

The Impacts of COVID-19 on Diabetic Foot Care

An interview with Devon Jahnke and Iris Noland

In early 2022, Janet Kuhnke, RN, BScN, MS, NSWOC, DrPsych, interviewed Devon Jahnke, DCh, IIWCC, CDE, MClSc (Wound Healing), and Iris Noland, BSc (Biochem), MD, MClSc (Wound Healing), to ask them about their experiences in treating patients with diabetes-related foot complications in the age of COVID.

Q: From your provider perspective can you tell me about your role and the impact COVID has had on care and services for patients with diabetes and foot complications?

Devon Jahnke (DJ): My role as a chiropodist is to provide wound care to people with diabetes and advanced comorbid conditions. Since the pandemic started, I've noticed there has been limitation in services to our people with diabetes and foot wounds. This may be due to several reasons, including:

- Having to limit access to services as per medical directives, both institutionally and provincially
- Redeploying staff to provide services in different ways to provide care for the acute inpatients
- Triaging many patients to the sickliest of patients and therefore, not being able to put our efforts toward more preventative means of care

- Experiencing limitations in diagnostic testing such as X-rays and C&S—everything's delayed

What we've noticed over the years of pandemic is that, unfortunately, our patients' wounds have become worse. We are seeing more frequent infections, increased need for antibiotics, more emergency room visits and higher rates of inpatient hospitalizations due to septicemia bacteremia. We've even had complications from infections such as cardiac arrest, higher limb amputations and death.

Interestingly we've also seen an increase in people having more than one type of wound on their feet, and instead of just treating a single wound, we're often treating multiple wounds.

When patients come in, they're scared to be here. They are scared they may become infected with COVID-19 by coming to their appointment and worried about being in a waiting area with other people. They are also scared of what they are going to hear from their medical provider.

Patients can also be very angry due to the circumstances, or very depressed, and that actually

creates a barrier for them to adhere to treatment goals.

We've had to stop all patient education classes for diabetic foot care unless it is through direct contact with a clinician during a scheduled in-person appointment.

Even access to proper footwear or offloading devices has been affected. Supplies of footwear and trying to get people to be fitted with footwear have been limited.

Basic hygiene to keep skin and wounds clean and timely dressing changes have all been impacted and limited. In fact, many times scheduled home care visits have not actually occurred due to an overwhelmed system and lack of personnel or skilled providers.

Iris Noland (IN): I provide both consultant and primary care for patients with diabetes and foot complications in an underserved rural area. Referrals are sent to me from emergency physicians and primary care providers for persons with diabetes and diabetic foot ulcers.

I have seen a lot of what Devon describes. The access that persons with diabetes and foot complications have to medical services has often been delayed due to lack of primary care provider in-person assessments, avoidance of emergency departments because of fear of contracting COVID-19 and fear of being admitted to hospital with the COVID-19 restrictions of visitors.

I consider all DFU referrals as urgent and try to see them within one week. My initial assessment focuses on assessment of vascular status, infection management, pressure redistribution and wound care, including debridement of callus.

The pandemic has resulted in later presentation of complicated wounds and extreme reluctance of patients and families to attend emergency and urgent care clinics as well as specialty clinics and diagnostics. The wait times for CTs, MRIs, vascular Dopplers, interventional radiology and vascular surgery have increased for those with critical ischemia but not immediately limb-threatening wounds. Pressure redistribution/offloading was difficult to obtain before the pandemic and remains extremely challenging, with bottlenecks to access

Devon Jahnke is a chiroprapist, wound consultant and certified diabetes educator with 20 years of experience in wound care. She is employed by Health Sciences North/Horizon Santé-Nord in Sudbury, Ontario. She is an advisory committee member for Health Quality Ontario (HQP) Wound Care Standards and an Ontario Health Technology Committee member for offloading devices. She is a faculty member for Wounds Canada and the Wounds Canada Institute.



