

University of Vermont

**UVM ScholarWorks**

---

Family Medicine Clerkship Student Projects

Family Medicine Community

---

2022

## Trust Your Gut: Promoting gut health through updated nutrition education

Christina Cobb  
*University of Vermont*

Follow this and additional works at: <https://scholarworks.uvm.edu/fmclerk>



Part of the [Dietetics and Clinical Nutrition Commons](#), [Family Medicine Commons](#), [Human and Clinical Nutrition Commons](#), [Medical Education Commons](#), [Preventive Medicine Commons](#), and the [Primary Care Commons](#)

---

### Recommended Citation

Cobb, Christina, "Trust Your Gut: Promoting gut health through updated nutrition education" (2022). *Family Medicine Clerkship Student Projects*. 816.  
<https://scholarworks.uvm.edu/fmclerk/816>

This Book is brought to you for free and open access by the Family Medicine Community at UVM ScholarWorks. It has been accepted for inclusion in Family Medicine Clerkship Student Projects by an authorized administrator of UVM ScholarWorks. For more information, please contact [schwirks@uvm.edu](mailto:schwirks@uvm.edu).

# TRUST YOUR GUT

Promoting gut health  
through updated  
nutrition education

Christina Cobb  
Rotation 4, September 2022  
Middlebury Family Health  
Project Mentor: Dr. Peter Wilhelm

# Problem Identification

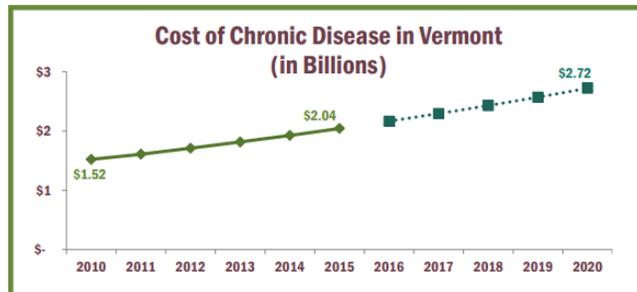
- Physician time and nutrition education are limited, yet lifestyle changes, including healthy eating, are often the primary intervention for both preventing & managing chronic conditions, such as cardiovascular disease, hypertension, and type 2 diabetes.
- There is growing evidence of the importance of gut health & the microbiome's link to several aspects of health, including the immune system, mental health, and metabolic syndrome.<sup>3</sup>
- Fiber is important for gut health and healthy bowel movements, and it reduces the risk of coronary heart disease. Yet over 90% of Americans do not meet recommended intakes for dietary fiber.<sup>10</sup>
- This project fulfills the “Medical Practice Transformation” and “Social Determinants of Health” AHEC areas of focus by seeking to improve dietary recommendations through patient handouts, emphasize preventative care through nutrition, and encourage increased collaboration with dietitians to offer more patient-centered care.

# Public Health Cost

## THE COST OF CHRONIC DISEASE

Chronic diseases affect the quality of life for Vermonters and the state's economic future.

Medical costs related to asthma, cancer, diabetes and cardiovascular disease have increased since 2010. In 2015, the estimated cost in Vermont was \$2,042,000,000. Costs are expected to continue on this path, increasing by 75 percent from 2010 to 2020.



Data Source: Center for Disease Control and Prevention Chronic Disease Cost Calculator



## In the United States,

- Heart disease costs the US about \$219 billion each year.<sup>4</sup>
- High blood pressure costs the US about \$131-198 billion each year.<sup>5</sup>
- In 2019, only 12.3% of adults met fruit recommendations, and 10% met vegetable recommendations in the US.<sup>6</sup>

## In Vermont,

- In 2019, eight in ten Vermont adults consumed less than five fruits or vegetables a day (80%). About a third of adult Vermonters were overweight (34%) or had high cholesterol (34%), a quarter had hypertension (25%).<sup>1</sup>
- 3-4-50 is a simple concept that emphasizes that 3 health behaviors contribute to 4 chronic diseases that result in more than 50 percent of deaths in Vermont.<sup>2</sup>

*Improving nutrition is one way to begin to tackle this public health problem.*

# Community Perspective & Project Support

- Family physicians at Middlebury Family Health shared that they often use patient handouts for more in-depth nutrition education, especially when patient encounter time is limited, but that these handouts are somewhat outdated and need to be updated.
- Emily Beringer MS, RDN – Dietitian at Middlebury Family Health
  - “I’d love to see more patient education about promoting gut health– sharing what is gut health & how to promote it, rather than the topic only coming up once a problem arises, like IBS. A handout for those not just actively dealing with GI issues but for those that want to promote wellbeing.”
- Kathleen Van De Weert, MS, RD, CD – Dietitian at Hannaford in Middlebury
  - “It’d be great to share with more people the importance of fiber – it’s great for heart health, gut health, appetite control, and more ... Also that there’s so many ways to get in fiber besides prunes and bran cereal. And telling people to start slow and gradually introduce fiber, especially through whole food intake and not just supplements.”

