"What Does A Chatbot Know About Life?": Ill and Healthy Adults' Perspectives on

Artificial Intelligence Integration in Advance Care Planning

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Abstract

Despite the benefits of advance care planning to patients' quality of life and end of life, completion rates remain modest in the United States. This mixed methods study explores adults' perspectives on advance care planning and the potential use of artificial intelligence chatbots to facilitate this process. Using an exploratory design, we surveyed 203 adults, including individuals 18 and older living with life-limiting illnesses ($n = 75$) and individuals 50 and older who identified as healthy ($n = 128$). Across the full sample, participants were 64.02 years old ($SD = 11.09$); 48.8% men, 48.3% women, 2.5% other gender identity; and 55.7% disabled. Participants represented diverse racial, socioeconomic, and religious backgrounds, and most had given consideration to end-of-life care. Findings revealed some openness to engaging with chatbots to facilitate advance care planning, particularly for logistical or informational tasks. However, for advance care planning conversations of a more personal or emotional nature, participants strongly preferred human communication characterized by empathy and trust, qualities they felt chatbots currently lack. Participants' comfort with chatbot-facilitated advance care planning increased when chatbots were portrayed as transparent, were text-based, and were used in conjunction with healthcare providers. Ultimately, while chatbots may serve as supportive tools in advance care planning, their design must prioritize transparency and human integration to gain broader acceptance. These findings underscore the continued primacy of human connection in end-of-life planning and highlight the conditions under which artificial intelligence chatbots may responsibly supplement, but not replace, this process.

Keywords: End of life, advance care planning, artificial intelligence, conversational agent, virtual healthcare assistance

The question of how individuals wish to be cared for at the end of life (EOL) is fundamentally one of dignity, autonomy, and respect for personal values. Despite broad consensus on the ethical imperative to honor individuals' preferences[1], in some cases such preferences are not honored, compromising quality of care and the overall patient and family experience during the final stages of life. Approximately 13–21% of patients in the United States receive EOL care that is inconsistent with their expressed values, for example with respect to treatment (e.g., life extension versus comfort care) and preferred place of death.[2,3]

Advance care planning (ACP) practices are intended to prevent such harms. ACP refers to practices and processes related to clarifying and communicating decisions about the care an individual prefers to receive at EOL, particularly in the event they become incapacitated. ACP includes formal and informal conversations as well as medical and legal documentation. A patient's documentation of their values and treatment goals through an advance directive, for example, increases the likelihood that patient will receive their desired care at EOL.[4] Unfortunately, fewer than one in three adults in the United States has completed an advance directive.[5]

At its best, the goal of ACP is to ensure that the medical, spiritual, and psychological care a person receives throughout the duration of an illness or at EOL is in line with their personal values, goals, and preferences. Both the process of engaging in ACP and the tangible outcomes of ACP reduce stress and decisional burden on family and loved ones[6] and improve satisfaction with care and bereavement outcomes.[7] ACP is associated with reducing unnecessary hospitalizations and aggressive treatments, increasing use of palliative and hospice services, and lowering healthcare costs.[8–10] Brown et al.[11] analyzed data from nearly five million patients with chronic neurodegenerative diseases and found that patients who had documented ACP

discussions experienced 20–30% reductions in emergency department visits, and patients who previously showed increasing rates of emergency room visits and hospitalizations began to show declining rates after ACP documentation. Despite these benefits, rates of engagement in ACP conversations in the United States remains low[12] and there is room for ACP to be made more effective.

Low ACP Rates and Areas for ACP Improvement

Patients report avoiding ACP discussions for many reasons, including emotional discomfort with EOL topics, a lack of knowledge about ACP, and concerns about harming the provider-patient relationship.[13] Physicians also sometimes hesitate to initiate ACP conversations out of concern that such discussions could cause emotional distress, diminish a patient's sense of hope, or feel inappropriate in certain clinical contexts.[14,15] Both patients and providers approach conversations related to EOL with verbal and non-verbal cues indicating the topic is extremely sensitive, and tend to use language replete with ambiguity.[16] In addition, ACP does not always result in tangible products that provide evidence for what treatments a patient would prefer when they are no longer capable of communicating for themselves, such as advance directives and the assignment of healthcare proxies.[17,18]

