RNAO Registered Nurses' Association of Ontario
L'Association des infirmières et infirmiers autorisés de l'Ontario

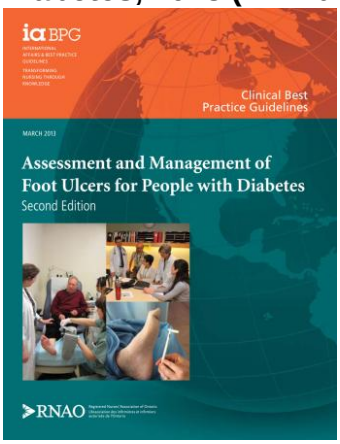
ia BPG INTERNATIONAL AFFAIRS & BEST PRACTICE GUIDELINES

BPSO RNAO BEST PRACTICE SPOTLIGHT ORGANIZATION

RNAO Best Practices: Evidence Booster

Best Practice Guideline Implementation to Reduce Diabetic Foot Ulcers

Assessment and Management of Foot Ulcers for People with Diabetes, 2013 (2nd Ed.)



This guideline provides evidence-based recommendations for nurses and the inter-professional team to assess and manage existing diabetic foot ulcer(s) for people 15 years of age and older with type 1 or type 2 diabetes.

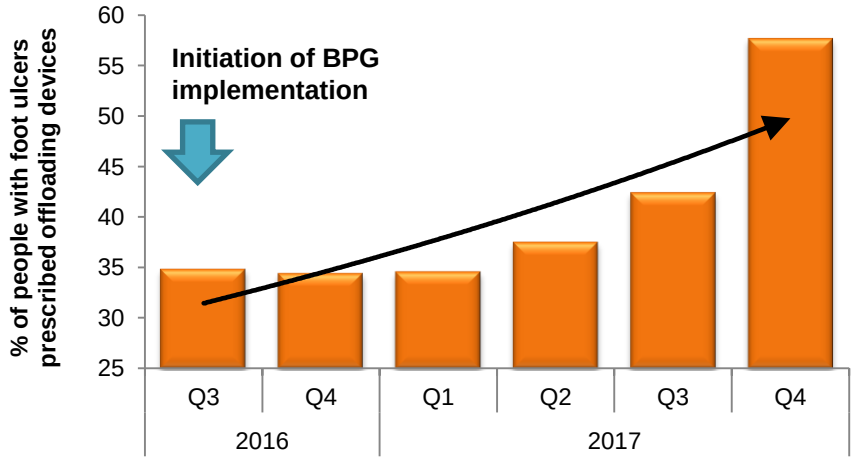
Approximately 1.53 million Ontarians are living with diabetes and between 16,600 and 27,600 may develop a diabetic foot ulcer (DFU).[1] The direct health-care costs for DFU are between $320 to $400 million and indirect costs are between $35 to $60 million.[1] Offloading devices (devices that relieve pressure) have demonstrated substantial cost savings. An offloading device costs between $~100 (removable cast walker) to $~1,500 (total contact casting), as opposed to $~70,000 per amputation. The estimated cost savings for Ontario is between $48 to $75 million per year due to saved limbs.[2]

Aim: To examine changes in health outcomes associated with the implementation of the RNAO best practice guideline (BPG) *Assessment and Management of Foot Ulcers for People with Diabetes, 2013* (2nd Ed.) in an Ontario Home Care Best Practice Spotlight Organization® (BPSO®).

Measure: Using indicators from the Nursing Quality Indicators for Reporting and Evaluation ® (NQuIRE®) data system to determine:
(a) percentage of patients 15 years and older with diabetes and foot ulceration who were prescribed an offloading (pressure relief) device
(b) percentage of foot ulcerations in people 15 years and older with diabetes that had a 50% reduction in wound surface area at 4-weeks.

Clinical improvement: Noted as an increase in utilization of offloading devices and an increase in wound healing.

Figure 1: Average percent of people with foot ulcers prescribed an offloading device in one Ontario Home Care BPSO, 2016 to 2017



Impact: A 40% increase (34.9% to 57.7%) in the prescribing of offloading devices for people 15 years and older with DFU was reported from 2016 to 2017 for one Home Care BPSO.

Practice Changes

The Home Care BPSO implemented the BPG initially in three locations and spread the practice changes across all implementation sites. Several tools were developed and implemented to support nursing care including a wound assessment document, wound care flow sheet, and clinical care pathway. These strategies, resources, and tools helped nurses to identify when offloading devices may be beneficial for people with diabetic foot ulcers.

