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# Patient Education: Importance of Diabetic Foot Care

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# PATIENT EDUCATION: IMPORTANCE OF DIABETIC FOOT CARE

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WINOOSKI, VT

FAMILY MEDICINE CLERKSHIP, FEB-MARCH 2018

MENTORS: DR. ANN GOERING, MD, DR. CHARLES D. MACLEAN, MD

# PROBLEM IDENTIFICATION AND NEED

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- Diabetes continues to cause devastating health consequences in the United States, especially in Vermont, where 10% of the population or approximately **55,780** suffer from this debilitating disease and its numerous complications that including amputations, osteomyelitis, peripheral artery disease and chronic kidney disease.
- Diabetes is the leading cause of **non-traumatic lower extremity amputation** in the United States.
- It is estimated that greater than 85% of all non traumatic amputations begin with diabetic foot ulcers.
- Diabetic foot problems are responsible for more hospitalization than any other diabetic complication.
- Proper foot care is therefore of utmost importance in the care and management of patients with diabetes.

# PUBLIC HEALTH COST

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- In Vermont, it is estimated that diabetes and prediabetes cost the state an estimated **\$ 543 million in health care costs** each year.
- It is estimated that people with diabetes **have 2.3 times higher medical expenses** than those without diabetes.
- Diabetic foot ulcers and other foot complications impose a substantial burden on public and private payers in the United States, doubling care costs per patient compared with diabetic patients without foot ulcers.

# COMMUNITY PERSPECTIVE

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- “Lack of patient self management education material on proper footcare is one of the biggest barriers in diabetic patient adhering to good footcare management.”
- “Having more educational materials that patients can take home can help provide helpful reminders about proper diabetic footcare.”
  - Rebecca O’Reilly, MS, RD; Diabetes Program Manager at Vermont Department of Health
- “Physicians are not doing enough and can stand to do more in educating patients on the importance of proper diabetic foot care management.”
- “Having educational material readily available in patient rooms can provide helpful reminders for physicians to discuss proper foot care management at each visit not just at annual wellness exam visits.”
  - Dr. Charles D. MacLean, MD; Associate Dean, Primary Care, University of Vermont, Larner College of Medicine



# INTERVENTION AND METHODOLOGY

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- Reviewed current literature on proper diabetic foot care management.
- Discussed with different community providers (MDs, NP, PAs) and diabetes educators about the importance and barriers to proper diabetic footcare management.
- Created brochure with information on:
  - The importance of proper diabetic foot care
  - Tips and guidelines for good foot care management

# INTERVENTION - BROCHURE



## For More Information, Please Visit:

National Diabetes Education Program  
1-800-860-8747  
[www.ndep.nih.gov](http://www.ndep.nih.gov)

American Association of Diabetes Educators  
1-800-338-3633  
[www.diabeteseducator.org](http://www.diabeteseducator.org)

American Diabetes Association  
1-800-DIABETES (1-800-342-2383)  
[www.diabetes.org](http://www.diabetes.org)

American Podiatric Medical Association (APMA)  
301-581-9200  
[www.apma.org](http://www.apma.org)

Centers for Disease Control and Prevention  
1-800-CDC-INFO (1-800-232-4636)  
[www.cdc.gov/diabetes](http://www.cdc.gov/diabetes)

Centers for Medicare & Medicaid Services  
1-800-MEDICARE (1-800-633-4227)  
[www.medicare.gov/coverage/therapeutic-shoes-or-inserts.html](http://www.medicare.gov/coverage/therapeutic-shoes-or-inserts.html)

Questions?  
Come Visit Us.



Winooski Family Health  
328 Malletts Bay Avenue  
Winooski, Vermont, 05404  
802-655-4422  
[www.chcb.org](http://www.chcb.org)



## Diabetic Foot Care



## FOOTCARE FOR DIABETES

### To Avoid Foot Complications, Follow these Simple Guidelines:

1. **Inspect your feet daily.**
  - Check for small cuts, blisters, or redness. If you have trouble bending over, use a mirror.
2. **Wash your feet each day in warm water every day.**
  - Avoid using hot water, and test the water temperature with your elbow.
3. **Dry your feet completely, especially between the toes.**
  - Moisturize daily to prevent dry foot, but don't moisturize between toes to prevent fungal infections.
4. **Never walk barefoot, even indoors.**
5. **Wear clean, dry socks.**
6. **Consider special diabetic socks.**
  - These socks have extra cushioning and can help reduce moisture in your foot.



