FROM QUALITY IMPROVEMENT TO HEALTH SYSTEM TRANSFORMATION: RNAO’S SYSTEMATIC, COMPREHENSIVE PROGRAM OF DEVELOPING, IMPLEMENTING & EVALUATING BEST PRACTICE GUIDELINES

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Overview and Objectives

• To identify components of a comprehensive quality improvement program leading to health system transformation;
• To outline the strategies and processes for managing and sustaining evidence-based clinical practice change;
• To describe how indicator-based monitoring and evaluation of guideline implementation shapes and sustains evidence based practice, clinical excellence and improved outcomes.
• 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
• Best Practice Guidelines is a signature program of RNAO
RNAO is the professional association of Registered Nurses in Ontario, Canada
RNAO Best Practice Guideline Program

Funded by the Ontario Ministry of Health and Long-term Care since 1999 to:

Develop, disseminate, and actively support the uptake of evidence-based clinical & healthy work environment best practice guidelines and to evaluate their impact in patient/organizational and health system outcomes.
Goals of the BPG Program

Improve health care

• Reduce the variation in care
• Transfer research evidence into practice
• Convey the knowledge base of nursing
• Assist with clinical decision making
• Identify gaps in research
• Stop interventions that have little effect or cause harm
• Reduce cost
RNAO Best Practice Guideline Program
Nursing Best Practice Guidelines is a signature program of the Registered Nurses’ Association of Ontario

38 Clinical Practice Guidelines
9 Healthy Work Environment Guidelines
Clinical Guideline Recommendation Types

Practice Recommendations
- What the professional needs to do

Education Recommendations
- What the professional needs to know

Organization & Policy Recommendations
- What the Organization needs to create an Evidence Based Culture

Organization & Policy Recommendations
- What the Organization needs to create an Evidence Based Culture
# RNAO’s Scientific Guideline Development Process

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td>• Systematic review of the evidence</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>• Development of recommendations by expert panels of clinicians, academics and researchers; identification of monitoring indicators and implementation resources (Nursing Orders Sets; NQuIRE quality indicators)</td>
</tr>
<tr>
<td><strong>3</strong></td>
<td>• External stakeholder review</td>
</tr>
<tr>
<td><strong>4</strong></td>
<td>• Publication and dissemination</td>
</tr>
<tr>
<td><strong>5</strong></td>
<td>• Review and update of guidelines</td>
</tr>
</tbody>
</table>
BPGs Go Canada Wide!

- The Council of the Federation (CoF)
- Clinical Practice Guidelines (CPG)
- RNAO BPGs selected
  - 2012-2013 Care of Patients with Diabetic Foot Ulcers
- National RNAO-led implementation webinars
RNAO’s Framework for Guideline Implementation


- Available for free download [www.rnao.ca](http://www.rnao.ca)
- English and French
RNAO's BPG Implementation Methodology

- **Individual Level**
  - Champion Network®
  - Learning Institutes
  - eLearning programs
  - Nursing Order Sets

- **Organizational Level**
  - Best Practice Spotlight Organization® Designation

- **System Level**
  - Implementation Projects
RNAO Best Practice Champion Network

A collective force that influences knowledge transfer and uptake of best practice guidelines

- RNAO has prepared over 15,000 Champions in a range of sectors:
  - Their role to show the way to evidence based practice and clinical practice change
  - Initial and ongoing Education
  - Networking
  - Leading practice change
Nursing Order Set: BPG Implementation Tool

An RNAO nursing order set is a group of ICNP-encoded evidence-based interventions derived from the RNAO BPGs. It aids BPG implementation & standardizes the care provided for a specific patient/client condition (e.g. pain, pressure ulcers, smoking).
RNAO Welcomed By the International Council of Nurses As:

Accredited ICNP Research & Development Centre

- Map nursing order sets and nursing sensitive outcome measures
- Provide standardized nursing interventions that can be embedded within electronic medical/health records globally
- Facilitate electronic data collection and evaluation of nursing sensitive outcomes derived from RNAO’s BPGs
- One of 11 sites around the world; only site in Canada
## Sample Nursing Order Set