# Intervention & Methodology

- Updated existing patient handouts in Middlebury Family Health's electronic medical record to reflect more recent nutrition recommendations including handouts about the DASH diet, fiber, IBS & low FODMAP diet, and nutritional advice for GERD and hyperlipidemia.
- Created a “Promoting Gut Health” patient handout through an extensive literature review and collaboration with two Middlebury dietitians. This handout is intended to be used for those with GI complaints, as well as at annual wellness visits.

# Results & Responses

- Middlebury Family Health's dietitian, Emily Beringer, provided initial feedback on the draft of the gut health handout.
- Unfortunately, there was inadequate time between creating the gut health handout and this project summary to evaluate the response from physicians and patients.

# Evaluation of Effectiveness & Limitations

- A proposed mechanism for evaluation is tracking the number of gut health handouts distributed and assessing both provider & patient response with a short survey or brief interviews.
- Limitations:
  - Inability to assess both patient and provider response due to time constraints. Additionally, would have wanted to assess patient barriers to making nutritional changes.
  - Handouts were used by MFH for further patient education, but assessing the general efficacy of patient handouts in making lifestyle changes would have been of benefit.

# Recommendations for Future Interventions

- As stated, a recommended intervention would be to evaluate both provider and patient response to the gut health handout and updated nutrition handouts. Additionally, one could assess GI complaints pre- and post-intervention with the gut-health handout.
- Assess patient barriers to making nutritional changes, and propose interventions for addressing these barriers and improving access to healthy eating.
- A specific handout relating to IBS that highlights updated research could be of benefit, as project scope and time limited my ability to do so, and this was an area that one dietitian said could be improved.
- The “promoting gut health” handout was only distributed at Middlebury Family Health, but could be implemented in other family medicine practices, and responses could be assessed across practices.

# References

1. “1305 Surveillance: State Public Health Actions.” *Chronic Disease Surveillance Data Pages*, Vermont Department of Health, May 2019, [https://www.healthvermont.gov/sites/default/files/documents/pdf/HS\\_1305\\_Data\\_Pages\\_081816.pdf](https://www.healthvermont.gov/sites/default/files/documents/pdf/HS_1305_Data_Pages_081816.pdf).
2. “3-4-50: Prevent Chronic Disease.” *Vermont Department of Health*, <https://www.healthvermont.gov/3-4-50>.
3. Bulsiewicz, Will. *Fiber Fueled: The Plant-Based Gut Health Program for Losing Weight, Restoring Your Health, and... Optimizing Your Microbiome*. Avery Pub Group, 2022.
4. “Health Topics - Heart Disease and Heart Attack.” *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 17 Aug. 2021, <https://www.cdc.gov/policy/polaris/healthtopics/heartdisease/index.html>.
5. “Health Topics - High Blood Pressure.” *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 18 Nov. 2021, <https://www.cdc.gov/policy/polaris/healthtopics/highbloodpressure/index.html>.
6. Lee SH, Moore LV, Park S, Harris DM, Blanck HM. Adults Meeting Fruit and Vegetable Intake Recommendations — United States, 2019. *MMWR Morb Mortal Wkly Rep* 2022;71:1–9. DOI: <http://dx.doi.org/10.15585/mmwr.mm7101a1external icon>
7. McDonald, Daniel, et al. “American Gut: an Open Platform for Citizen Science Microbiome Research.” *American Society for Microbiology*, 15 May 2018, <https://journals.asm.org/doi/10.1128/mSystems.00240-18>.
8. Perlmutter D. 2015. *Brain Maker: The Power of Gut Microbes to Heal and Protect Your Brain--For Life*. Little, Brown and Company, New York, NY
9. Snijders, A.M., Langley, S.A., Kim, Y.-M., Brislawn, C.J., Noecker, C., Zink, E.M., Fansler, S.J., Casey, C.P., Miller, D.R., Huang, Y., et al. (2016). Influence of early life exposure, host genetics and diet on the mouse gut microbiome and metabolome. *Nat. Microbiol.* 2, 16221.
10. U.S. Department of Agriculture and U.S. Department of Health and Human Services. *Dietary Guidelines for Americans, 2020-2025*. 9th Edition. December 2020. Available at [DietaryGuidelines.gov](https://www.dietaryguidelines.gov).