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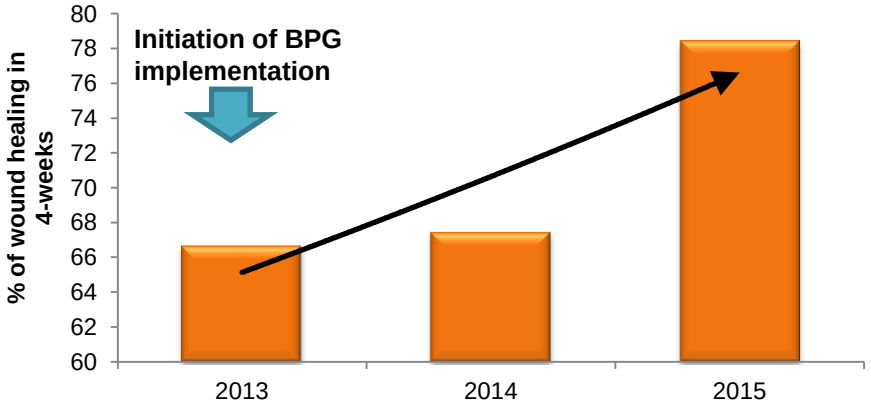
Figure 2: Average percent of wound healing in 4-weeks, in one Ontario Home Care BPSO from 2013 to 2015

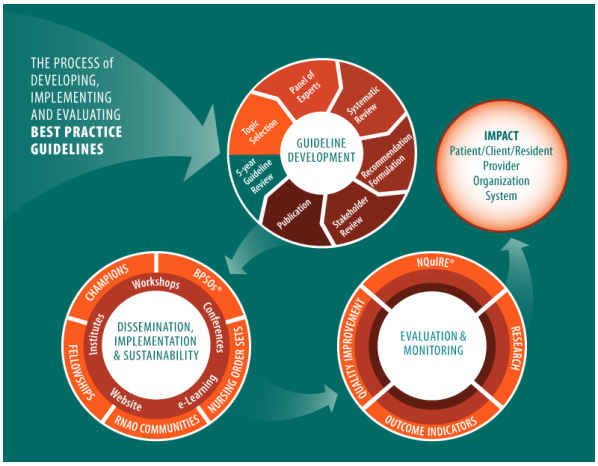


Impact: A 15% increase (66.7% to 78.4%) in diabetic wound healing was reported from 2013 to 2015 for one Ontario Home Care BPSO. Specifically, a 50% reduction in wound surface area was evident at 4 weeks. This results are projected to achieve cost savings between $2,475 to $3,246 per person per day.

Practice Changes

The Home Care BPSO undertook several practice changes to support implementation and standardization including: modification of organization policies, educational training including e-learning modules, and other diagnostic resources (monofilaments, decision support tools, and quick assessment guides). These resources supported knowledge uptake and clinical decision making. A wound care lead role was created to provide orientation and ongoing support for health-care providers. Many nurses developed advanced competencies in wound care assessment and management.

Conclusion: This analysis demonstrates a significant increase in the percentage of people with diabetic foot ulcers who were prescribed an offloading device and an increase in percentage of foot ulcer wound healing at 4-weeks for two different Ontario Home Care BPSOs that implemented the RNAO best practice guideline, *Assessment and Management of Foot Ulcers for People with Diabetes, 2013* (2nd Ed.).



RNAO launched the BPG Program in 1999[3] with funding from the Ministry of Health and Long-Term Care in Ontario, Canada. The 54 evidence-based BPGs developed to date are transforming nursing care and interprofessional work environments in all sectors in health systems worldwide. BPSOs are health-care and academic organizations that implement and evaluate these BPGs. Currently, there are 132 BPSOs across Canada and around the globe, representing more than 700 implementation sites.

NQuIRE[4], a unique nursing data system housed in the International Affairs & Best Practice Guideline Centre, allows BPSOs to measure the impact of BPG implementation by BPSOs worldwide. The NQuIRE data system collects, compares, and reports data on human resource structure, guideline-based nursing-sensitive process, and outcome indicators.

References

[1]Canadian Diabetes Association. 2015. Impact of offloading devices on the cost of diabetic foot ulcers in Ontario. http://www.diabetes.ca/getmedia/5109456e-8c0b-458f-b949-a5accd41513a/impact-of-offloading-devices-ontario.pdf.aspx

[2] Registered Nurses Association of Ontario (2017). Queen's Park day: Offloading devices for people with diabetic foot ulcers. *RNAO Backgrounder*, 2 pages.

[3] Grinspun, D., Virani, T., & Bajnok, I. (2002). Nursing best practice guidelines: The RNAO (Registered Nurses' Association of Ontario) project. *Hospital Quarterly,* 5(2), 56-60.

[4] VanDeVelde-Coke, S., Doran, D., Grinspun, D., Hayes, L., Sutherland Boal, A., Velji, K., White, P., Bajnok, I., Hannah, K. (2012). Measuring outcomes of nursing care, improving the health of Canadians: NNQR (C), C-HOBIC and NQuIRE. *Nursing Leadership*, 25(2): 26-37.

To learn more about RNAO's IABPG Centre, please visit RNAO.ca/bpg. This work is funded by the Ontario Ministry of Health and Long-Term Care. All work produced by the RNAO is editorially independent from its funding source. Contact NQUIRE@RNAO.ca for more details.

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