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Fibreglass Total Contact Casting, Removable Cast Walkers, and Irremovable Cast Walkers to Treat Diabetic Neuropathic Foot Ulcers: OHTAC Recommendation

ONTARIO HEALTH TECHNOLOGY ADVISORY COMMITTEE RECOMMENDATION

- The Ontario Health Technology Advisory Committee recommends that fibreglass total contact casting, removable cast walkers, and irremovable cast walkers be publicly funded in patients presenting with a neuropathic diabetic plantar foot ulcer

RATIONALE FOR THE RECOMMENDATION

The Ontario Health Technology Advisory Committee members accepted the conclusions of the health technology assessment[1] and agreed that all three interventions (fibreglass total contact casting, removable cast walkers, and irremovable cast walkers) provide clinical benefit and value for money, and are consistent with patient values and preferences across the spectrum of management of neuropathic diabetic plantar foot ulcers.

The clinical evidence suggests that both fibreglass total contact casting and irremovable cast walkers may lead to improved ulcer healing compared with removable cast walkers. While committee members recognized that there is more variability in ulcer healing with removable cast walkers, they remain a preferred treatment option when the offloading device needs to be removed regularly (e.g., in patients with infected ulcers).

Public Comment: Held May 10 to May 31, 2017.

Ontario
Health Quality Ontario

Decision Determinants for Fibreglass Total Contact Casting, Removable Cast Walkers, and Irremovable Cast Walkers to Treat Diabetic Neuropathic Foot Ulcers

Decision Criteria	Subcriteria	Decision Determinants Considerations
Overall clinical benefit How likely is the health technology/intervention to result in high, moderate, or low overall benefit?	**Effectiveness** How effective is the health technology/intervention likely to be (taking into account any variability)?	The clinical evidence suggests that fibreglass total contact casting, removable cast walkers, and irremovable cast walkers are beneficial in the treatment of neuropathic, noninfected foot ulcers in patients with diabetes but without severe peripheral arterial disease. However, there was more variability in ulcer healing with removable cast walkers: the studies showed that 68% to 95% of ulcers were healed with fibreglass total contact casting, 70% to 80% with irremovable cast walkers, and 22% to 80% with removable cast walkers.
	Safety How safe is the health technology/intervention likely to be?	No safety concerns were identified in the studies. Given the small sample sizes and few events reported, it was not possible to draw firm conclusions for this outcome
	Burden of illness What is the likely size of the burden of illness pertaining to this health technology/intervention?	The burden of illness is large; diabetes affects approximately 10% of the Ontario population, and each year approximately 2% to 3% of people with diabetes will develop a neuropathic foot ulcer
	Need How large is the need for this health technology/intervention?	Neuropathic foot ulcers can cause substantial morbidity and increase the risk of foot and lower leg amputation. Offloading pressure from the affected foot is an important principle of wound management. Each device has different characteristics and may not be appropriate for all patients. Factors to be considered when selecting a treatment include patient and ulcer characteristics (lifestyle, device fit, ulcer infection, need for frequent dressing changes); the availability of the device and of trained personnel to apply it (fibreglass total contact casting); and whether the patient can return to the clinic for frequent visits to reapply irremovable devices
Consistency with expected societal and ethical values[a] How likely is adoption of the health technology/intervention to be congruent with societal and ethical values?	**Societal values** How likely is adoption of the health technology/intervention to be congruent with expected societal values?	Use of these treatments is expected to be congruent with societal values Patients with diabetic foot ulcers feel that fibreglass total contact casting improves healing more effectively than removable cast walkers. However, fibreglass total contact casting can be more costly and may affect mobility to a greater extent
	Ethical values How likely is adoption of the health technology/intervention to be congruent with expected ethical values?	Use of these treatments is expected to be congruent with ethical values
Value for money How efficient is the health technology/ intervention likely to be?	**Economic evaluation** How efficient is the health technology/intervention likely to be?	Fibreglass total contact casting and irremovable cast walkers are less expensive and lead to more health outcome gains (e.g., quality-adjusted life years, ulcers healed) than removable cast walkers

Decision Criteria	Subcriteria	Decision Determinants Considerations
Feasibility of adoption into health system How feasible is it to adopt the health technology/intervention into the Ontario health care system?	**Economic feasibility** How economically feasible is the health technology/intervention?	Increased access to fibreglass total contact casting, removable cast walkers, and irremovable cast walkers could result in cost savings for the health system, given the potential for lower amputation rates
	Organizational feasibility How organizationally feasible is it to implement the health technology/intervention?	Access is needed to a health care professional who can assess and determine the appropriate treatment Fibreglass total contact casting must be applied by a qualified healthcare professional Geographic isolation may hinder the use of irremovable devices (fibreglass total contact casting and irremovable cast walkers), because frequent visits are needed for cast removal and reapplication. Removable cast walkers may be an option in such cases

[a]The anticipated or assumed common ethical and societal values held in regard to the target condition, target population, and/or treatment options. Unless there is evidence from scientific sources to corroborate the true nature of the ethical and societal values, the expected values are considered.

REFERENCES

(1) Health Quality Ontario. Fibreglass total contact casting, removable cast walkers, and irremovable cast walkers to treat diabetic neuropathic foot ulcers: a health technology assessment. Ont Health Technol Assess Ser [Internet]. 2017 Sep;17(12):1-124. Available from: http://www.hqontario.ca/evidence-to-improve-care/journal-ontario-health-technology-assessment-series

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