Describing Nursing Contribution to Chronic Disease Management in Primary Care Practices in Ontario

Nijboer, J., RN, PhD (student), Tranmer, J., RN, PhD, VanDenKerkhof, E., RN, PhD, Edge, D., RN, PhD
School of Nursing and Centre for Health Services and Policy Research, Faculty of Health Sciences, Queen’s University, Kingston, Ontario, Canada
• Chronic diseases place a substantial burden on the Canadian healthcare system

• The prevalence and costs associated with chronic diseases is increasing worldwide and chronic diseases are currently the highest cause of preventable death worldwide

• Therefore, it is important to ensure that patients with chronic illnesses are receiving appropriate healthcare services
Background

• There is a current emphasis being placed on managing patients with chronic diseases within the primary care setting

• Nurses play an important role in the delivery of primary care
  – In 2010, approximately 9200 nurses worked in primary care practices in Ontario
    (College of Nurses of Ontario, 2010)

• The roles and activities routinely performed by nurses working in primary care that relate to chronic disease management are not fully understood
Overall Goal

To describe the current roles and activities of nurses who work in the primary care setting in Ontario, specifically related to chronic disease management.
Objectives

1. To determine whether nurses working in primary care in Ontario are satisfied with their role description, scope of practice, and level of supervision.
1. To determine whether nurses working in primary care in Ontario are satisfied with their role description, scope of practice, and level of supervision.

2. To determine whether primary care practices in which nurses are currently working are engaging in activities to prevent and manage chronic diseases.
1. To determine whether nurses working in primary care in Ontario are satisfied with their role description, scope of practice, and level of supervision.

2. To determine whether primary care practices in which nurses are currently working are engaging in activities to prevent and manage chronic diseases.

3. To determine the current roles and activities that nurses are undertaking that relate to chronic disease prevention and management in Ontario.
Study Design
Descriptive cross-sectional survey

Setting
Primary care practices
Province of Ontario
Sample

- Registered practical nurses (RPNs)
- Registered nurses (RNs)
- Nurse practitioners (NPs)

- Place of employment was a primary care facility in Ontario:
  - community health centres, physician’s offices, family practices, or other community health centres
Sample: Assessed for eligibility (6011)
Sample:

- Assessed for eligibility (6011)
- Remaining sample (5982)
- Excluded - unidentifiable LHIN (29)
Sample:

Assessed for eligibility (6011)

Remaining sample (5982)

Southeast LHIN (411)

Excluded - unidentifiable LHIN (29)

All other LHINs (5571)

Random sample (1500)
Sample:

- Assessed for eligibility (6011)
- Excluded - unidentifiable LHIN (29)
- Remaining sample (5982)
  - Southeast LHIN (411)
  - All other LHINs (5571)
    - Random sample (1500)
- TOTAL SAMPLE (n=1911)
Survey

• Modified based on a national survey conducted in Australia (Halcomb et al., 2007)
• Terminology was changed to make survey more appropriate to nurses working in Ontario
• Additional modifications were made based on feedback from a small pilot study and findings from a scoping review
• Option to complete the survey by hand or online (StudentVoice)
• May-July, 2011
Data Analysis

• Comparisons between regulatory designations were examined (i.e. NPs, RNs, RPNs)

• Continuous data:
  – Means, confidence intervals, and one-way ANOVAs with Tukey’s post hoc analysis

• Categorical data:
  – Frequencies and chi-square analysis
Results
Description of Participants

Response Rate:
• 18.8% (359/1911)
  – 5 surveys were excluded in the analysis

Breakdown of sample by regulatory designation:
  21% NPs
  62% RNs
  17% RPNs
Mean Age:

* NPs significantly younger than RNs (p<0.001)
Description of Participants

- **Gender**: Female (98%)
Description of Participants

- **Gender:** Female (98%)

**Overall Nursing Experience**

**Nursing Experience in Primary Care**

* Significantly different than RN (p<0.05)
Results:
Objective 1
Do you have a job description that clearly identifies your role?