LOVE YOUR FEET



7. **Take care of your diabetes.**
  - Keep your blood sugars under control by taking your medications as directed.
8. **Have your feet checked at every healthcare visit.**
9. **Always wear shoes that fit well.**
  - Before putting on your shoes, feel inside for stones or sharp edges that can damage your foot.
10. **Consider wearing special diabetic shoes.**
  - Medicare can cover the cost of some custom-made shoes with moldable insoles.



TREASURE YOUR FEET



### Why Proper Footcare is Important:

- Diabetes is a disease of high blood sugars. Over time, high blood sugars can cause damage to the nerves in your foot.
- Diabetes can cause nerves to stop working, causing you to lose feeling in your foot.
- Diabetes may also reduce blood flow to the foot, making it harder to heal injuries or infections.
- Because of these problems, you may not feel small stones inside your shoes or socks. This can result in non-healing ulcers that can become infected leading to amputations.



MIND YOUR FEET

# RESULTS AND RESPONSE

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- This brochure is meant to be an educational resource and reminder to patients about the importance of diabetic foot care.
- It was well received by providers at Winooski Family Health, as well as the marketing and communications coordinators at the Community Health Centers of Burlington, as it aligned well the marketing guidelines on patient educational materials.
- Patients loved the design of the brochure and noted that it will help provide daily reminders on proper diabetic foot care.
- Brochures were put on display throughout the clinic at Winooski family health and were distributed throughout community Center of Burlington network of clinics.



# EVALUATION OF EFFECTIVENESS/LIMITATIONS

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- Evaluating the effectiveness of this brochure could include a patient survey on the response to the brochure and its utility.
- Another way to evaluate the brochure, would be to interview providers to see if patient foot care management improved since the distribution of the brochure.
- In addition, a review of the number of patient foot complications since the distribution, could be a way to evaluate the effectiveness of this brochure.

## Limitations:

- There was not enough time in the clerkship to collect data from surveys to assess the effectiveness of the brochure.
- Chittenden County contains a large non-English speaking refugee community, who may not find the brochure helpful or even relatable due to different cultural beliefs.

# RECOMMENDATIONS FOR FUTURE INTERVENTIONS/PROJECTS

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- Translate the brochure into different languages and provide the refugee community with more access to it as well as more resources that may align better with different cultures.
- Encourage medical assistants and nurses to actively distribute the brochure to all diabetic patients during initial intake office visits.
- Survey patients on barriers to proper diabetic management and foot care management over time since the distribution of the brochure.

# REFERENCES

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- <http://www.diabetes.org/assets/pdfs/advocacy/state-fact-sheets/vermont-state-fact-sheet.pdf>
- <https://www.advancedtissue.com/the-importance-of-diet-and-proper-foot-care-for-diabetic-patients/>
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- Rice JB, Desai U, Cummings AK, Birnbaum HG, Skornicki M, Parsons NB. Burden of diabetic foot ulcers for Medicare and private insurers. *Diabetes Care*. 2014. 37 (3):651-8
- *Huge Burden of Foot Ulcers Doubles Diabetes Costs in US - Medscape - Mar 13, 2014.*
- <https://www.cdc.gov/diabetes/data/index.html>

# INTERVIEW CONTENT FORM

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- Thank you for agreeing to be interviewed. This project is a requirement for the Family Medicine clerkship. It will be stored on the Dana Library ScholarWorks website. Your name will be attached to your interview and you may be cited directly or indirectly in subsequent unpublished or published work. The interviewer affirms that he/she has explained the nature and purpose of this project.
- The interviewee affirms that he/she has consented to this interview.
- Yes
- Name: Dr. Charles D. MacLean
- Thank you for agreeing to be interviewed. This project is a requirement for the Family Medicine clerkship. It will be stored on the Dana Library ScholarWorks website. Your name will be attached to your interview and you may be cited directly or indirectly in subsequent unpublished or published work. The interviewer affirms that he/she has explained the nature and purpose of this project.
- The interviewee affirms that he/she has consented to this interview.
- Yes
- Name: Rebecca O'Reilly, MS, RD