Lumanity

Elevating patient engagement in clinical trials: Patient insights on chatbot benefits and risks

Authors: Shilpa Khobragade*, Pippa Perrett*, Susan Daniels†
*Joint first authors; †Presenting author

Affiliation: Lumanity, London, United Kingdom

INTRODUCTION

Challenges in patient retention

- Randomised clinical trials (RCTs) are essential for advancing medical research and evaluating the effectiveness and efficacy of new treatments[1]
- Patient retention in these trials is a significant challenge, impacting the validity and reliability of results[1]

Growing interest in chatbots

- Digital tools, like chatbots, hold promise for enhancing patient engagement and retention in clinical trials
- Chatbots are automated conversational agents that can provide timely information and support during all phases of clinical trials, enhancing patient experiences from recruitment to follow-up

Focusing on patient perceptions

- A recent systematic review found that RCTs that used chatbots or chatbot apps did not have better patient retention compared with those that did not[2]
- This finding underscores the importance of understanding the specific factors that influence patient engagement and retention when using chatbots in clinical trials
- Understanding patient perceptions and experiences can help identify areas for improvement and refine chatbot strategies to support patients during clinical trials

OBJECTIVE

- Our objective was to understand the perceptions and experiences of patients regarding the use of chatbots in clinical trials by collecting feedback from the Lumanity Patient Council (LPC), an external, global group of patients, patient advocates, and caregivers

METHODS

Research design and methodology

- The study was conducted in two sequential steps: (1) a pre-survey virtual group meeting with LPC members (qualitative inquiry) and (2) a post-meeting follow-up online survey to gather both qualitative and quantitative data (**Figure 1**)

Figure 1. Study methodology



Pre-survey virtual group meeting with LPC
- Determined if the LPC was aware of the current use of chatbots, whether they have used them during a clinical trial, and in which stage or setting they believe chatbots would be most useful
- Assessed if the LPC considered this a topic worth exploring further

Preliminary feedback to refine the survey
- Gathered preliminary feedback or related insights to refine survey questions/focus areas

Online survey distribution
- An online survey was sent to seven LPC members via SurveyMonkey on 12 September 2024, with a request to complete it within 10 days

Online survey questions
- The online survey included the following:
  - Perceived benefits and concerns related to the potential use of a hypothetical clinical trial chatbot for gaining basic information
  - A rating by participants of the likelihood of using the chatbot during a clinical trial on a scale from 1 (never) to 5 (very frequently)
  - Question asking participants if they had any further comments or suggestions

Key insights on chatbot use in clinical trials
- Key insights were derived to understand the patients' perspectives on chatbot use during clinical trials

LPC, Lumanity Patient Council

RESULTS

Insights gained from LPC members during a virtual group meeting

- Seven LPC members (two from the United States, three from the United Kingdom, and two from Europe, including six patients or patient advocates and one caregiver) participated in the pre-survey virtual group meeting
- Some LPC members had experience using chatbots and reported frustration with the automated answers, a lack of support, and a need for more personalised care; however, they still believed that pursuing the use of chatbots during a clinical trial was worthwhile

Survey responses from LPC members

- Responses to the survey were received from six LPC members, including five patients or patient advocates and one caregiver
- The perceived benefits and concerns of the LPC regarding the use of chatbots in clinical trials are presented in **Figure 2**
- Half of the respondents rated their likelihood of using the chatbot as 'frequently,' with a weighted average score of 3.8/5 (**Figure 3**)
- To improve patient engagement through the chatbot during clinical trials, the LPC suggested clearly defining the chatbot's role, enabling seamless connection to a human for complex issues, and ensuring responses are friendly and empathetic (**Figure 4**)

RESULTS (continued)

Figure 2. Perceived benefits and concerns about the use of chatbots during a clinical trial

