



Information and Data Brief: Diabetic Foot Ulcers

Find out why a particular quality standard
was created and the data behind it

**Health Quality
Ontario**

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Quality Standards are:

- Concise sets of easy-to-understand statements outlining what care should look like for people living with certain conditions.
- Based on the best available evidence.
- Accompanied by quality indicators that enable organizations to monitor the quality of their care.
- Designed for health care providers to help them understand what care they should be offering, and how to measure it.
- Intended to also help patients, residents, families, and caregivers know what to ask for in their care.

What is included in this Brief

Wounds are a breakdown in the protective function of the skin and represent a significant burden for patients, their caregivers and families, clinicians, and the Ontario health system. There are several types of wounds.

This brief includes data and information on Diabetic Foot Ulcers.

Methodological details, references, acknowledgments and additional information are available at the end of this brief.

Why this Quality Standard is needed:

- Diabetes (type I and II) is one of the most prevalent chronic diseases, with about 1 in 10 people in Ontario currently affected.¹
- It is estimated that 15% to 25% of people with diabetes will develop a diabetic foot ulcer during their lifetime.²
- Diabetic foot ulcers are a serious and costly complication of diabetes that can lead to amputation and even death.³ Diabetic foot ulcers are the leading cause of about a third of all non-traumatic below-the-knee amputations in Canada.⁴
- People with diabetic foot ulcers report poor overall health-related quality of life—particularly in terms of pain, discomfort, and loss of mobility.⁵
- The data reported here account for only a portion of the affected population since patients with diabetic foot ulcers outside of acute care cannot be identified.
- Also, the data do not speak to how these wounds are cared for due to the lack of information on the actual management of diabetic foot ulcers.