### Assessment and Management of Foot Ulcers

**Nursing Order Set [Sub-Set]**

<table>
<thead>
<tr>
<th>Assessment</th>
<th>PR#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obtain a comprehensive health history</td>
<td>1.0</td>
</tr>
<tr>
<td>Perform physical examination of affected limb(s)</td>
<td>1.0</td>
</tr>
<tr>
<td>ALERT: People with diabetic foot ulcers should be identified as high risk for amputation</td>
<td>1.1</td>
</tr>
<tr>
<td>Measure foot ulcers using a consistent tool</td>
<td>1.1</td>
</tr>
<tr>
<td>ALERT: Using a consistent tool may improve accuracy and consistency in assessment</td>
<td>1.1</td>
</tr>
<tr>
<td>Classify foot ulcers using an appropriate stratification system</td>
<td>1.2</td>
</tr>
<tr>
<td>Associated Document: University of Texas Foot Classification System, PEDIS: Diabetic Foot Ulcer Classification System</td>
<td>1.2</td>
</tr>
<tr>
<td>ALERT: Consistency in classification can enhance care planning</td>
<td>1.2</td>
</tr>
<tr>
<td>Assess bed of foot ulcer(s) for exudate, odour, condition of per-ulcer skin and pain</td>
<td>2.0</td>
</tr>
</tbody>
</table>

### Planning

<table>
<thead>
<tr>
<th>Planning</th>
<th>PR#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determine the potential of the foot ulcer(s) to heal and ensure interventions to optimize healing have been explored.</td>
<td>2.1</td>
</tr>
<tr>
<td>ALERT: Moist wound care is not recommended in wounds where complete healing is not the goal. Use a dry dressing to keep the wound bed dry.</td>
<td>2.1</td>
</tr>
<tr>
<td>Develop a plan of care incorporating goals mutually agreed upon by the client and health-care professionals to manage diabetic foot ulcer(s)</td>
<td>3.0</td>
</tr>
</tbody>
</table>

### Implementation

<table>
<thead>
<tr>
<th>Implementation</th>
<th>PR#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement a plan of care to mitigate risk factors that can influence wound healing</td>
<td>3.0</td>
</tr>
<tr>
<td>Provide wound care consisting of debridement, infection control and moisture balance, where appropriate</td>
<td>3.1</td>
</tr>
<tr>
<td>ALERT: Applying moisture retentive dressings in the presence of ischemia and/or dry gangrene can result in a serious limb-threatening infection. Apply a drying antimicrobial, such as providone iodine, a protective dry dressing and ensure proper off loading.</td>
<td>3.1</td>
</tr>
</tbody>
</table>
Nursing Order Sets: Standardized Terminology

- **Standardized terminology:**
  - Same wording/code is used to represent the same patient information

- **Standardized nursing data is essential in electronic systems**
  - Standardized internally and among health care organizations globally
  - Facilitates:
    - Exchange of health information among clinicians
    - Comparative analysis by policy makers
    - Evaluation for quality improvement
    - Research for knowledge creation
Benefits of Nursing Order Sets

- Mechanism to embed evidence-based nursing assessments and interventions in electronic clinical systems.
- Improves patient safety and quality of nursing care.
- Utilization of standardized nursing terminology.
- Strengthens inter-professional care.
- Facilitates global access to evidence-based nursing practice.
### 27 Available Nursing Order Sets

| Chronic Diseases | • Risk Assessment and Prevention of Pressure Ulcers  
|                 | • Assessment and Management of Stage I to IV Pressure Ulcers  
|                 | • Ostomy Care and Management  
|                 | • Strategies to Support Self-Management in Chronic Conditions with Clients  
|                 | • Decision Support for Adults Living with Chronic Kidney Disease  
|                 | • Reducing Foot Complications for People with Diabetes  
|                 | • Assessment and Management of Foot Ulcers for People with Diabetes  
|                 | • Assessment and Management of Pain  
|                 | • Management of Hypertension  
|                 | • Stroke Assessment  
| Women & Children | • Breastfeeding  
| Addictions & Mental Health | • Smoking Cessation  
| Elder Care | • Prevention of Falls and Fall Injuries in the Older Adult  
|             | • Screening for Delirium, Dementia & Depression in Older Adults  
| General | • Client-Centred Care |
## Nursing Order Sets In Development

