

CADTH RAPID RESPONSE REPORT: SUMMARY OF ABSTRACTS

Foot Care Interventions for Adults in the Community Setting: Clinical Effectiveness and Guidelines

Service Line: Rapid Response Service
Version: 1.0
Publication Date: July 20, 2018
Report Length: 7 Pages

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Cite As: *Foot Care Interventions for Adults in the Community Setting: Clinical Effectiveness and Guidelines*. Ottawa: CADTH; 2018 Jul. (CADTH rapid response report: summary of abstracts).

Acknowledgments:

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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 RCT¹ 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 study¹ 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 RCT² 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 study² concluded that the ICC intervention was not effective, most likely due to failure of implementation.

One evidence-based guideline³ was identified regarding basic or advanced foot care treatments in patients with peripheral vascular disease or diabetes. The guideline³ 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 guideline³ 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](#)

2. Zwarenstein M, Shariff S, Mittmann N, Stern A, Dainty KN. A large cluster randomized trial of outcome-based pathways to improve home-based wound care. *Trials.* 2017 Aug 29;18(1):393.

[PubMed: PM28851413](#)

Guidelines and Recommendations

3. National Institute for Health and Care Excellence. Diabetic foot problems: prevention and management. (*NICE guideline NG19*) 2015. Last updated Jan 2016; <https://www.nice.org.uk/guidance/ng19/resources/diabetic-foot-problems-prevention-and-management-pdf-1837279828933>. Accessed 2018 Jul 19.

Appendix — Further Information

Previous CADTH Reports

4. Foot Care for Seniors in the Community Setting: Clinical Effectiveness and Guidelines. (*CADTH Rapid response report: summary of abstracts*). Ottawa (ON): CADTH; 2014: <https://cadth.ca/sites/default/files/pdf/htis/nov-2014/RB0705%20Foot%20Care%20Final.pdf>. Accessed 2018 Jul 19.
5. Debridement Procedures for Managing Diabetic Foot Ulcers: A Review of Clinical Effectiveness, Cost-effectiveness, and Guidelines. (*CADTH Rapid response report: summary with critical appraisal*). Ottawa (ON): CADTH; 2014: <https://www.cadth.ca/sites/default/files/pdf/htis/dec-2014/RC0579-002%20Diabetic%20Foot%20Ulcers%20Final.pdf>. Accessed 2018 Jul 19.
6. Negative Pressure Wound Therapy for Managing Diabetic Foot Ulcers: A Review of the Clinical Effectiveness, Cost-effectiveness, and Guidelines. (*CADTH Rapid response report: summary with critical appraisal*). Ottawa (ON): CADTH; 2014: <https://www.cadth.ca/sites/default/files/pdf/htis/dec-2014/RC0579-001%20Diabetic%20Foot%20Ulcers%20Final.pdf>. Accessed 2018 Jul 19.
7. Compression Therapy in Diabetic Foot Ulcer Management: A Review of Clinical Effectiveness, Cost-effectiveness and Guidelines. (*CADTH Rapid response report: summary with critical appraisal*). Ottawa (ON): CADTH; 2014: <https://www.cadth.ca/sites/default/files/pdf/htis/nov-2014/RC0579-004%20Diabetic%20Foot%20Ulcers%20Final.pdf>. Accessed 2018 Jul 19.
8. Delivery of Podiatry Care for Adults with Diabetes or Chronic Foot Conditions: A Review of the Clinical Effectiveness. (*CADTH Rapid response report: summary with critical appraisal*). Ottawa (ON): CADTH; 2013: <https://www.cadth.ca/sites/default/files/pdf/htis/dec-2013/RC0492%20Podiatric%20care%20Final.pdf>. Accessed 2018 Jul 19.

Systematic Reviews – Mixed Setting

9. Dumville JC, Lipsky BA, Hoey C, Cruciani M, Fiscon M, Xia J. Topical antimicrobial agents for treating foot ulcers in people with diabetes. *Cochrane Database Syst Rev*. 2017;6:CD011038. [PubMed: PM28613416](https://pubmed.ncbi.nlm.nih.gov/28613416/)

Guidelines – Methodology Not Reported

10. Canadian Diabetes Association 2013 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada. Appendix 9: Diabetes and Foot Care: A Patient's Checklist. *Can J Diabetes*. 2013;37:S211. [https://www.canadianjournalofdiabetes.com/article/S1499-2671\(13\)00097-X/pdf](https://www.canadianjournalofdiabetes.com/article/S1499-2671(13)00097-X/pdf) Accessed 2018 Jul 19.
11. Assessment and management of foot ulcers for people with diabetes. 2nd ed. Toronto (ON): Registered Nurses' Association of Ontario; 2013: <http://rnao.ca/bpg/guidelines/assessment-and-management-foot-ulcers-people-diabetes-second-edition>. Accessed 2018 Jul 19.

Non-Randomized Studies

12. Omote S, Watanabe A, Hiramatsu T, et al. A foot-care program to facilitate self-care by the elderly: a non-randomized intervention study. *BMC Res Notes*. 2017 Nov 09;10(1):586.

[PubMed: PM29122000](#)

13. Baba M, Duff J, Foley L, Davis WA, Davis TM. A comparison of two methods of foot health education: the Fremantle Diabetes Study Phase II. *Prim Care Diabetes*. 2015 Apr;9(2):155-162.

[PubMed: PM24929632](#)

Evidence-based Guidelines – Setting Unclear

14. Ghanbari A, Rahmatpour P, Jafaraghaee F, Kazemnejad E, Khalili M. Quality assessment of diabetic foot ulcer clinical practice guidelines. *J Evid Based Med*. 2018 Jun 07. [Epub ahead of print]

[PubMed: PM29882311](#)