Current ACP processes and tools tend to be simplistic, emphasizing a binary view of completion versus non-completion of legal documents—rather than regular revisiting of one's goals and preferences—and a narrow set of decisions related to opting in or out of life-extending treatments. Therefore, ACP documents may be outdated,[19] ambiguous or lacking in practical details,[20] or unintentionally restrict surrogates' flexibility in responding to unforeseen circumstances.[21] Finally, completed advance directives may simply fail to reflect a person's true values, goals, and healthcare preferences because they prioritize specific treatment decisions

over broader conversations about values and decision-making processes. These varied problems highlight the great potential improved ACP processes could bring to EOL outcomes, underscoring the need to find new avenues for facilitating effective, dynamic ACP conversations and producing personalized documentation.

Can ACP Be Improved With the Help of AI Chatbots?

Researchers and healthcare professionals have developed self-guided ACP aids in easy-to-follow formats such as conversation booklets, video tutorials, and even card games in order to reduce emotional discomfort, simplify complex topics, and encourage meaningful dialogue about EOL preferences.[22] Such tools have demonstrated effectiveness in motivating individuals to move beyond intention and take real action—for example, after engaging with an ACP card game, up to 75% of participants took concrete ACP-related actions such as discussing their wishes with family or appointing a healthcare proxy.[23] However, one of the key limitations of these ACP aids is their static nature: they offer broad, predetermined scripts and cannot adapt in real time to the user's emotions, preferences, or readiness to engage.

In contrast, artificial intelligence (AI) chatbots have the capacity to produce a fluid, responsive conversation with adjustments in tone, pacing, and content based on user input,[24] allowing for a more personalized and supportive experience. Chatbots are computer-based systems designed to replicate human dialogue through text, voice, or multimedia interactions. With recent advancements in AI and digital technologies, their capabilities have significantly expanded and are now widely applied in diverse healthcare settings.[25,26] Related research in the realm of ACP is rapidly evolving, but some suggests patients may be especially willing to engage with chatbots on sensitive topics[27] like EOL care. In addition, chatbots have the potential to address existing barriers to ACP: lack of time in healthcare appointments, limited access to

providers, and lack of EOL and ACP knowledge. New AI chatbot ACP tools would presumably be accessible to patients at any time or day, be free or low-cost for patients, and be equipped to provide basic and advanced information about EOL care and ACP according to patients' needs.

Early research with AI chatbots in the context of palliative care demonstrates such tools can be effective in dispelling misconceptions, improving patient awareness and education, and producing human-like conversation resembling meaningful dialogue.[28,29] This research has also revealed certain limitations, such as chatbots' excessive repetition of phrases as well as expressions of strong, potentially inappropriate opinions on sensitive topics like religion, death, and the afterlife. Palliative care experts have also raised concerns about AI chatbots being positioned as replacements for human interaction,[30] which could progressively weaken and ultimately diminish the patient-provider relationships which are fundamental to effective medical practice.[31] Laypeople are concerned about privacy and security in AI chatbots conversations.[32] Finally, there are concerns about the potential for biased chatbots, which could lead to the potential harm of marginalized groups if not moderated efficiently.[33] Though the use of AI chatbots in this sensitive context presents challenges, given that decades of research seeking to improve ACP have made only marginal gains[34–36] innovative approaches are needed. Seeking input from potential users is an important first step.

Purpose of the Present Study

The present study contributes to the existing literature on ACP communication by seeking to understand U. S.–dwelling adults' openness to AI chatbot integration in ACP conversations. Chatbots are already being implemented as a communication aid in other healthcare settings[25,26] and are currently being assessed for its implementation in the ACP communication process.[28,29] However, there is no present literature on patients' perspectives on

communicating with AI chatbots in the emotionally sensitive context of EOL care, nor on their imagined preferences for such communication.

In response to this literature gap, we surveyed two demographic groups we believed would have given some consideration to EOL care preferences and ACP. The first group was comprised of adults over the age of 18 who self-identified as having a life-limiting illness, or a medical condition that cannot be cured and is expected to significantly shorten lifespan and/or reduce quality of life, as such individuals may be more likely to have considered care preferences and mortality. We also surveyed adults over the age of 50 who may not identify as having a life-limiting illness, as age is associated with increased awareness of mortality.[37] Our primary objective was to assess participants' general perceptions of and attitudes toward the integration of AI chatbots in ACP with the aim of identifying barriers and opportunities for this application. Our secondary objective was to gather participant input that could inform the future development of ACP AI chatbot technology designed to support individuals in identifying and communicating their care preferences.