Iris Noland is a former medical director of emergency and primary care at Quinte Health, in Ontario, overseeing four emergency departments and three primary care sites (2010–2017), and medical director of primary care (2017–2019). She worked as a hospitalist on the inpatient unit at Trenton Memorial Hospital (1984–2019) and has a primary care practice as a part of the Brighton-Quinte West FHT. In addition, she is the medical director of a long-term care facility and has a consulting practice in wound care with an interest in chronic wounds and lymphedema.



to funded programs through home-care-supported services.

Diabetes education programs have been moved to virtual and online since the pandemic for many patients and, as a result, foot examinations are more often not completed and opportunities for focused education and prevention are missed.

Q: In terms of care delivery, is there anything that has improved? What is not going well?

IN: I can talk about a couple of areas where I've seen improvements. For example, a diabetic foot program was launched in the region through home care, and more home care nurses are doing APBIs, so vascular disease is being identified earlier.

In addition to the things Devon and I mentioned earlier, some of the negative impacts include a shortage of wound care nurses, resulting in inconsistent care and service delays. The rollout

of many diabetic foot programs has not been well communicated, and access has been limited by the need for referrals and nursing availability.

I have also observed shortages in dressing and wound care supplies, which has led to missed dressing changes and substitutions to “whatever is available” to cover the wound.

The already limited and delayed access to pressure redistribution (chronic) has worsened, with bottlenecks at both the referrer and provider points in the process.

There continues to be limited access to funded high-risk foot care in community, and even those who can self-pay or have third-party insurance have found it difficult to access these services due to pandemic restrictions.

Tertiary care interventions for those with vascular compromise are often delayed and subject to multiple cancellations and rebooking due to limited operating room availability and high demand for interventional radiology services.

DJ: We are being more thorough when investigating patients if they’re feeling sick with flu-like symptoms. Infection control and prevention awareness and practices have reduced spread of viral infections prior to entering and mixing with other patients in small spaces. If patients are feeling unwell, we can suspect that these illnesses will impact blood glucose levels and we can correlate the time of illness with blood glucoses changes and possible wound deterioration.

We have improved our awareness of sanitation, hand hygiene, cleaning our rooms, floors and garbage, as well as the need for proper equipment and PPE to keep everyone safe.

We are looking into how to deliver services in different ways, whether it’s virtually, digitally or through telephone conferences. Providing joint appointments with other specialists to reduce the number of appointments the patient may have in the day is something that is showing promise.

However, direct patient care remains limited, including the amount of time provided. Also, some services have been limited or cancelled, such as non-urgent surgeries. This has resulted in more major amputations instead of minor amputations

and an increase in patient hospitalization due to sepsis.

Q: Can you discuss the COVID-related barriers and strengths when it comes to patient and family self-management?

DJ: Well, what we’re witnessing right now due to limited access to clinicians, providers and specialists is patients relying on their family members to provide care. In many instances, their family members have had to advocate for the patient’s needs through telephone conversations or virtual programs. This has given us some insight into what the patient’s home life is like, what their true living conditions are or what their overall environment is. For example, knowing how many stairs a patient may have in their home or how able they are to use the washroom readily when wearing an offloading device is valuable. Family members have had to take blood glucose readings and provide foot inspections and dressing changes. So, in that respect, it has allowed us to address the needs of the patients in a different way.

Patients have had to develop new self-management skills to achieve health-care goals for their diabetes and diabetic foot wounds. This responsibility has been laid at the feet of the patient’s family and immediate social circle. We have identified a care gap. This care gap means we must provide a lot more education to the patient—and their families. This educational approach to care may strengthen the family bonds and support prevention strategies.

However, when the service or treatment of the patient requires hands-on care, that’s when it is truly important for that visit to be in person. It can’t be through the telephone or online.

I have seen more patients want to bring in an additional care provider or support person to their appointments. Therefore, it is not just the patient in the appointment you are educating but the support person as well, and the appointment may take more time to address the concerns of both the patient and the additional caregiver. I think there is an appreciation or better understanding by the family member or support person regarding

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wound and diabetes management when both parties attend.

