Piloting an Al ChatBot Tool for Diabetes MCT2D Nutrition Counseling



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BACKGROUND & CHALLENGE

The Michigan Collaborative for Type 2 Diabetes (MCT2D) is a state-wide collaborative quality initiative supported by Blue Cross Blue Shield of Michigan that aims to support participating practices in improving their type 2 diabetes (T2D) care.

T2D persists at epidemic proportions, and clinicians face ongoing challenges with navigating the complexities of patient care and providing effective treatments to meet patients' needs.

The Standards of Care published by the American Diabetes Association recommends that all people with T2D receive individualized medical nutrition therapy and endorses low carbohydrate diets (LCDs) as a viable approach in T2D management.

However, clinicians report limited training and confidence in discussing LCDs with patients contributing to it being an underutilized treatment approach.

RESULTS

Post Survey Results (n=13)	Mean
Agreement with the following: "The chatbot effectively simulated a real-world interaction I would have with a patient."	4.4/5
How useful was the chatbot in improving your skill in recommending a low carbohydrate diet to a specific patient?	4.4/5
How useful was the chatbot in practicing the skill of motivational interviewing?	4.4/5
How user-friendly did you find the overall experience with the chatbot?	4.5/5
Would you recommend using the chatbot to colleagues for training purposes?	Percentage 100%

Suggestions

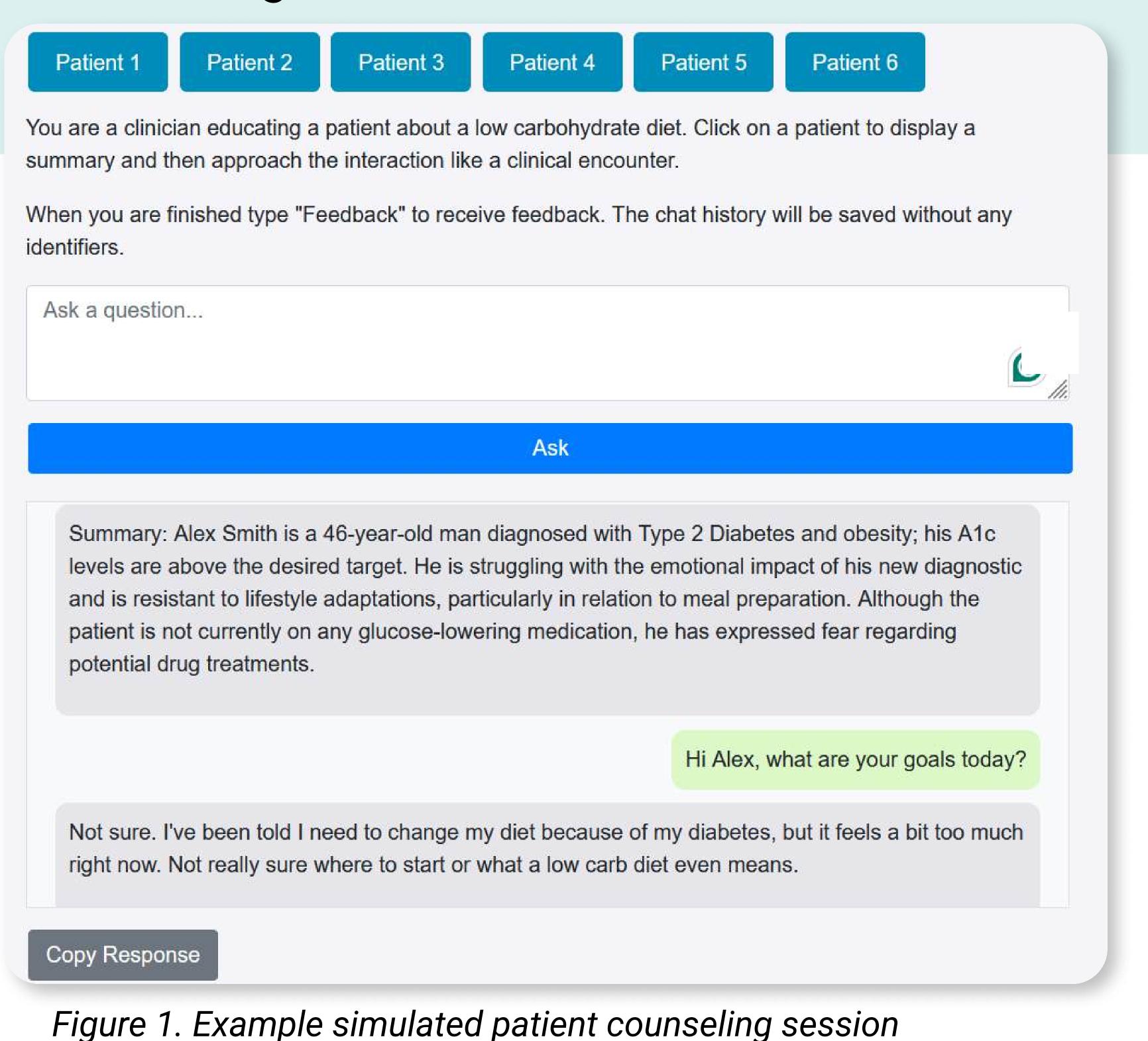
- O Make the simulated patient be more difficult, less agreeable, or less knowledgeable. (n=4)
- O Provide a downloadable transcript of the conversation. (n=1)