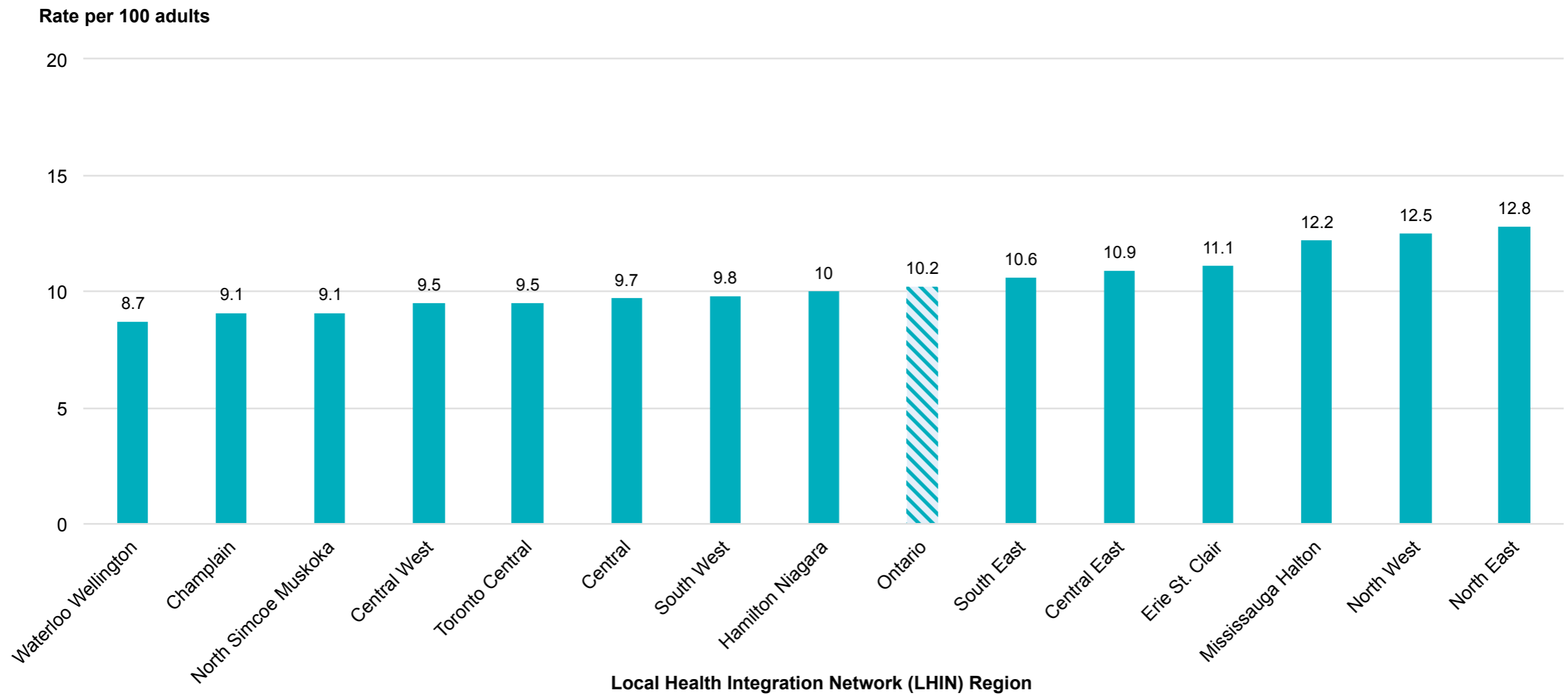


Diabetic Foot Ulcer: The Data

KEY FINDING

The prevalence of diabetes varied across Ontario's 14 regions. Up to 1 in 4 people with diabetes will develop a diabetic foot ulcer during their lifetime.

