Building a Community of Practice

On May 30, the evening before Wounds Canada's spring 2019 symposium, New Perspectives in Diabetic Limb Preservation, the event chair, Ahmed Kayssi, with logistical support from Wounds Canada, convened a meeting of experts and researchers to share current practices to advance the care of people at risk for non-traumatic lower-leg amputations secondary to diabetes.

The goal of the meeting, which was supported by an unrestricted educational grant from Cook Medical, was to grow a virtual community of practice specific to diabetic limb preservation.

Though various groups have undertaken such discussions in the past, this is the first time a significant number of interested individuals—40 from across Canada—had been brought together to focus on challenges and opportunities surrounding diabetic limb preservation.

To set the stage, the first portion of the event involved presentations on the status of amputation prevention in various jurisdictions, including barriers and facilitators. Though not all geographic areas were discussed, the speakers represented a cross-section of Canada.

Newfoundland and Labrador (Zaina Albalawi)

Newfoundland and Labrador have the highest rates of diabetes and amputations in the country. Challenges include the region having Canada's highest level of rural living, lifestyle factors, economic issues, an aging population and a drop in an already small population. Restricted resources are another significant challenge.

On the positive side, the province has a number of champions for limb preservation. As well, Atlantic Canada has identified diabetic foot disease as a priority and has allocated funding focused on vascular disease.

Interested parties are currently navigating partnerships with stakeholders, including collaborators such as Canadian Institute for Health Information (CIHI), various local groups, and the Canadian Agency for Drugs and Technologies in Health (CADTH), which is a big player in contributing evidence for decision-makers and piloting the implementation of new standards.

One of the opportunities is to build on the work already being done, with more focus on the unique risk factors in the province.

Nova Scotia (Matt Smith)

Nova Scotia has undergone systemic changes, where nine health districts became four zones. Halifax has a cardiac-level vascular clinic, but other regions don't have anything at this level. Wait times can be long. Patients may have to travel long distances to access care.

Opportunities include establishing hub-and-spokes care, with connections from a hub to outreach posts, as well as virtual health initiatives.

Quebec (Maryse Beaumier)

A unique characteristic of Quebec is that data from the province are often not included in published national data. Other challenges are common to all regions. For example:

- Few wound clinics exist in the province, and the two that do are in major cities (Québec and Montreal).
- There is a lack of education in wound care for physicians. Nurses are given practice in the area of wound care but can be blocked by other decision-makers.
- Technology for vascular assessment is not used:
  - ABPIs (ankle-brachial pressure indexes) are not often done or not done well; there is a need to upgrade practitioners' knowledge.
  - Toe pressures are not often obtained.
  - Only two sites in the province have the technology to conduct transcutaneous oxygen measurement.

Opportunities abound for education, and some new programs are on the horizon. A three-credit course at the university level is now mandatory for nurses. A possible master's degree for physicians and nurses is in the works.

On the research front, to date, only one study has been conducted on the status of amputations in Quebec. There is clearly an opportunity for more research in this area.

Ontario (Ahmed Kayssi)

In Ontario, until recently, limb preservation has not been prominent in the health-care model, whereas in some other provinces, the issue has been on the health-care agenda for some time. A number of centres of excellence exist in the province, but co-ordination has been lacking. Experience indicates that referring someone for an amputation is easier than co-ordinating efforts to heal a wound.

Other challenges include:

- Lack of access to foot and ankle surgery: Providers are overwhelmed; the problem is lack of resources, not of interest.
- Lack of education: Wound care in Ontario lags behind other areas of health care, but why?
- Health care in the North: The people there are at much higher risk than those in southern regions; we need a frank discussion on how our Northern populations are being treated.

Manitoba (April Boyd)

In Manitoba, the rate of diabetes in the population is 1 in 1,000. In the Indigenous population, the numbers are significantly higher: 15 in 1,000 for women, and 20 per 1,000 for men. Manitoba has the highest rate of Indigenous persons per population in Canada. This group is two to three times more likely to undergo an amputation, due to several factors: they often live outside the city, have poor access to running water, have a diet high in carbohydrates and junk food, and are often late to get care.

The bulk of care occurs in two hospitals in Winnipeg, which, for many patients, means long-distance travel. Guidelines for primary care are in place but are difficult to implement if patients can't get to care.

Many community physicians lack the knowledge to manage these patients, creating both a challenge and an opportunity. A new program allows medical students to move through practice stations and gain knowledge while learning about different specialties.

Saskatchewan (David Kopriva)

The common challenges from the other provinces also apply to Saskatchewan. However, with only one million people, the province can try things out on a small scale and is, therefore, nimbler than the larger provinces.

Saskatchewan was an early creator of a lower-extremity pathway. Unfortunately, early does not equal good; the pathway is not working adequately, because the foundations were not well set. The province has a high percentage of Indigenous persons, many of whom already have advanced conditions. We are not case finding, so they are coming to us late or too late. The pathway doesn't address this and needs to be adjusted.

