Evaluating Nursing and Client Outcomes through Guideline-based Indicators: The RNAO NQUIRE Initiative

CoF Webinar 6
August 29, 2013
Hosted by the Registered Nurses’ Association of Ontario
Welcome from
Dr. Irmajean Bajnok
Director
International Affairs & Best Practice Guideline Centre
Registered Nurses’ Association of Ontario
Presenter

• Dr. Monique Lloyd
  – Associate Director, International Affairs & Best Practice Guidelines Centre

Moderator

• Angela Joyce
  – Project Coordinator, NQuIRE, International Affairs & Best Practice Guidelines Centre
Monthly Webinar Series: 
Assessment and Management of Foot Ulcers for People with Diabetes (2\textsuperscript{nd} ed.)

1) Guideline Development (March 2013)
3) Implementation Strategies – Best Practice Champion Network (May 2013)
4) Implementation Strategies – Best Practice Spotlight Organizations (June 2013)
5) Implementation Strategies – Getting Started: Gap Analysis and the Diabetic Foot Ulcer CPG (July 2013)
6) Evaluation Strategies – Nursing Quality Indicators for Reporting and Evaluation (NQuIRe) (August 2013)

Archived webinars: 
RNAO.CA/BPG/GUIDELINES
Agenda

• Overview of the RNAO Best Practice Guideline Program & the guideline *Assessment and Management of Diabetic Foot Ulcers in People with Diabetes (2nd ed.)*

• Guideline evaluation using Nursing Quality Indicators for Reporting and Evaluation (NQuIRE)

• Lessons from the Field – Guideline evaluation in Best Practice Spotlight Organizations
  – Christina Zettler, Trillium Health Partners

• Questions
RNAO is the professional association of Registered Nurses in Ontario, Canada

The strong, credible voice leading the nursing profession to influence and promote healthy public policy, and clinical excellence.
Nursing Best Practice Guidelines is a signature program of the Registered Nurses’ Association of Ontario
RNAO Best Practice Guideline Program

International Affairs & Best Practice Guidelines Program Components

- Topic Selection
- Panel of Experts
- Systematic Review
- Recommendation Development
- Stakeholder Review
- Publication
- 3 yr Guideline Review

Nurse / Patient / Client Organizational Societal Outcomes

Champions
- BPSOs
- Deployment & Implementation
- E-Learning
- Website
- Conferences / Institutes

NQuIRE
- Quality Improvement
- Evaluation
- Monitoring
- Sustainability

Nursing OrderSets
- RNACO Communities
- Fellowships

Outcome Indicators
- Patient Outcomes
RNAO and The Council of the Federation (CoF)

- Provincial Health Ministers & Premiers of Canada
- Focus on Clinical Practice Guidelines
- RNAO BPGs selected
  - Assessment and management of foot ulcers for people with diabetes
- National RNAO-led webinars
Assessment and Management of Foot Ulcers for People with Diabetes (2nd ed.)

1. What are the most effective methods for the assessment of foot ulcer in clients with diabetes?
2. What are the most effective interventions to manage foot ulcers and prevent re-ulceration in clients with diabetes?
3. What health-care professional education and training is required to ensure the provision of effective diabetic foot ulcer care?
4. How do health-care organizations support and promote optimal assessment and management of foot ulcers in clients with diabetes?
Recommendations

- Practice Recommendations (19)
  - Assessment (8)
  - Planning (4)
  - Implementation (5)
  - Evaluation (2)
- Education (2)
- Organization and Policy (5)

Available for free download: www.RNAO.CA/BPG
Recommendations

- Practice Recommendations (19)
  - Assessment (8)
  - Planning (4)
  - Implementation (5)
  - Evaluation (2)

- Education (2)
- Organization and Policy (5)

Available for free download: [www.RNAO.CA/BPG](http://www.RNAO.CA/BPG)
Nursing Quality Indicators for Reporting and Evaluation
NQuIRE is a system of quality measurement using RNAO guideline-based indicators.

1. Indicator sets

2. On-line Database

3. Local, National & International BPSOs
RNAO Best Practice Guideline & Quality Indicators

Best Practice Guideline Implementation & Evaluation

Nursing Unit / Service / Program

Nursing Unit / Service / Program

Nursing Unit / Service / Program

Best Practice Spotlight Organization

Quality Improvement

Practice
Research
Policy
Education

Reports

NQuIRE Database

RNAO
How are the indicators developed?