Diabetes prevalence per 100 adults in Ontario, by LHIN region, April 2012

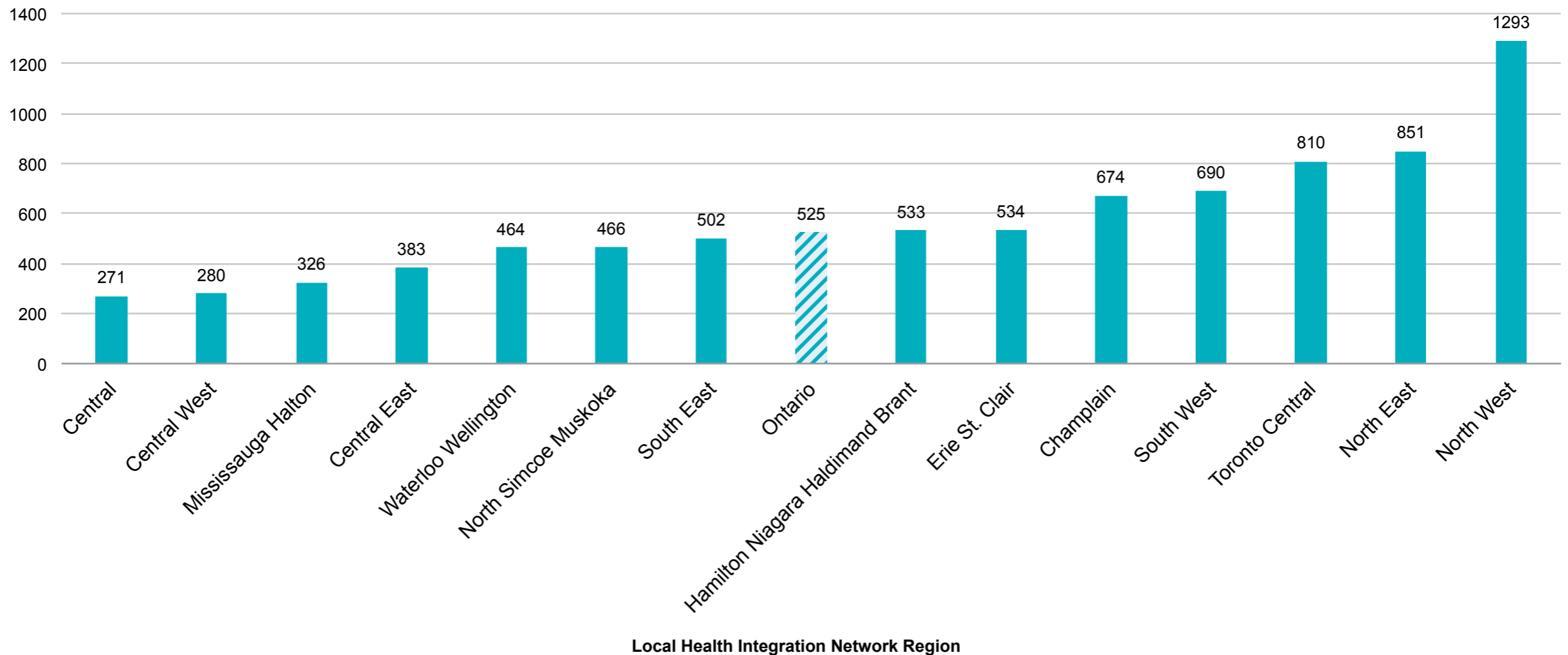


KEY FINDING

The rates of hospitalizations related to amputations in people with diabetes due to diabetic foot ulcers vary almost 5-fold across LHIN regions.

Rates of hospitalizations related to amputations in people with a diabetic foot ulcer, out of all people with diabetes, by LHIN region, 2014/15