Materials and Methods

Ethics

This study was deemed Exempt by the University at Buffalo Institutional Review Board (STUDY00008612). Participants provided informed consent prior to taking the survey.

Recruitment and Participation

Participant Recruitment

Data was collected February through June of 2025. Participants were recruited via an email campaign to leaders of 87 local organizations serving diverse constituencies, posting flyers in local community spaces and businesses serving minoritized and older populations, and

through research registries. Research registries were the Buffalo Research Registry, a volunteer

database managed by University at Buffalo Clinical and Translational Science Institute, and

ResearchMatch, a national volunteer registry established by numerous academic institutions and

supported by the U. S. National Institutes of Health as part of the Clinical Translational Science

Award program. We attempted to oversample for adults with LLI as this population is difficult to

reach for research recruitment.[38,39]

Inclusion and Exclusion Criteria

To be eligible, individuals had to be able to read and respond to the survey in English and

to currently reside in the United States for at least one year. Adults who identified as living with

a life-limiting illness ("LLI")—living with a serious, terminal, or progressive condition such as

cancer, organ failure, chronic obstructive pulmonary disease, or neurological disorders—had to

be at least 18 years old. Adults who identified as not living with an LLI ("healthy") had to be at

least 50 years old. Survey respondents were included in the present sample if they completed at

least 95% of the survey.

Sample

A total of 203 participants were included in the sample. Of these, 128 adults ranging from

50–83 years old identified as healthy and 75 adults ranging from 22–84 years old identified as

having an LLI. Sample characteristics such as gender, race, and other demographic variables are

displayed in Table 1.

Survey Measure

The questions analyzed in the present study were collected as part of a larger survey

examining preferences, concerns, desires, expectations, and beliefs related to EOL care, ACP

communication and documentation, and AI chatbots. Each section included multiple-choice and open-ended questions, prompting both quantitative and qualitative responses.

Procedure

Eligible participants were directed to a Qualtrics consent form and survey hosted on the University at Buffalo's secure platform. The full survey was estimated to take approximately 20–30 minutes to complete. Participants had the option to skip questions and, in some cases, choose multiple responses. Participants were given the option to opt into a drawing for one of 10 digital rewards of $25 at survey close.

Analyses

The study employed an exploratory design involving a self-administered online survey; we did not make hypotheses. Descriptive statistics were used to summarize participant responses. When appropriate, group comparisons between healthy adults and adults with LLI were conducted using t-tests and chi-square tests. Of note, group differences are noted in Results only when statistically significant. All quantitative analyses were performed in R.[40] Qualitative thematic analysis was conducted on the open-ended responses to the survey to identify patterns, themes, and key insights.[41] Themes were generated from analyzing the data, and coding and re-coding was performed to ensure reliability and validity in response interpretation.

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Results

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Descriptive Statistics

As displayed in Table 1, the sample included an even distribution of men and women. Most participants identified as White and as heterosexual. The sample was religiously diverse, with Christianity best represented. The sample was more educated than the general U. S. population,[42] with nearly half holding a graduate degree. The healthy group was significantly

older ($M = 65.42$, $SD = 8.50$) than the LLI group ($M = 61.60$, $SD = 13.70$), $t(107.95) = 2.18$, $p = .031$, $d = 0.36$ and fewer healthy participants identified as having a disability or chronic condition, $\chi^2(1, N = 203) = 39.20$, $p < .001$, Cramer's V $= 0.44$. In addition, financial situation differed significantly by group, $\chi^2(2, N = 203) = 20.37$, $p < .001$, Cramer's V $= 0.32$; participants with LLI more often reported financial difficulties and healthy participants more often reported having more than enough money for necessities and luxuries. Finally, healthy participants were more likely to have completed college or graduate degrees than participants with LLI, $\chi^2(2, N = 203) = 9.51$, $p = .009$, Cramer's V $= 0.22$.

EOL Care Consideration

A substantial portion of participants indicated they had given their future EOL care at least some thought, with 85.5% selecting either *somewhat* or *quite a bit* of thought. A chi-square test of independence revealed a significant association between group and the extent to which participants had thought about their EOL care, $\chi^2(2, N = 203) = 6.33$, $p = .042$, Cramer's V $= 0.18$. Participants in the LLI group were more likely to report having thought about it *quite a bit* (41.3%) compared with the healthy group (33.6%) and were less likely to report having thought about EOL care *not at all* (6.7%) compared to the healthy group (19.5%).