### Chronic Diseases
- Adult Asthma Care
- Nursing Care of Dyspnea in Individuals with COPD
- Supporting and Strengthening Families: Expected/Unexpected Life Events
- Assessment and Management of Foot Ulcers for People with Diabetes
- Assessment and Management of Venous Leg Ulcer

### Women & Children
- Interventions for Postpartum Depression
- Primary Prevention of Childhood Obesity
- Promoting Asthma Control in Children
- Woman Abuse: Screening, Identification and Initial Response

### Addictions & Mental Health
- Assessment and Care of Adults at Risk for Suicidal Ideation and Behaviour
- Caregiving Strategies for Delirium, Dementia, and Depression
- Crisis Intervention

### Elder Care
- Oral Health Nursing Assessment and Interventions
- Prevention of Constipation on the Older Population
- Promoting Continence Using Prompted Voiding

### General
- Assessment and Device Selection for Vascular Access
- Care and Maintenance to Reduce Vascular Access Complications
- Subcutaneous Administration of Insulin in Adults with Type 2 Diabetes
RNAO's BPG Implementation Methodology

- **Individual Level**
  - Champion Network®
  - Learning Institutes
  - eLearning programs
  - Nursing Order Sets

- **Organizational Level**
  - Best Practice Spotlight Organization® Designation

- **System Level**
  - Implementation Projects
ZEROING IN ON BEST PRACTICE SPOTLIGHT ORGANIZATIONS ®
Organizational Implementation

Key Strategy

*Best Practice Spotlight Organizations® (BPSO)*

Goal

To influence the uptake of best practice guidelines across all health care organizations, to enable practice excellence and positive client outcomes
Best Practice Spotlight Organization®

Organizations partner with RNAO to implement multiple clinical BPGs over a 3 Year period and attain the BPSO Designation

- Application process and formal partnership with RNAO
- Specific requirements re:
  - Systematic BPG implementation
  - Infrastructure
  - Reporting
  - Knowledge exchange
  - Sustainability planning
  - Measuring outcomes through use of standard indicators NQuIRE
- **Designated BPSO**: sustained use, expansion, spread, and mentoring opportunities
Best Practice Spotlight Organizations®

68 BPSOs; 310 sites
BPSO® National & International

Canada: 52 BPSOs

International:

• 2 BPSO Country Hosts:
  – Spain: 9 sites
  – Australia: 10 sites and growing

• Chile: 2 BPSOs
• Colombia: 2 BPSOs
• USA: 1 BPSO
BPSO® National & International

BPSOs represent:

• Primary care
  – Nurse Practitioner Led Clinic
  – Community Health Centre
• Public Health
• Home Health Care
• Long Term Care
• Acute Care
• Academia
RNAO Best Practice Guideline Program

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

Deployment & Implementation
- Champions
- BPSO's
- Nursing OrderSets
- RNAO Communities

Evaluation & Monitoring
- NQuIRE
- Quality Improvement
- Outcome Indicators
- Patient Outcomes

Outcomes
- Nurse
- Patient
- Organization
- Societal
NQuIRE: NURSING QUALITY INDICATORS FOR REPORTING AND EVALUATION
NQuIRE is a system of quality monitoring and evaluation of structure, process and outcome indicators based on RNAO BPGs to:

- **Articulate the impact** of evidence-based nursing practice on client, provider, organization and financial outcomes
- **Utilize outcome data** to optimize nursing practice
- **Enhance BPSO capacity** to influence quality and patient safety agendas through benchmarking
- **Standardize** the monitoring and evaluation of RNAO Best Practice Guideline implementation
- **Identify the value-add of nursing** to quality health care
Improved quality health care through the use of nurse-sensitive indicators based on implementation of RNAO Best Practice Guidelines, to impact practice, management and policy decisions, education and health system research
NQuIRE is a system of quality measurement using guideline-based indicators
NQuIRe is helping Best Practice Spotlight Organizations answer common questions.