Rate per 100,000 people with diabetes

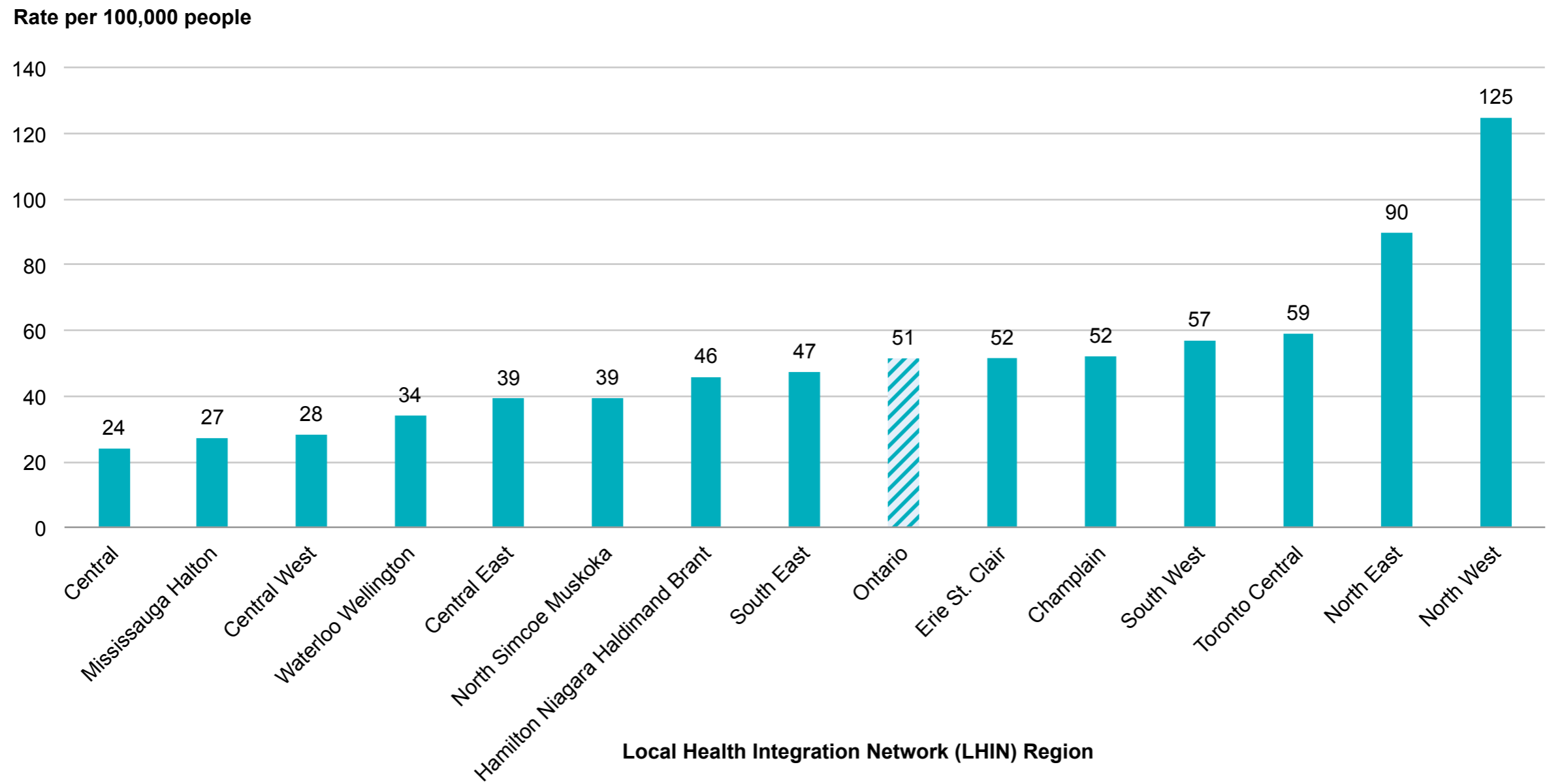


Local Health Integration Network Region

KEY FINDING

Hospitalization rates for diabetic foot ulcers varied five-fold across the province.

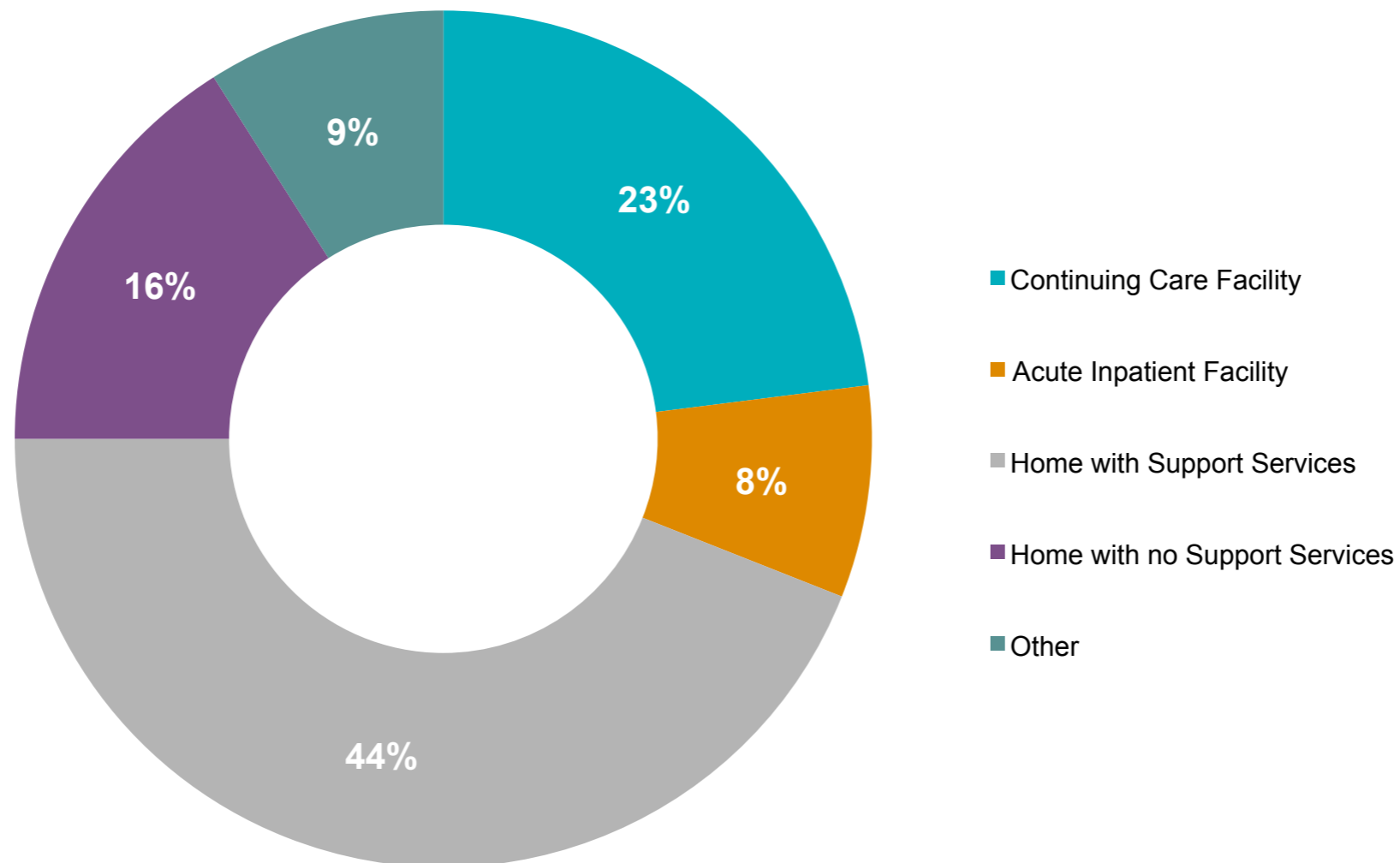
Hospitalization rates for diabetic foot ulcers per 100,000 people in Ontario, by LHIN region, 2014/15