Perspectives on AI Integration Into Healthcare and ACP

Slightly more than half of the sample (58.9%) had previously interacted with a chatbot. Participants were asked, "In what healthcare contexts do you think a chatbot could provide accurate information?" prompting yes/no ratings of 11 categories of health-related support. As illustrated in Figure 1, AI chatbots were perceived as having the potential accuracy in situations such as helping users find treatment locations or prepare questions for medical appointments. However, when it came to more complex tasks such as diagnosing conditions based on

symptoms and providing emotional support, chatbots were viewed as less accurate, for example endorsing "Providing me with comfort and emotional support" significantly less frequently than would be expected if all options were equally likely to be chosen, $\chi^2(1, N = 836) = 36.91, p < .001$, Cramer's V = 0.21. The only significant difference between LLI and healthy groups was for the item "Helping me find the right specialist," $\chi^2(1, N = 203) = 4.26, p = .039$, Cramer's V = .15, such that LLI participants were more likely than healthy participants to trust a chatbot with this task.

Openness to the Use of AI Chatbots in ACP

Participants were asked about their openness to communicating with a chatbot for the purpose of learning more about EOL care and clarifying their values around ACP. Across the sample, most participants demonstrated some openness, ranging from *extremely* open (17.8%) to *somewhat* open (27.0%) to *neutral* (28.0%). The remainder were *probably not* (16.3%) or *definitely not* (10.3%) open to such conversations. Participants were prompted to explain their answers in an open-ended response. Resulting themes, descriptions, and illustrative quotes are presented in Table 2. Overall, participants expressed curiosity about chatbot conversations as well as concerns regarding patient privacy and chatbot bias. Participants often expressed they believed chatbots were severely limited with regard to providing emotional support. However, even those participants who preferred human interaction tended to acknowledged that chatbots could bridge gaps in access when human support is unavailable or ineffective.

Participants were also asked if they would prefer to have conversations about ACP virtually with a chatbot, or in person with a medical professional. The majority preferred a medical professional (73.9%). Only 7.4% preferred a chatbot; 23.6% selected *I'm not sure or have no preference*. Participants were also prompted to explain their reasoning behind their

choice. In their open-ended explanations, participants who selected medical professionals emphasized the importance of expertise and believed professionals were better equipped to handle emotionally challenging ACP conversations. As one participant explained:

> Advance care planning is a sensitive topic and should include the care of a human being who can hold space for the depth of emotions and complexity of humanity in the conversation. An unfeeling robot cannot provide the psychological, mental, or emotional touch necessary for these types of conversations.

A few participants described having a trusting and valued relationship with their healthcare provider: "I…have a very caring and compassionate [primary care provider] that I believe would give me true and accurate information, especially since he has been my physician for over 10 years." In one notable case, a participant clarified that while they preferred to converse with a medical professional, this choice was likely unrealistic due to concerns about the fragility of the healthcare system:

> [A medical professional] would be ideal. There just isn't time though. I have Medicaid. It's not a doctor's fault they don't have time for lots of extras. Not in the [United States]. I'm just grateful to have care. I'm scared with current politics I'll lose this care that I have.

Some participants who selected *not sure* described the complexity contained within the choice, for example, pointing to a desire for the conversation partner—whether a medical professional or a chatbot—to "understand what is involved with your particular medical condition because generic, one size fits all answers would be frustrating…It could be awkward or uncomfortable discussing such things in person, especially with a professional who doesn't really know you." Some said that their choice depended on the

situation: "I think the choice would have to do with the urgency of need to have the discussion and the type of info needed to pass between me and the provider." Others were simply "open to discuss[ing] advance care with anyone, even [a] chatbot."

A small proportion of participants preferred a chatbot. These participants believed that a chatbot would provide a private and non-judgmental environment ("No judgement by bot on silly questions or repeat questions. The bot does not act like [it's too] busy or [you're] bothering [them]") or be more accessible and available than providers ("I don't think medical professionals have time for things like [ACP conversations]"). Overall, a portion of the respondents who selected no preference or a chatbot preference believed that chatbots could potentially fulfill psychosocial and practical needs they perceived as unlikely to be met through interaction with medical providers.

