Foot Care Interventions for Adults in the Community Setting: Clinical Effectiveness and Guidelines
Authors: Kelsey Seal, Kaitryn Campbell


Acknowledgments:

Disclaimer: The information in this document is intended to help Canadian health care decision-makers, health care professionals, health systems leaders, and policy-makers make well-informed decisions and thereby improve the quality of health care services. While patients and others may access this document, the document is made available for informational purposes only and no representations or warranties are made with respect to its fitness for any particular purpose. The information in this document should not be used as a substitute for professional medical advice or as a substitute for the application of clinical judgment in respect of the care of a particular patient or other professional judgment in any decision-making process. The Canadian Agency for Drugs and Technologies in Health (CADTH) does not endorse any information, drugs, therapies, treatments, products, processes, or services.

While care has been taken to ensure that the information prepared by CADTH in this document is accurate, complete, and up-to-date as at the applicable date the material was first published by CADTH, CADTH does not make any guarantees to that effect. CADTH does not guarantee and is not responsible for the quality, currency, propriety, accuracy, or reasonableness of any statements, information, or conclusions contained in any third-party materials used in preparing this document. The views and opinions of third parties published in this document do not necessarily state or reflect those of CADTH.

CADTH is not responsible for any errors, omissions, injury, loss, or damage arising from or relating to the use (or misuse) of any information, statements, or conclusions contained in or implied by the contents of this document or any of the source materials.

This document may contain links to third-party websites. CADTH does not have control over the content of such sites. Use of third-party sites is governed by the third-party website owners' own terms and conditions set out for such sites. CADTH does not make any guarantee with respect to any information contained on such third-party sites and CADTH is not responsible for any injury, loss, or damage suffered as a result of using such third-party sites. CADTH has no responsibility for the collection, use, and disclosure of personal information by third-party sites.

Subject to the aforementioned limitations, the views expressed herein are those of CADTH and do not necessarily represent the views of Canada's federal, provincial, or territorial governments or any third party supplier of information.

This document is prepared and intended for use in the context of the Canadian health care system. The use of this document outside of Canada is done so at the user's own risk.

This disclaimer and any questions or matters of any nature arising from or relating to the content or use (or misuse) of this document will be governed by and interpreted in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein, and all proceedings shall be subject to the exclusive jurisdiction of the courts of the Province of Ontario, Canada.

The copyright and other intellectual property rights in this document are owned by CADTH and its licensors. These rights are protected by the Canadian Copyright Act and other national and international laws and agreements. Users are permitted to make copies of this document for non-commercial purposes only, provided it is not modified when reproduced and appropriate credit is given to CADTH and its licensors.

About CADTH: CADTH is an independent, not-for-profit organization responsible for providing Canada’s health care decision-makers with objective evidence to help make informed decisions about the optimal use of drugs, medical devices, diagnostics, and procedures in our health care system.
Research Questions

1. What is the clinical effectiveness of basic foot care treatments for adult patients in a community setting?
2. What is the clinical effectiveness of advanced foot care treatments for patients with peripheral vascular disease or diabetes in a community setting?
3. What are the evidence-based guidelines regarding basic or advanced foot care treatments in patients with peripheral vascular disease or diabetes?

Key Findings

Two randomized controlled trials and one evidence-based guideline were identified regarding foot care for adult patients in a community setting.

Methods

A limited literature search was conducted on key resources including Medline, the Cumulative Index to Nursing & Allied Health Literature (CINAHL), the Cochrane Library, University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. Methodological filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, and guidelines. The search was limited to English language documents published between January 1, 2013 and July 10, 2018. Internet links were provided, where available.

Selection Criteria

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

Table 1: Selection Criteria

| Population                  | Q1.3: Adult patients in a community setting
|                            | Q2: Adult patients in a community setting with peripheral vascular/arterial disease (or peripheral arterial occlusive disease) or diabetes
| Intervention               | Q1: Basic foot care treatment procedures (e.g., washing or cleaning, toenail clipping, general assessments)
|                            | Q2: Advanced foot care treatment procedures (e.g., debridement, dressing changes and management, topical antibiotic application, advanced assessment)
|                            | Q3: Basic or advanced foot care treatment
| Comparator                 | Q1-2: Control (e.g., no treatment, waitlist, other PVD/PAD treatments [e.g., optimized medical management])
|                            | Q3: No comparator
| Outcomes                   | Q1-2: Clinical effectiveness (e.g., number of ulcers, number of ingrown toenails, number of infections, walking ability, injury)
|                            | Q3: Evidence-based guidelines
| Study Designs              | Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, evidence-based guidelines. |
Results

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials and evidence-based guidelines.

Two randomized controlled trials and one evidence-based guideline were identified regarding foot care for adult patients in a community setting.

Additional references of potential interest are provided in the appendix.

Overall Summary of Findings

Two randomized controlled trials (RCT)\(^1\)\(^-\)\(^2\) were identified regarding foot care in patients with diabetes. One RCT\(^1\) was performed to examine the effectiveness of a foot care education module for diabetes specifically designed by the researchers. They examined 127 patients with diabetes mellitus: 63 patients received the intervention, which was a foot care education module, and 64 patients were placed in the control group, which received routine care at baseline and one month. Knowledge scores were statistically significantly higher in the intervention group. The study\(^1\) concluded that audio-visual foot care patient education in outpatient settings is an effective means to improve foot care knowledge and practice in patients with diabetes. The second RCT\(^2\) examined the Integrated Client Care (ICC) project, which was a multi-year initiative to develop and test a new model of wound care within home care in Ontario. There were a total of 12,063 diabetic foot ulcer patients in the study. The intervention group received the ICC module and the control group received standard care. The study\(^2\) concluded that the ICC intervention was not effective, most likely due to failure of implementation.

One evidence-based guideline\(^3\) was identified regarding basic or advanced foot care treatments in patients with peripheral vascular disease or diabetes. The guideline\(^3\) recommends that a foot protection service for preventing diabetic foot problems, and for treating and managing diabetic foot problems in the community should be in place. It also states that all community settings should have antibiotic guidelines covering the care pathway for managing diabetic foot infections that take into account local patterns of resistance. The guideline\(^3\) also recommends that when treating diabetic foot ulcers, debridement in the community should only be done by healthcare professionals with the relevant training and skills, continuing the care described in the person’s treatment plan.

References Summarized

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

No literature identified.

Randomized Controlled Trials

1. Rahaman HS, Jyotsna VP, Sreenivas V, Krishnan A, Tandon N. Effectiveness of a Patient Education Module on Diabetic Foot Care in Outpatient Setting: An Open-label
Randomized Controlled Study. *Indian J Endocrinol Metab.* 2018 Jan-Feb;22(1):74-78. PubMed: PM29535941


Guidelines and Recommendations

Appendix — Further Information

Previous CADTH Reports


Systematic Reviews – Mixed Setting


Guidelines – Methodology Not Reported


Non-Randomized Studies


Evidence-based Guidelines – Setting Unclear