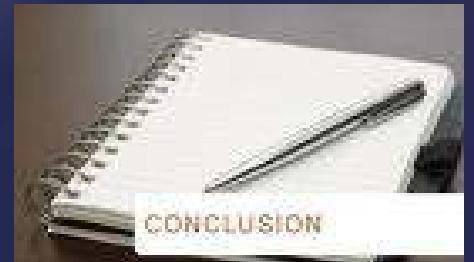
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