Preferred Characteristics of an ACP AI Chatbot

Participants were asked to rate their comfort with a potential chatbot interaction based on six key scenarios: a) "I can have a phone conversation with the chatbot"; b) "I can have a text conversation with the chatbot (typing on a cell phone or computer)"; c) "If my doctor told me they trust and recommend the chatbot"; d) "If my doctor told me we would have a follow-up face-to-face conversation based on my chatbot conversation"; e) "The chatbot states right away that it is a chatbot"; f) "The chatbot implies they are a real, live person."

As displayed in Table 3, participant comfort levels varied across scenarios. In the phone conversation scenario, the majority of participants reported feeling either *neither comfortable nor uncomfortable*, *somewhat uncomfortable*, or *extremely uncomfortable*. In contrast, the text conversation scenario led to an approximately normal distribution centered around the neutral midpoint. Interestingly, when a doctor recommended and trusted the chatbot, participants were

only nudged somewhat toward increased comfort. However, the promise of a face-to-face follow-up with a doctor resulted in increased comfort levels, with 62.0% of participants feeling either *somewhat comfortable* or *extremely comfortable.* Finally, when the chatbot implied it was a real person, the majority (74.4%) of participants felt either *extremely uncomfortable* or *somewhat uncomfortable*, whereas only 20.7% of participants were *extremely uncomfortable* or *somewhat uncomfortable* when the chatbot was transparent about being an AI agent. To summarize, transparency about the chatbot's nature, as well as meaningful doctor involvement, plays a crucial role in enhancing participant comfort.

Discussion

The purpose of this study was to explore adults' beliefs about AI chatbot integration into the ACP process. We analyzed responses from 203 participants, including 128 who identified as healthy and 75 who identified as living with an LLI. Participants across both groups represented a range of racial, religious, and socioeconomic backgrounds. Most participants had given at least some thought to their own EOL care, with those identifying as having an LLI more likely to have considered it in depth. Additionally, more than half of the sample reported prior experience interacting with an AI chatbot, suggesting a baseline familiarity with the technology relevant to the study's focus.

Utility of AI in Healthcare and ACP

We first examined participant beliefs about the use of AI chatbots in healthcare broadly. Participants endorsed the use of chatbots for emotional support significantly less often than the other categories. While we note that there may have been some variability in participants' interpretations of the meaning of "accuracy" with regard to emotional support, participants open-ended responses indicated they tended not to view AI as well-suited to providing comfort or

empathy in medical settings. This finding reinforces existing concerns about technological

dehumanization in healthcare[31] and suggests that while chatbots may be viewed as useful for

logistical or informational tasks, they are not perceived as appropriate substitutes for emotional

or relational aspects of health communication. The only significant group difference was in the

domain of specialist referrals, where participants with an LLI were more likely than healthy

participants to believe that a chatbot could help them find the right specialist. This difference

may reflect the LLI group's more frequent navigation of the healthcare system and use of

specialist care, however, we note that due to the number of group comparisons made we interpret

this result with caution.

Participants' views of using AI chatbots for ACP specifically also reflected both

openness and ambivalence. Some participants were curious or cautiously optimistic, highlighting

AI's ability to offer general information, guide reflection, and improve access to planning tools.

A few mentioned chatbots' potential to reduce human bias or judgment, appreciating the

objectivity AI might bring to sensitive conversations. Others pointed to chatbots' convenience

and scalability, especially in situations where human support is limited. However, not all

participants were open to the idea of AI integration into ACP. Participants voiced doubts about

the accuracy and reliability of chatbot-generated content and questioned whether such tools

could adequately address the emotional, ethical, and contextual complexity of ACP

communication. Preference for human connection and emotional support was a recurring theme,

with some respondents asserting that chatbots lack the empathy, nuance, and understanding

required for meaningful ACP conversations. One participant provided a concise summary of a

perspective expressed by many:

I would be somewhat open to chatting with a chatbot for learning about end-of-life care

and clarifying my values around advance care planning. A chatbot could provide helpful

general information, prompt reflection, and offer resources. However, I would prefer to

discuss deeply personal or complex concerns with a human professional, as these topics

require empathy, nuance, and individualized guidance.

