

# A Call to Action to All Canadian Communities: Establish Diabetic Foot Care Pathways

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In Alberta, the landscape of diabetic foot complications leading to amputation, like the rest of Canada, has been discouraging. Diabetes prevalence rates in Alberta are high (6.89–8.51/100 people) and continue to climb. The number of lower limb amputations increases each year, with 60% resulting from diabetic foot ulcers. With the same five-year mortality rates in patients post-amputation (50%) as the rest of the country, and lifetime risk for a foot ulcer in persons with diabetes at 15–25%, the result is significant financial impact on the health-care system and personal cost to patients and their families.

Diabetic foot ulcers can undergo rapid deterioration as a result of their complex nature and because of the lack of sensation in the feet of persons with neuropathy. In many cases, patients and health-care professionals do not realize the seriousness and urgency of the situation, and without prompt and appropriate interventions, amputation may be the result.

However, given that up to 85% of these amputations could be prevented, we knew it was possible to make positive change in our province if the Diabetes Obesity Nutrition Strategic Clinic Network identified and recognized the opportunity to implement a process for ensuring patients received the right interventions at the right time.

## The Project

In spring 2014 we initiated a project to develop a diabetic foot-care pathway that promoted foot screening in

primary care settings for all Albertans with diabetes to support earlier intervention to prevent unnecessary amputations.

During the barrier identification stage of the project it was determined that:

- Tremendous variation of diabetes-related foot-care services existed in the province. There were no standards in terms of screening processes.



- Wound clinics tended to see only patients with wounds and not people at risk of developing a wound.
- In tertiary and rural settings where there were no wound clinics people with foot problems tended to go to emergency/hospitals; but by that time it was often too late to be treated effectively.
- There was a lack of communication and co-ordination between acute care and primary care. Follow-up after an ER visit or an acute care admission and discharge was similar.
- The footwear benefits program from government posed significant barriers and costs to patients.

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Based on the identified gaps and barriers in services the goals of the project became clear:

- Improved access to foot screens for all Albertans with diabetes
- Earlier detection of foot problems
- Timely treatment to address complications and risks for ulceration, with the overarching goal of reducing the development of diabetic foot ulcers and amputations.

### Beyond Blood Work

As we were developing the process we worked with a number of patients from pilot sites to determine the factors that led to amputation. In the year prior to and in the year of their amputation, over 33% had blood sugars in the normal range. Key learning: Don't rely just on blood work; do a proper physical assessment that includes foot screening.

Once the gaps were identified, we deconstructed all the components and began to develop a pathway that involved broad engagement of all stakeholders, including frontline clinicians, patients, pharmacists and diabetes educators.

### A Pathway for Prevention

Diabetic foot-care pathways have been utilized successfully in several developed countries. Many components are universal and can be incorporated into any health system. The Diabetic Foot Care Clinical Pathway was developed in conjunction with best practices and has been piloted in Alberta. The key components include:

- Screening, assessment and treatment standards along with patient referral/transition processes
- Tools and educational resources for patients and primary care providers
- Support for patient self-management
- Support and education by a clinical practice lead in foot and wound assessment and management for primary care networks
- Support for integrated care by fostering engagement with community-based high-risk foot teams to encourage acceptance of referrals from primary care networks that have completed foot screens and identified feet at risk in persons who do not have a wound
- Access and timely use of diagnostic technologies, revascularization procedures and advanced wound care

This comprehensive modification of the current system is expected to have many benefits, and early indications are promising. For example, one of our pilot sites is now screening 100% of their patients with diabetes. Preliminary data are also showing that ulcer and amputation rates are starting to decrease.

Overall, the anticipated outcomes include improved patient self management, more consistent and timely screening in primary care, earlier and more appropriate care of moderate- and high-risk diabetic foot problems in triage and care, fewer referrals to acute care and increased patient and health provider satisfaction.

Ultimately, we expect to see the fulfillment of the primary goal for this project: reduced rates of foot ulcers and amputations.

### Did you know?

In Canada, only 51% of adults with diabetes reported receiving an annual foot screen.<sup>1</sup> (CIHI 2013)

For more information view previous Medtronic Presentation Digests:

- Amputation: Avoidable or Not? – <https://www.woundscanada.ca/docman/public/wound-care-canada-magazine/2015-13-no3/72-amputation-avoidable-or-not/file>
- Canadian Limb Salvage: A Call to Action – <https://www.woundscanada.ca/docman/public/wound-care-canada-magazine/2016-14-no3/ads-3/133-wcc-winter-2016-v14n3-medtronic-pd/file>

### Reference

1. Canadian Institute for Health Information. 2009. Diabetes Care Gaps and Disparities in Canada. Available from: [https://secure.cihi.ca/free\\_products/Diabetes\\_care\\_gaps\\_disparities\\_aib\\_e.pdf](https://secure.cihi.ca/free_products/Diabetes_care_gaps_disparities_aib_e.pdf).

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