Principles
- BPG-derived measures
- Limited set of core indicators
- Important & nurse-sensitive

Indicators
- Aligned with other initiatives
- Easy to understand

Literature & Use
- Systematic review
- BPG Expert panel
- Best Practice Spotlight Organizations

Indicators Assessment
- Feasibility
- Impact
- Strength of evidence
- Sensitivity
- Public Importance
- Policy driver
- Costs

NQuIRE Indicator Sets
Avoiding ‘Black Box’ Evaluation

“I think you should be more explicit here in step two.”
Avoiding ‘Black Box’ Evaluation

While we are ultimately all interested in outcomes...

To only focus on outcomes without looking at process and structure changes...

Means you may see improvement in outcomes...

But will not know how they were achieved!
There are 3 types of NQuIRE indicators

**Structural indicators**
- Human resource attributes of the setting in which care occurs

**Process indicators**
- What is done to and for clients in the process of providing care

**Outcome indicators**
- The effect of care on the health status of clients
Guideline-based NQuIRE indicators are derived from the clinical practice recommendations.

**Structural indicators**
- Human resource attributes of the setting in which care occurs

**Process indicators**
- What is done to and for clients in the process of providing care

**Outcome indicators**
- The effect of care on the health status of clients
NQuIRE includes 6 structural indicators…

- Intensity
- Skill mix
- Absenteeism
- Voluntary turnover
- Educational preparation
- Model of care delivery
... and 5 - 10 indicators for each Guideline

- Falls prevention
- Pressure ulcer prevention
- Stroke assessment
- Pain management
- Breastfeeding
- Foot ulcers
- Ostomy care
- Client centred care
- Stage I to IV pressure ulcers
- Foot complications
- Self-management
- Hypertension
- Delirium, dementia & depression screening
- Smoking cessation
Evaluating the impact of best practice guideline implementation

1. What are the indicators?
2. Why are they being measured?
3. Where is the data?
4. Who are you collecting data on?
5. How are you collecting this data?
6. What does the data mean?
1. What are the indicators?

*Assessment and Management of Foot Ulcers for People with Diabetes (2nd ed.)*

<table>
<thead>
<tr>
<th>Process</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of patients with bilateral lower extremity assessment</td>
<td>% of foot ulcers with a 50% reduction in wound surface area at 4-weeks</td>
</tr>
<tr>
<td>% of patients with complete foot ulcer assessment</td>
<td>% of foot ulcers that have healed at 12 weeks</td>
</tr>
<tr>
<td>% of patients provided education or educational materials addressing diabetes management and ulcer care</td>
<td>% of patients who were prescribed an offloading (pressure relief) device</td>
</tr>
</tbody>
</table>
# Process indicators:

*Assessment and Management of Foot Ulcers for People with Diabetes (2nd ed.)*

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Recommendation</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of patients with bilateral lower extremity assessment</td>
<td>1.0, 1.3, 1.7</td>
<td>Calf pain, absence of peripheral pulses and colour of the foot have prognostic significance for future amputation in people with or without foot ulceration.</td>
</tr>
<tr>
<td>% of patients with complete foot ulcer assessment</td>
<td>1.1, 1.7</td>
<td>Measurement is crucial to evaluate whether the wound is moving towards desired outcomes, to direct care planning and the use of appropriate pressure redistribution devices, and to predict risk.</td>
</tr>
<tr>
<td>% of patients provided education or educational materials addressing diabetes management and ulcer care</td>
<td>3.3, 3.4</td>
<td>Results in improved knowledge and self-care behaviours, which lead to improved blood glucose control, healing of foot ulcers, and prevention or delay of complications.</td>
</tr>
</tbody>
</table>
### Outcome indicators:

*Assessment and Management of Foot Ulcers for People with Diabetes (2nd ed.)*

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Recommendation</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of foot ulcers with a 50% reduction in wound surface area at 4-weeks</td>
<td></td>
<td>Progress of wound healing at 4 weeks may be correlated with wound closure at 12 weeks. A 50% reduction in wound surface area at 4 weeks is a strong predictor of wound healing at 12 weeks.</td>
</tr>
<tr>
<td>% of foot ulcers that have healed at 12 weeks</td>
<td>All recommendations</td>
<td>Pressure alleviation is integral to prevent the formation of calluses and to promote ulcer wound healing. Pressure alleviation can be accomplished by redistributing pressure over a larger surface area through the application of external pressure offloading devices.</td>
</tr>
<tr>
<td>% of patients who were prescribed an offloading (pressure relief) device</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. Why are you measuring these indicators?