Concerns about data safety and privacy were also prevalent, particularly regarding how

information might be shared or exploited by corporations. Several participants expressed

discomfort with the motives driving AI development, citing fears of corporate greed, cost-

cutting, and the dehumanization of healthcare. As one participant starkly put it:

I know the corporate world is trying to save money and boost the profits of the one

percent and corporate owners, but I wish not to play their games and live in the world

controlled by software. I would prefer to speak with a real human being on matters such

as life and end of life care.

These findings suggest that while some users are open to experimenting with AI in ACP

contexts, many are not convinced that the technology is ready, or appropriate, for such deeply

human matters—as one participant wrote, "What does a chatbot know about life?"

The Role of Health Care Providers

Our findings underscore the central role that healthcare providers continue to play in

ACP communication. Nearly three-quarters of participants indicated a preference for in-person

ACP conversations with a medical professional versus an AI chatbot, citing trust in their

healthcare provider's expertise and a strong desire for emotional support. Participants who were

neutral or unsure about their preference tended to recognize the benefits and limitations of both

human and AI-facilitated conversations, indicating their preferences would depend on factors

such as medical urgency, provider familiarity, or the complexity of their condition. Some participants noted that longstanding, trusting relationships with their providers made them feel more comfortable discussing their EOL preferences, consistent with research suggesting that patient-provider relationships are fundamental to effective ACP and effective medical practice more broadly.[19,31] Provider-offered ACP consultations have been found to significantly boost advance directive completion rates. One retrospective chart review study found that patients who were directly offered ACP consults ended up completing advance directives at extraordinarily improved rates: 65.9% completion in primary care settings compared with 1% of controls and 28.1% completion in the hematology/oncology setting compared with 3% of controls.[43]

At the same time, some participants who preferred medical providers acknowledged that these ideal patient-provider relationships are not universally accessible. A few responses reflected concerns about limited appointment length, which is a known deterrent to patient-initiated ACP conversations.[13] Concerns were also raised about strained provider capacity, and inequitable access to care due to insurance or other systemic barriers. Indeed, among the small subgroup of participants who preferred a chatbot, several cited practical convenience and ease of access as key reasons. Our findings suggest that although healthcare providers may be seen as the gold standard for ACP conversations, structural limitations in healthcare access may require the development of supplemental tools such as AI chatbots if ACP participation rates are to improve.

Participant responses revealed that comfort with AI chatbots in ACP conversations is highly dependent on the context of the interaction and the chatbot's transparency. Participants were especially open to chatbot interactions when a face-to-face follow-up physician encounter was promised. Transparency also played a pivotal role: participants were very uncomfortable

when the chatbot implied it was a real person and most comfortable when it clearly identified itself as a chatbot, which may be related to participants' preference for text-based over voice-based chatbot interactions. Together, these results suggest that human oversight is critical for chatbot acceptability and that human imitation is particularly off-putting. ACP AI chatbot tool development in this context must therefore incorporate input by healthcare providers,[44] language training that produces emotionally attuned and empathetic language[45] and incorporates bias mitigation language, and strong cybersecurity protocols.[46]

Study Strengths and Limitations

We successfully recruited participants who had given some thought to EOL care preferences and had some exposure to AI chatbots, supporting the appropriateness of the target participant groups. We did not recruit adults 18–49 without LLI and only eight participants with LLI under age 50 participated, limiting our ability to generalize to adults under age 50. In addition, this survey was administered online via a Qualtrics survey, which means participation required a basic level of digital literacy. While this was helpful in our goal of recruiting an audience with exposure to AI, those who lack internet access or struggle with using technology may have been excluded. Our sample was diverse across several domains, including a balance of men and women, a strong representation from those with federally-administered insurance, and some notable diversity within race, religion, and income levels. Nonetheless, these latter groups were not sizable enough to conduct group comparisons, which will be important in future research given that preferences for virtual healthcare assistance may vary by identity characteristics such as race.[47] We were also limited in our ability to generalize our findings to individuals from some racial groups (e.g., Asian, Middle Eastern), with minoritized gender identities, with low educational attainment, struggling with financial insecurity, or without

insurance, all of whom often face greater barriers in EOL equity.[48] These factors should be

considered when interpreting the findings and their implications for broader ACP and AI chatbot

implementation.