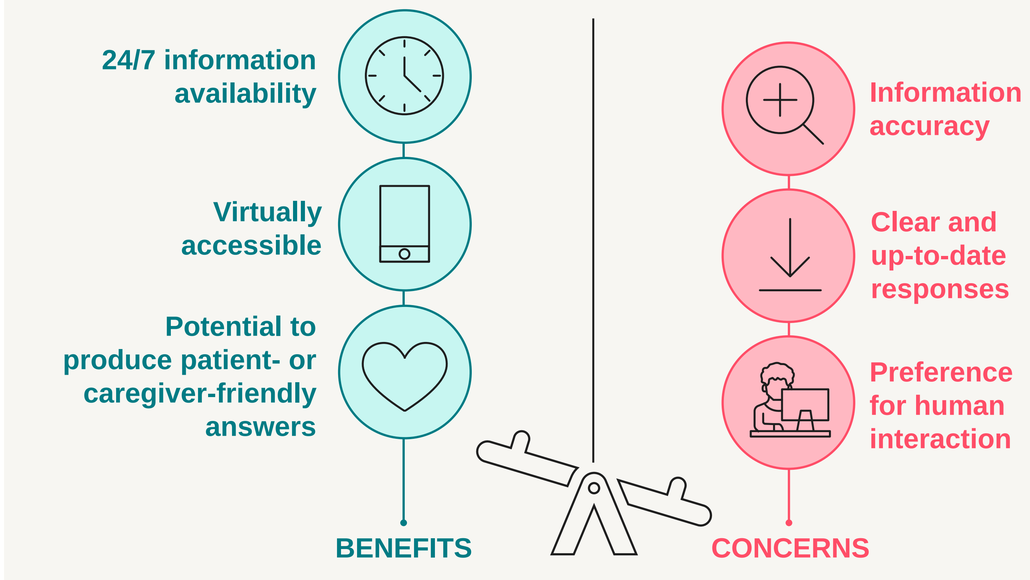
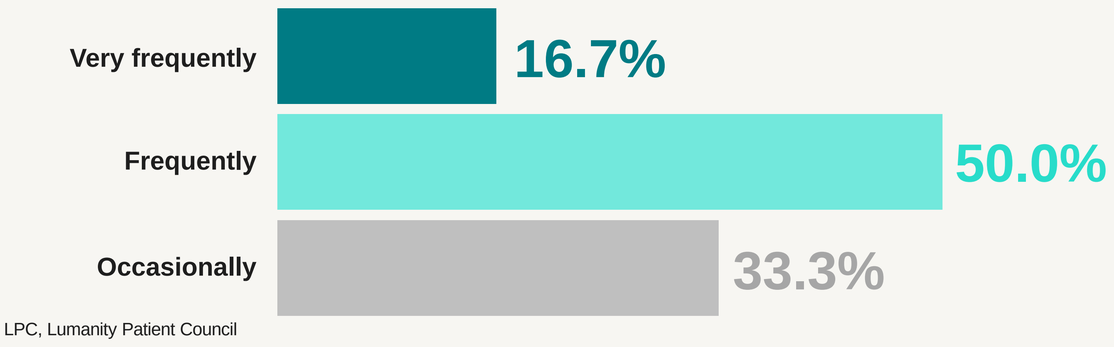
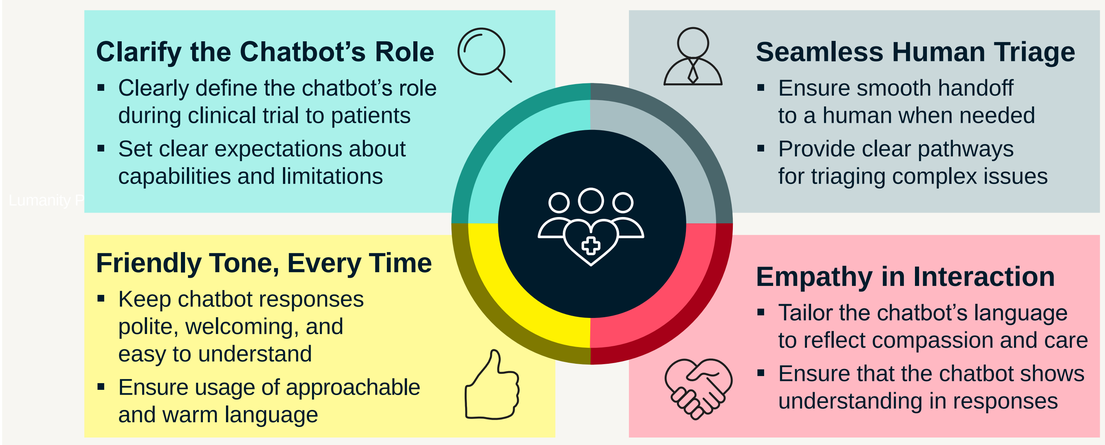


Figure 3. Likelihood of using a chatbot during a clinical trial by LPC (N=6)



LPC, Lumanity Patient Council

Figure 4. Insights from LPC to improve patient engagement through chatbots



LPC, Lumanity Patient Council

CONCLUSIONS

- Feedback from the Lumanity Patient Council highlighted the chatbot's potential to enhance patient engagement during clinical trials
- The desire for easily accessible, 24/7 information during a clinical trial indicates a high-level need for patient-friendly and readily available information
  - However, concerns remain about accuracy and the need for effective triage to human support
- Addressing these issues could enhance patient engagement and retention during clinical trials through chatbots
- Future work should explore integrating advanced artificial intelligence to improve the chatbot's ability to understand and respond to patient queries more accurately and efficiently

REFERENCE

1. Brueton VC, et al. *Cochrane Database Syst Rev*. 2013;(12):MR000032. 2. Cevasco KE, et al. *J Med Syst*. 2024;48(1):40.

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