![Bar chart showing respondents' answers to the question. The chart includes bars for 'Yes', 'Unclear', and 'No' responses, with the categories 'NP', 'RN', and 'RPN'. The p-value is p=0.076.]
Adequate supervision?

Respondents (%)

Too Little | Yes | Too Much
---|---|---
NP | RN | RPN

$p=0.310$
Level of optimism about nursing role development?

- Extremely Optimistic
- Somewhat Optimistic
- Unsure of Future Role
- Somewhat Pessimistic
- Extremely Pessimistic

Respondents (%)

- NP
- RN
- RPN

$P = 0.260$
Scope of practice?

- **NP**
- **RN**
- **RPN**

**p < 0.001**
Results: Objective 2
Routine Screening Programs?

Yes = 79%

- Diabetes: 80%
- Hypertension: 70%
- COPD: 40%
- Dementia: 30%
- Asthma: 20%
- Mental Health Disorders: 20%
- Heart Failure: 10%
- Arthritis: 10%

Respondents (%)
Chronic Disease Management Programs or Clinics?

Yes = 64%
Method of Flagging Patients with Chronic Disease?

Yes = 59%

- Diabetes
- Hypertension
- COPD
- Dementia
- Asthma
- Mental Health Disorders
- Heart Failure
- Arthritis
Results:
Objective 3
Assessment Activities
(n=354)

* significantly different (p<0.001)
Diagnosis and Management Activities
(n=354)

- Wound care
- Prescription renewal in GPs absence
- Prescribe medications
- Initiate treatment
- Review diagnostic test results independently
- Order laboratory/diagnostic tests

* significantly different (p<0.001)
Health Promotion and Disease Prevention Activities (n=354)

* All categories are significantly different (p<0.001)
Implications

• Nurses engage in a variety of activities related to chronic disease management
Implications

- Nurses engage in a variety of activities related to chronic disease management
- Team-based primary care structures are becoming more prominent in Ontario
Implications

- Nurses engage in a variety of activities related to chronic disease management
- Team-based primary care structures are becoming more prominent in Ontario
- It is important to clearly understand the nursing contribution to chronic disease management in primary care to optimize their role within interprofessional teams
Implications

• Although the majority of nurses working in primary care are satisfied with their role description, scope of practice and level of supervision - it is clear that there is the potential to optimize the role of nursing within primary care practices.
Implications

• Although the majority of nurses reported to work within practices that engage in chronic disease management activities, several chronic conditions were poorly represented
Implications

• Most activities were routinely performed by NPs and less commonly by RNs and RPNs
Implications

• Most activities were routinely performed by NPs and less commonly by RNs and RPNs
• There was substantial overlap between the activities that RNs and RPNs participated in that related to chronic disease management
Implications

• A greater proportion of NPs performed most of the activities involved in chronic disease management than RNs and RPNs

• There was substantial overlap between the proportions of RNs and RPNs that participated in each activity

• In the future it will be important to determine how to optimize the nursing contribution to chronic disease management activities
Strengths

• Provided important descriptive information regarding the current roles of nurses
Strengths

• Provided important descriptive information regarding the current roles of nurses

• Survey was distributed to nurses who worked in a wide range of primary care practices
Strengths

• Provided important descriptive information regarding the current roles of nurses
• Survey was distributed to nurses who worked in a wide range of primary care practices
• Highlighted the depth and range of activities that nurses perform within primary care
Strengths

• Provided important descriptive information regarding the current roles of nurses
• Survey was distributed to nurses who worked in a wide range of primary care practices
• Highlighted the depth and range of activities that nurses perform within primary care
• Provided an overview of the chronic diseases managed within primary care settings
Limitations

- Low response rate (18.8%)
- Response bias
- Descriptive survey
- Generalizability
Acknowledgements

- Dr. Joan Tranmer
- Dr. Elizabeth VanDenKerkhof
- Dr. Dana Edge
- Carly Kelly
- Wilma Hopman

Primary Health Care System Program
Ontario Graduate Scholarship (OGS)