KEY FINDING

Patients hospitalized with a diabetic foot ulcer transition to a variety of settings, highlighting the importance of interprofessional collaboration across settings.

Anticipated Discharge Destination for Patients with Diabetic Foot Ulcers in Ontario, 2014/15



Methodological notes: Diabetic Foot Ulcer

Indicator	Numerator	Denominator	Source	Notes
Diabetes prevalence per 100 adults in Ontario, by Local Health Integration Network (LHIN) region, 2011.	Number of people in the denominator with diagnosed diabetes.	Number of people in the population.	ICES Diabetes Atlas.	Population aged 12 and over who report that they have been diagnosed by a health professional as having diabetes.
Rates of hospitalizations related to amputations in people with a diabetic foot ulcer, out of all people with diabetes, by LHIN region, 2014/15	Number of hospital discharges with a amputations and a coded diabetic foot ulcer	All cases of diabetes that are prevalent on April 1 of 2014/15	Ontario Diabetes Database, Discharge Abstract Database, Registered Persons Database, Ontario Health Insurance Plan provided by the Institute for Clinical Evaluative Sciences (Denominator): Discharge Abstract Database, Ontario Ministry of Health and Long-Term Care, IntelliHEALTH ONTARIO (Numerator).	Only amputations of the lower extremities are included.
Hospitalization rates for diabetic foot ulcers per 100,000 population in Ontario, by LHIN region, 2014/15.	Number of people in the denominator who were hospitalized for a diabetic foot ulcer.	Number of people in the population.	Discharge Abstract Database, Ontario Ministry of Health and Long-Term Care, IntelliHEALTH ONTARIO	Includes those with a most responsible diagnosis of a diabetic foot ulcer.
Anticipated discharge destination for patients with diabetic foot ulcers in Ontario, 2014/15.	Anticipated discharge destination upon discharge.	Number of people discharged with a primary diagnosis of diabetic foot ulcer.	Discharge Abstract Database, Ontario Ministry of Health and Long-Term Care, IntelliHEALTH ONTARIO	Includes those with a most responsible diagnosis of a diabetic foot ulcer.

References

1. Canadian Diabetes Association. Diabetes charter backgrounder [Internet]. Toronto (ON): The Association; 2015 [cited 2016 Apr]. Available from: <https://www.diabetes.ca/getmedia/513a0f6c-b1c9-4e56-a77c-6a492bf7350f/diabetes-charter-backgrounder-national-english.pdf.aspx>
2. Singh N, Armstrong DG, Lipsky BA. Preventing foot ulcers in patients with diabetes. *JAMA*. 2005;293(2):217-28.
3. Snyder RJ, Frykberg RG, Rogers LC, Applewhite AJ, Bell D, Bohn G, et al. The management of diabetic foot ulcers through optimal off-loading: building consensus guidelines and practical recommendations to improve outcomes. *J Am Podiatr Med Assoc*. 2014;104(6):555-67.
4. Canadian Diabetes Association. Impact of offloading devices on the cost of diabetic foot ulcers in Ontario. Toronto (ON): The Association; 2016.
5. Siersma V, Thorsen H, Holstein PE, Kars M, Apelqvist J, Jude EB, et al. Importance of factors determining the low health-related quality of life in people presenting with a diabetic foot ulcer: the Eurodiale study. *Diabet Med*. 2013;30(11):1382-7.

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Additional Resources

This Information Brief is intended to support the quality standard for Diabetic Foot Ulcers, which can be found in full on the [Quality Standards page](#) of the Health Quality Ontario website.

A white square with a thin border containing the text "Quality Standards" in white.

Quality
Standards

For more information:

Website: hqontario.ca/qualitystandards

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