- Develop a plan and link it to the overall organization plan
  - Data gaps / data interests
  - Future data collection plans & quality initiatives
  - Opportunities to influence measurement

- Communicate to all, based on what you know about what is and what could be
  - Know your baseline! Know your target!

- Engage Staff and Colleagues
  - Designate an evaluation coordinator or project manager
  - Engage middle leaders (managers and others)
  - Provide training to those unfamiliar with data or this type of measurement
2. Why are you measuring these indicators?

- Collect useful data, not perfect data

<table>
<thead>
<tr>
<th>Research</th>
<th>Accountability</th>
<th>Quality Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generate new knowledge; Collect large amounts of data ‘just in case’</td>
<td>Valid comparisons to justify change; Obtain 100% of available data</td>
<td>Gaining &amp; applying knowledge to change future outcomes; ‘Just enough data’</td>
</tr>
</tbody>
</table>
3. Where is the data?

• Administrative databases
  – Provincial databases; national reporting systems
• Health records – electronic or paper
  – Nursing documentation; Patient charts
• Survey data
  – NRC Picker
• Observation
4. Who are you collecting data on?

- The total patient population
4. Who are you collecting data on?

- The total patient population
- The population of interest
  - 15 years of age or older; diagnosis of diabetes; foot ulcer
4. Who are you collecting data on?

• The total patient population
• The population of interest
  – 15 years of age or older; diagnosis of diabetes; foot ulcer
• The population of interest that will be measured
  – All ‘eligible’ patients
  – A sample of patients
    • If a sample, how will patients be chosen? Do you expect practice differences: By shift? By day / week / month? By site?
5. How are you collecting the data?

- **Electronic**
  - Data from automated reports
  - Specific requests for data
  - Paper audits of electronic data

- **Paper-based**
  - Existing clinical audits
  - New audit processes

- **Hybrid systems**
  - A combination of electronic & paper
6. What does the data mean?

Consider:

• Who is using the indicator data?
• Why is the data meaningful to them?
  – Alignment with other activities
  – Targets or benchmarks
• What action(s) can or should be taken to improve the area being measured
  – Data collection alone does not lead to quality improvement!
Bringing the data to life

% of patients with complete foot ulcer assessment

TARGET

Implementation Unit A
Bringing the data to life

% of patients with complete foot ulcer assessment

Implementation Unit A

Q1  Q2  Q3  Q4  Q1  Q2  Q3  Q4  Q1

% 50  45  50  70  75  80  85  87  80
Bringing the data to life

% of patients with complete foot ulcer assessment

- Unit A
- Unit B
- Unit C
- Unit D

TARGET: 80%

Legend:
- Q1
- Q2
- Q3
- Q4
Bringing the data to life

% of patients with complete foot ulcer assessment

TARGET

Unit A  Unit B  Unit C  Unit D

Q1  Q2  Q3  Q4

%
Bringing the data to life

% of patients with complete foot ulcer assessment

Unit A
Unit B
Unit C
Unit D

TARGET

Q1
Q2
Q3
Q4
Bringing the data to life

% of patients with complete foot ulcer assessment

Implementation Unit A
Bringing the data to life

% of patients with complete foot ulcer assessment

Implementation Unit A
Bringing the data to life

% of patients with complete foot ulcer assessment

Baseline
Implementation
Post-Implementation

TARGET
RATE OF IMPROVEMENT

Implementation Unit A
Bringing the data to life

% of patients with complete foot ulcer assessment

Implementation Unit A

TARGET

Post-Implementation

Rate of Improvement

Baseline

Implementation

Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1

0 10 20 30 40 50 60 70 80 90 100

%
Access your experts early and often
Get organized
Use what you have
Understand the data before you compare it to others
Lessons from the field:

Christina Zettler, RN, MSc
Manager, Professional Practice Portfolio & BPSO Coordinator
Trillium Health Partners
Credit Valley Site
If you’re not keeping score, you’re just practicing

(Vince Lombardi, former head coach of the Green Bay Packers)
Upcoming Webinar Session

Webinar 7

Guideline Implementation Strategies:
Focus on Nursing Order Sets

September 18, 2013
12:00-1:00 p.m. EDT
Visit the RNAO website
www.rnao.ca/bpg

• Access the guideline Assessment and Management of Foot Ulcers for People with Diabetes

• Get more information regarding our various implementation and evaluation resources

• Access archived presentation from this webinar series

BPSO Questions? Contact Andrea Stubbs: astubbs@rnao.org
NQuIRE Questions? Contact Angela Joyce: ajoyce@rnao.org