• Are we making progress?
• What are our targets?
• Are we sustaining improvement?
• How do we compare to others?
NQuIRE provides unique opportunities for quality measurement

- Guideline-based quality indicators
- Multi-sectoral indicator data
- International indicator data
- In Best Practice Spotlight Organizations (user-centered environment)
NQuIRE indicators are developed from Clinical Guideline practice recommendations

Structure Indicators

Process Indicators

Outcome Indicators

Common to all BPGs

Guideline Specific Nursing Order Sets

Guideline Specific Client Related
NQuIRE includes 6 structural indicators

- Intensity
- Skill mix
- Absenteeism
- Voluntary turnover
- Educational preparation
- Model of care delivery
NQuIRE includes 5 - 10 indicators for each Guideline (process + outcome)

- Falls
- Risk Assessment of Pressure Ulcers
- Stroke
- Pain
- Breastfeeding
- Foot Ulcers
- Ostomy
- Client Centred Care
- Smoking
- Stage I to IV Pressure Ulcers
- Foot Complications
- Self-Management
- Hypertension
- Delirium, dementia & depression
Charting quality improvement using NQuIRE data

- Baseline
- Implementation
- Post-Implementation

Percent (%)

Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4

Target / Benchmark

Rate of Improvement

Percent (%)

Time
# NQuIRE Reports

## NQuIRE Report – Risk Assessment and Prevention of Pressure Ulcers

**BPSO XYZ**

**Q3: July – September, 2012**

<table>
<thead>
<tr>
<th>BPSO Size</th>
<th>Hospital Affiliation</th>
<th>Hospital Type</th>
<th>Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>300-499</td>
<td>Teaching</td>
<td>CCC</td>
<td>Private, Not-for-Profit</td>
</tr>
</tbody>
</table>

### CCC, Complex Continuing Care

<table>
<thead>
<tr>
<th>Indicator</th>
<th>BPG Site</th>
<th>Type of care</th>
<th>Care setting</th>
<th>Client age</th>
<th>Timing of assessment or assessment schedule</th>
<th>Risk assessment tool</th>
<th>Indicator Result (%)</th>
<th>Comparative results</th>
</tr>
</thead>
<tbody>
<tr>
<td>ulcerprev_pro01 Pressure ulcer assessment, new admissions</td>
<td>Medical site</td>
<td>Acute Care</td>
<td>Inpatient</td>
<td>Adult &gt;=18</td>
<td>24 hours*</td>
<td>Braden</td>
<td>1.83</td>
<td>1.25</td>
</tr>
<tr>
<td></td>
<td>Surgical site</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.67</td>
<td>n/a*</td>
</tr>
<tr>
<td>ulcerprev_pro02 Pressure ulcer reassessment: % of patients reassessed for the risk of developing pressure ulcers according to the site of care risk assessment schedule</td>
<td>Medical site</td>
<td>Acute Care</td>
<td>Inpatient</td>
<td>Adult &gt;=18</td>
<td>72 hours**</td>
<td>Braden, Norton</td>
<td>27.27</td>
<td>48.93</td>
</tr>
<tr>
<td></td>
<td>Surgical site</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>70.59</td>
<td>n/a*</td>
</tr>
<tr>
<td>ulcerprev_pro03 Pressure ulcer prevention, support surface: % of at risk patients who have use of an appropriate pressure management surface</td>
<td>Medical site</td>
<td>Acute Care</td>
<td>Inpatient</td>
<td>Adult &gt;=18</td>
<td>n/a</td>
<td>n/a</td>
<td>81.82</td>
<td>85.03</td>
</tr>
<tr>
<td></td>
<td>Surgical site</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>88.24</td>
<td>n/a*</td>
</tr>
<tr>
<td>ulcerprev_out01 Healthcare associated pressure ulcers: Total number of patients who develop one or more new stage II to IV pressure ulcers after their admission</td>
<td>Medical site</td>
<td>Acute Care</td>
<td>Inpatient</td>
<td>Adult &gt;=18</td>
<td>n/a</td>
<td>n/a</td>
<td>13.64</td>
<td>15.64</td>
</tr>
<tr>
<td></td>
<td>Surgical site</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17.65</td>
<td>n/a*</td>
</tr>
</tbody>
</table>

