The Novel Development of a Customized GPT for Bariatric Surgery Patients: Program-Specific Automation

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OBJECTIVE

The primary objective of the novel development of a customized generative pre-trained transform (GPT) tailored to bariatric surgery patients is to study improvement in patient engagement, education, and support along bariatric pathways. Access to validated and program-specific information and guidance to bariatric patients that extends beyond work hours and typically scheduled patient-provider interactions enables real-time patient support. The use of this technology is also studied as a method of tracking patient engagement, knowledge, and identifying potential for improvement. The intent of the use of a custom GPT for bariatric surgery patients is to improve patient access to accurate and verified information, enhance overall patient experience, improve long-term outcomes, and to reduce administrative burden on bariatric programs.

DESCRIPTION

A custom GPT is created for bariatric surgery patients using program-specific materials to ensure the relevance and accuracy of information delivered. The technology employs natural language processing and machine learning algorithms to understand and respond to user queries related to various aspects of bariatric surgery, including preoperative preparation, post-operative care, dietary guidelines, and lifestyle modifications. The user-friendly interface allows patients to interact with the system effortlessly, providing an accurate and verified virtual companion throughout patient progress before and after bariatric surgery in a bariatric program.

APPLICATION

Users access BariBuddy, a custom GPT for bariatric surgery patients through digital platforms. Users input questions related to bariatric surgery preparation, perioperative, and post-operative care. The GPT utilizes a database of program-specific and evidence-based materials, such as professional guidelines, validated research findings, and expert recommendations, to filter information used to generate responses. The system uses a conversational approach, offering responses that adapt to individual user needs. Through custom GPT use, user interactions can be tracked to identify patterns, frequency of use, and knowledge gaps, which enables improvements in patient-professional communication.

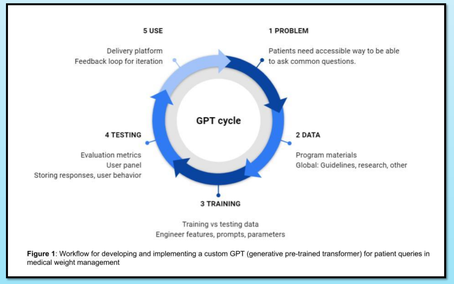


Figure 1: Workflow for developing and implementing a custom GPT (generative pre-trained transformer) for patient queries in medical weight management

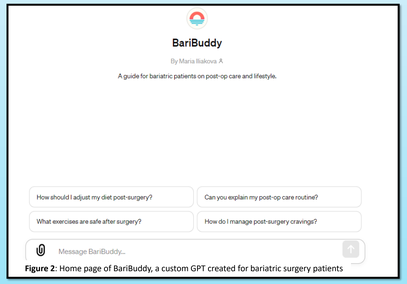


Figure 2: Home page of BariBuddy, a custom GPT created for bariatric surgery patients

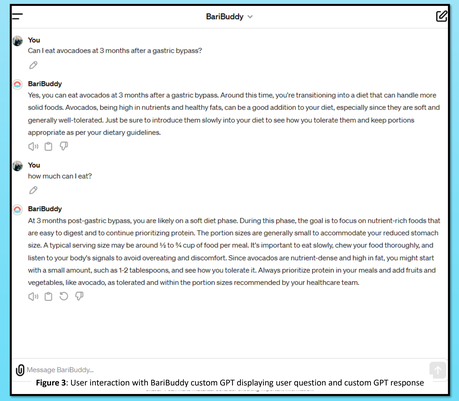


Figure 3: User interaction with BariBuddy custom GPT displaying user question and custom GPT response

PRELIMINARY RESULTS

Preliminary results indicate a positive user experience with the bariatric custom GPT. Users reporting increased satisfaction, improved adherence to post-operative guidelines, and a sense of enhanced support throughout the bariatric surgery program. Initial feedback suggests that the technology effectively addresses common concerns and queries, contributing to a more informed and engaged patient population. Use of the bariatric custom GPT may decrease administrative burden in providing patients with accessible and accurate information that would otherwise requires direct patient interaction with clinic staff during work hours.

CONCLUSION & FUTURE DIRECTIONS

The development of a custom GPT for bariatric surgery patients demonstrates potential improvement in patient outcomes and satisfaction while decreasing administrative burden for bariatric programs. Ongoing refinement of the technology, based on user feedback and emerging research, will further enhance its capabilities. Future directions include expanding the database of program-specific materials, incorporating real-time data analytics for personalized recommendations, collaborating with healthcare professionals to use the GPT into the overall patient care pathway, and integration with other technologies to enable frictionless patient support and feedback. The purpose of the use of machine learning in patient support is to enhance comprehensive care for individuals undergoing bariatric surgery to promote long-term success and well-being.