A committee on the appropriateness of care in the province is looking at how to improve the pathway.

The vascular community has been important in developing the pathway but is frustrated because it's the default service for managing foot wounds. Practitioners see a lack of collaboration and support among health-care providers.

Data, while key, are difficult to access. Requests for data go into a queue and can take time to obtain. Ultimately the data drive the improvements.

Alberta (Karim Manji)

Patients with diabetic foot complications will have different needs at different times, such as simple wound care in the community or access to a complex wound care team in an interdisciplinary setting.

Alberta has only one tertiary care centre, in Calgary. Patients are often sent to high-risk foot teams, who can't manage the volume of patients. Edmonton too needs a tertiary centre.

Podiatry has not been integrated into the full hospital service, which makes building bridges with other specialties difficult.

We need to work together to create interdisciplinary co-operation. This national conversation from leaders across the country in limb preservation is an important step.

Summary (Ahmed Kayssi)

The presentations indicated that provinces share many common challenges, including access to resources, degrees of collaboration, levels of education, system weaknesses and necessary policy changes. We were talking about these issues 15 years ago, but at that time there were only three people rather than 40.

General Discussion

Comments and recommendations from the participants included the following:

System issues:

- Health-care systems don't necessarily need more money but rather need money to be allocated to disease management and prevention, as 77% of total costs of managing patients with diabetic foot complications are for inpatient hospitalization (often due to infection) and amputation.
- We need to change how we deliver care. The implementation of simple pathways has shown differences in lengths of stay, implementing order sets, offloading and basic dressing, all of which lead to significant changes in outcomes.
- Physicians should be the ones to move wound care forward; it is currently nurse-driven.
- Most care for limb preservation can be managed non-surgically. However, sometimes quick action from vascular surgeons is necessary.
- In Ontario only 20% or less of patients who need pressure redistribution get it, there is not enough debridement, and triage into urgent and emergent care is handled poorly.
- Personalized care is best but isn't always possible.

- Clinicians complete documentation for most procedures, but some recording, particularly of wound care data, is entered by non-clinicians.
- Clinicians need to do more case finding, rather than waiting for patients to find them.

Education issues:

- The provinces and territories need physicians who are capable of working in ambulatory wound clinics.
- For every 1% reduction of A1c, there's better healing; but in Ontario, only 19% of patients and home-care nurses know the patient's A1c.
- Nurses are not qualified to diagnose, so physicians need to be better trained.
- Education is a top priority.

Collaboration issues:

- Manitoba is split between provincial and federal administration and funding.
- Podiatry is severely limited in Ontario, which has a different funding model than other provinces.
- Orthopedic specialists in general don't want a practice that has a lot of complex patients.
- Most family physicians aren't fully versed on care pathways, including where to refer patients.
- Foot and ankle surgeons value podiatry, but orthopedic surgeons in general need to be convinced. In Alberta, podiatrists, and foot and ankle orthopedic surgeons work well together. Patients are sent to one or the other depending on their condition.

Research issues:

- New research needs to be conducted to develop improved outcomes.
- The health-care community requires data on the status of amputation across the country.
- We can identify patients with amputations because they are treated in the hospital, but most patient needs are addressed in the community.
- The gap in Quebec regarding the use of data from other provinces or the United States is significant.
- Topics for future research:
  - tracking the change of cost when patients are treated via interdisciplinary care

- developing a research agenda for people who have lost a limb
- Research can't sustain anything, but it can bring people together to discuss education and what types of data are needed.
- Data should be published to improve awareness among health-care providers.
- There is a need to develop and sustain collaboration between individuals/organizations that have data with those who can analyze and disseminate it.
- More geographic analysis is needed. Amputation is usually caused by many factors working together. Certain markers are indicative of important social factors.

Advocacy issues:

- To move the issue forward with governments it is important to show cost savings.
- The patient voice must be included. Patients sit on decision-making boards and can sway decisions.
- Ways must be found to mobilize knowledge, via publishing and other methods.
- Outreach in practice can be a part of advocacy.

Attendees at the Dinner Meeting

Peggy Ahearn
Afsaneh Alavi
Zaina Albalawi
Reza Basiri
Maryse Beaumier
Mariam Botros
April Boyd
Charles de Mestral
Lisa Dubrofsky
Robyn Evans
Breanne Everett
Randolph Guzman
Jackie Hickey
James Hill
Sander Hitzig
Ahmed Kayssi
Robert Ketchen
David Kopriva
Warren Latham
Suzanne Lu
Karim Manji
Tilla Manning-Atwell
Tobi Mark
Perry Mayer
Crystal McCallum
Ann-Marie McLaren
Samantha Minc
Bijan Najafi
Richard Neville
Addie North
Guiseppe Papia
Maureen Rego
Lee Rogers
Sue Rosenthal
Gary Sibbald
Jeffrey Siracuse
Matthew Smith
Ranjani Somayaji
Amanda Thambirajah
Olena Veryha

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