*Not enough data to calculate at this time; **Site of care assessment schedule
How is NQuIRE data influencing QI?

- BPSOs are using NQuIRE data to promote meaningful data sharing and benchmarking.
- BPSOs are using NQuIRE to meet external reporting requirements (e.g., WHO Baby Friendly Initiative (BFI) Designation).
- BPSOs are using NQuIRE data to track health outcomes across sectors (e.g., breastfeeding; smoking cessation).
- NQuIRE is validating current nurse-sensitive quality indicators and identifying new indicators.
RNAO Best Practice Guideline Program

Guideline Development

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

OUTCOMES
- Nurse
- Patient
- Organization
- Societal

Deployment & Implementation

- RNAO Communities
- NURSING ORDERSETS
- RNAO FELLOWSHIPS
- RNAO CHAMPIONS
- BPSO's

Evaluation & Monitoring

- NQuIRE
- QUALITY IMPROVEMENT
- PATIENT OUTCOMES
- OUTCOME INDICATORS
- OUTCOMES

INTERNATIONAL AFFAIRS & BEST PRACTICE GUIDELINES PROGRAM COMPONENTS
Successes:

• Thousands of nurses involved in impacting the care and outcomes of over 1 million clients

• Guidelines with greatest impact on client outcomes
  – Falls; Pain; Screening for Delirium, Dementia and Depression; Wound Care

• Guidelines with greatest impact on practice
  – Falls; Pain; Screening for Delirium, Dementia and Depression; Wound Care; Professionalism in Nursing

• Key sustainability strategies
  – Staff Orientation & Education; Policies; Documentation records; Quality Improvement program activities

• Client outcomes and economic results
Impact on Patient/Client Outcomes

- Reduction in incidence of falls and injury fall rate
- Increased satisfaction with pain control; lower pain scores on discharge
- Decreased prevalence of pressure ulcers
- Reduced length-of-time on service for wound healing
- Increased limbs saved
- Increased # of smoking quit attempts
- Increased exclusive breastfeeding rates; reduced in-hospital formula supplementation
- Greater accuracy of assessment and detection
- Enhanced overall patient satisfaction scores
Impact on Provider Outcomes

- Provision of evidence-based practice vs. traditional practice
- Current clinical knowledge
- Enhanced satisfaction
- Engaged staff through increased focus on clinical work
- Increased retention and reduced turnover
- Demonstration of clinical leadership at point of care
- Increased professionalism in nursing to improve the quality of patient care and patient safety
Impact on Organizational Outcomes

- Reduction in length of vacancy; reduced turnover
- Accreditation success
- Reputation as a Leader in clinical excellence
- Enhanced interprofessional practice & team collaboration
- Sustained use of evidence-based practice through:
  - Staff education
  - Policies
  - Orientation for new staff
  - Documentation records and forms
  - Quality improvement program activities
Impact on Financial Outcomes

- Reduced staff turnover results in savings of minimum $64,000 / nurse
- Reduced injury falls results in savings of minimum $35,000 / fall
- Reduced amputation results in savings of $70,000 - $80,000 / limb
- Reduced prevalence of pressure ulcer results in saving of minimum $9,000 / pressure ulcer
- Reduced variability of care results in savings related to supplies (e.g., Promoting continence BPG; Wound care BPGs)
Evidence

"I think you should be more explicit here in step two."

THEN NURSING HAPPENS

Improved health outcomes
Questions & Discussion
A Special Welcome to South Africa, our newest BPSO®