METHODS

A conversational artificial intelligence (AI) chatbot called "LCD Patient Simulator" was developed with OpenAI for clinicians to practice counseling patients on LCDs for T2D management. The chatbot includes six simulated patients with different levels of health literacy and cultural backgrounds, and provides counseling feedback to the user (Figure 1-2).

MCT2D piloted the chatbot as a take-home self assessment tool during their Spring 2025 Low Carbohydrate Immersive Training Program. This weeklong training program was designed to provide clinicians with foundational knowledge of how to effectively counsel patients on LCDs. Participants were asked to use the chatbot to assess their understanding of LCDs and their counseling skills.

The pilot sought to establish feasibility of using a chatbot in LCD clinician education. Participants were asked to complete a post-workshop survey with questions aimed at evaluating the chatbot's usefulness as a tool for clinicians to practice their LCD counseling skills.



Based on the chat history provided, let's analyze whether the learning objectives were met: 1. Address concerns related to newly diagnosed T2D: The conversation begins with the individual expressing uncertainty about how to change their diet after being diagnosed with diabetes. The helper acknowledges these feelings, which partially addresses concerns related to the diagnosis, specifically about dietary adjustments. 2. Address emotional concerns and diabetes distress: There is a brief acknowledgment of feeling overwhelmed, but there is no in-depth exploration of emotional concerns or diabetes 3. Introduce non-pharma lifestyle management strategies for T2D: The conversation focuses on dietary changes, which is one aspect of lifestyle management. However, the conversation doesn't explore other non-pharmaceutical strategies like exercise, stress management, or sleep. 4. Introduce low carb diet and potential benefits: The helper explains the basic concept of a low-carb diet and mentions the benefit of avoiding glucose spikes. This objective is partially met, but there could be more detail on potential benefits. 5. Simple/easy meal planning: While the individual acknowledges needing to figure out alternatives to foods like bread and pasta, there is no explicit discussion or guidance on meal planning in the conversation. 6. Create a follow-up plan: There is no mention of a follow-up plan or future steps to continue supporting the individual. Overall, the conversation partially meets some learning objectives, particularly introducing the concept of a low-carb diet and addressing initial concerns. However, it lacks depth in addressing emotional concerns, comprehensive lifestyle management, detailed meal planning, and the establishment of a follow-up plan.

Figure 2. Example counseling feedback

CONCLUSIONS

- Clinicians had a positive experience using the AI chatbot for nutrition education.
- O Clinicians preferred challenging AI patients to practice their skills.
- O During the training, clinicians had the opportunity to work through multiple Al patients but most only chose to work through one.
- The chatbot will be improved and used for future iterations of the MCT2D LCD training.