Practice Implications

The responsible integration of AI chatbots into ACP could improve engagement,

completion, and quality of ACP. Chatbots are not constrained by time as human providers are

and may therefore enable increased ACP engagement at patients' preferred time, duration, and

pace. AI chatbots have access to tremendous knowledge bases and could provide education

tailored to individuals' needs, offer key questions for consideration, and elicit details not feasibly

generated in a brief patient-provider encounter. Further, as the worldwide populace ages, those

with lifelong exposure to digital generative AI tools are increasingly likely to expect its presence

in healthcare throughout their lives. Indeed, AI is rapidly being integrated into healthcare

communication, at a rate likely outpacing empirically-based best practices to inform its

development and deployment. Not only is there no prior research on patients' views of the

potential for AI chatbots to facilitate ACP communication, but there is also relatively little

conversation analytic research on human provider-patient communication on ACP on which to

build.[16] Continued research on human and AI-assisted ACP communication is imperative.

Establishing foundational knowledge about potential users' preferences when the technology is

still nascent increases the likelihood that such tools will be developed with crucial user input.

This study highlights the complex perspectives that adults hold regarding the integration

of AI in ACP conversations. Participants across both healthy and LLI groups recognized the

potential utility of AI chatbots in ACP, particularly for increasing access, providing information,

and guiding reflection, but conveyed substantial skepticism about AI chatbots' ability to replace

the emotional depth, empathy, and contextual awareness provided by human professionals. The central role of healthcare providers in ACP remains clear, yet structural barriers in the healthcare system point to a space where thoughtfully designed AI tools could serve as a supportive bridge or supplement to human care. For AI chatbots to gain acceptance in such sensitive domains, program design must reflect a deep understanding of emotional nuance, prioritize transparency, and function in partnership with human providers rather than in place of them. Future work should focus on co-designing AI ACP tools with input from diverse users to ensure they align with the psychological, ethical, and relational needs of patients navigating EOL decisions.

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Statements and Declarations

Competing Interests: The authors have no relevant financial or non-financial interests to disclose.

Ethics approval: This study was reviewed and deemed Exempt by the University at Buffalo Institutional Review Board.

Informed consent: Participants provided confirmation of informed consent prior to survey completion.

Data availability: The data that support the findings of this study are available from the corresponding author upon reasonable request, but restrictions apply due to participant privacy concerns.

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Tables and Figures

Table 1

Participant Demographics

Demographic Variable	Life-limiting illness *n* (%)	Healthy *n* (%)	Total *n* (%)
Disability or chronic condition			
Yes	63 (84.0)	49 (38.3)	112 (55.7)
No	11 (14.7)	78 (60.9)	89 (43.8)
Gender Identity			
Man	36 (48.0)	63 (49.2)	99 (48.8)
Woman	36 (48.0)	62 (48.4)	98(48.3)
Transgender, nonbinary, or genderfluid	3 (4.0)	2 (1.6)	5 (2.5)
Sexual Orientation			
Heterosexual	61 (81.3)	116 (90.6)	177 (87.2)
LGBTQ+	12 (16.0)	9 (7.0)	21 (10.3)
Race			
White	46 (61.3)	87 (68.0)	133 (65.5)
Black	18 (24.0)	17 (13.3)	35 (17.2)
Hispanic or Latino	10 (13.0)	15 (11.7)	25 (12.3)
American Indian or Alaska Native	8 (10.7)	3 (2.3)	11 (5.4)
Asian	5 (6.7)	8 (6.3)	13 (6.4)
Middle Eastern or North African	1 (1.3)	1 (0.8)	2 (1.0)
Multiracial or mixed	5 (6.7)	6 (4.7)	11 (5.4)
Other	4 (5.3)	7 (5.5)	11 (5.4)
Religion			
Agnostic	12 (16.0)	11 (8.6)	23 (11.3)
Atheist	7 (9.3)	21 (16.4)	28 (13.8)
Buddhist	1 (1.3)	4 (3.1)	5 (2.5)
Christian	31 (41.3)	53 (41.4)	84 (41.4)