IN: The need for self-management has increased due to lack of access to in-person services. For those with education and confidence to manage their diabetes this has worked well, but for those with complications and difficult-to-manage disease there has been inadequate support.

The pandemic has allowed those with skills, access and motivation to become more confident in their ability to manage their diabetes. Patients who have been able to engage family members to support them have benefited from both physical and emotional supports.

Q: Can you describe your experience regarding access to care—both positive and negative—that your patients with diabetes have had to navigate?

IN: With the move to more virtual and telephone education, those without computer skills or access have had limited assessment and education opportunities for management of their diabetes. On the other hand, patients and families with good computer skills, access and motivation have been able to connect with educators/endocrinologists virtually, which has increased their access and improved their diabetes control.

DJ: Well, basically I haven't been able to see as many patients or provide a virtual program to address the needs of our people with diabetes and wounds. People with diabetes haven't been able to access in-person classes. Specialists haven't been able to take on more referrals, and triaging is backed up, leaving our people not being seen in a timely manner.

We've tried to provide services virtually but, as Iris says, not everybody has the technology, good internet connections or skills to manage it.

We have had to rely on telephone conversations, but this limits people with hearing issues who have had difficulty not being able to read lips—especially our elderly population with diabetes.

However, if a patient has had a family member or caregiver to assist them with these things, I think it's helped to build a relationship and an understanding of what the patient needs for self-management of their diabetes. I also think it's allowed us to discover new ways to deliver care using technology. It's shed a light on the gaps in services for people with diabetes. It has exposed the need of advancing wearable technology.

Not having access to in-person care or infrequent patient visits also makes it harder for clinicians to determine if the mental health of the person with diabetes is getting worse. We know that people with diabetes and chronic illness have a higher risk of depression and anxiety. COVID-19 has compounded this. As clinicians we see this reflected in how patients adhere to treatment.

Q: What additional information do you want readers of *Limb Preservation in Canada* to know?

IN: The socioeconomic divide in diabetes care has widened during the pandemic.

The pandemic has resulted in far fewer in-person diabetic assessments, which, for many, has resulted in worsened diabetic management and delayed diagnosis of complications, including DFUs and critical ischemia.

The pandemic has resulted in patients avoiding emergency services due to fear of contracting disease AND fear of being admitted to hospital and separated from family supports. This has led to late diagnosis of severe infection and ischemia with increased major amputations and death.

Diagnostic delays related to access to DI, interventional radiology and vascular surgery have adversely affected outcomes of those with DFU.

DJ: I think it's important that we understand that the impact of COVID-19 will last for years.

Additional Reading

- Carro GV, Carlucci EM, Torterola I, Breppe P, Ticona Ortiz MÁ, Palomino Pallarez JE. Diabetic foot and COVID-19. Medical consultation and severity of lesions compared to 2019. *Medicina*. 2020;80 Suppl 6:30–4.
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- Schuivens PM, Buijs M, Boonman-de Winter L, Veen EJ, de Groot HG, Buimer TG, et al. Impact of the COVID-19 lockdown strategy on vascular surgery practice: More major amputations than usual. *Annals of Vascular Surgery*. 2020;69:74–9.

The impact of chronic wound care on health-care providers—though not studied well—has led to compassion fatigue. COVID-19 has amplified this, leading to loss of experienced professionals to early retirement and an exodus into other fields.

Patients coming to see us are afraid of getting an infection or losing a leg. Now, there's an additional fear that patients are not going to get care or enough care. We know they've lost faith in our health-care system. It's up to us to make sure that faith is returned in a caring and compassionate way. We must inform our patients that services may not be delivered in the same ways as before, but that this creates opportunities for us to advocate and intervene through technological means. Maybe some of our own fears with technology will also be overcome.

I think it has really led to an understanding that we are treating and educating more than just the person with diabetes with the diabetic foot ulcer. We're also treating and educating the surrounding caregivers, family members, partners, neighbours, friends, nieces, nephews and grandchildren. We used to say it takes a village to raise a child. Maybe it should also be said that it takes a village to save a limb. ■

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