Jewish	3 (4.0)	4 (3.1)	7 (3.4)
Muslim	1 (1.3)	0 (0.0)	1 (0.5)
Spiritual, but not religious	9 (12.0)	15 (11.7)	24 (11.8)
None	3 (4.0)	7 (5.5)	10 (4.9)
Other	7 (9.3)	13 (10.2)	20 (9.9)
Education			
High school or less	4 (5.3)	5 (3.9)	9 (4.4)
Some college, but no degree	14 (18.7)	19 (14.8)	33 (16.3)
Associates or professional degree	14 (18.6)	8 (6.3)	22 (10.9)
College graduate	18 (14.0)	34 (26.6)	52 (25.6)
Graduate degree	25 (33.3)	62 (48.4)	87 (42.9)
Financial situation			
Routinely unable to purchase sufficient food or necessities	7 (9.3)	1 (0.8)	8 (4.0)
Occasionally unable to purchase sufficient food or necessities	12 (16.0)	7 (5.5)	19 (9.4)
Have enough money for the necessities	23 (30.7)	28 (21.9)	51 (25.1)
Have more than enough money for necessities and some luxuries	33 (44.0)	92 (71.9)	125 (61.6)
Health insurance			
Medicare	50 (66.7)	66 (51.6)	116 (57.1)
Medicaid	21 (28.0)	13 (10.2)	34 (16.7)
Part of an employer group plan	23 (30.7)	53 (41.4)	76 (37.4)
Purchased private health insurance	8 (10.7)	21 (16.4)	29 (14.3)
No health insurance	1 (1.3)	5 (3.9)	6 (3.0)

Note. All variables were self-reported. The percentages are of the total number of participants who responded to the given question.

Participants were allowed to skip questions and were allowed to select more than one category for race, religion, and health insurance.

Some categories were collapsed because of low response rates.

Table 2

Themes from Participant Reflections on Artificial Intelligence Integration in Advance Care Planning and End-of-Life Discussions

Theme	Concern or Disdain	Curiosity or Interest
Trust in chatbots	Concerns about accuracy of information provided	Curiosity and openness to benefits of AI in advance care planning
	"I would not trust what they would say. This is in no way a cut and dry issue there is SO much to consider. A chatbot can't even provide me with a customer service phone number, why would I trust them with my life?"	"I would be interested to see what types of questions they ask and the options they give." "I've used AI a few times. It is scarily smart. I do like the idea of exploring options without the pressure of a sales person etc."
	"These issues are too important to trust developers to create systems that have the ability to address them thoroughly and accurately. There are no man-made systems that have anywhere near the computing and communication capacity of human brains. To think there are such systems requires hubris of epic proportions."	"I think a chat bot could describe or direct you to the necessary forms, say which ones need an attorney or doctor to sign and create a checklist for you to print out. It could give examples of how to start difficult conversations and how to phrase difficult things depending on the type of person you are talking to."
Human interaction	Strong preference for human emotional support	Chatbots are limited but better than when access to humans is not available
	"What does a chatbot know about life?" "I am not in favor of such a sensitive conversation with a programmed response."	"Might be helpful for making sure to cover the basics but seems impersonal for such an important topic & hard to deal with all the nuances. Might be better than nothing for some."
	"Chat bots do not have the emotional component that I would need from the person I have this conversation with." "I am afraid AI may not pick up on emotional nuances and hesitations."	"'Speaking' with a chatbot would not be my first choice but I would open to experimenting with one. Particularly if offered the option of an in-person follow up to review and confirm the outcome."

|		
	"I felt dread when reading [this question]! Maybe my age has something to do with my attitude, but I would prefer to talk to an intelligent human."	"It is what it is. Not enough humans to help other humans. I would want this chat to direct me to resources that gave options for me to individualize my needs etc and how they're articulated."
AI bias	Potential to promote biases and discrimination	Potential to reduce bias and value judgements
	"Due to the learning process I would expect the Chatbot to display similar ageism as the current healthcare community. Yes, I have my own bias. As an athlete, extremely fit, healthy individual I do not fit the healthcare or end-of-life planning industry's models".	"The chatbot would reply without judgement and probably would have access to good information to share." "I like the fact that a human's not involved. Humans have a tendency to project their own beliefs onto the person they're talking to."
Comfort with AI	Expresses discomfort about engaging with AI	Skeptical of AI, but willing to engage
	"I'm not a big Chatbot person. Hopefully I am not around when they are common!" "I hate chatbots. End of life conversations are sensitive, and require human empathy. The last thing I'd want is to be misunderstood by a chatbot." "I don't trust chat bots since my information can be leaked." "I am not sophisticated re modern technology and I fear how information provide could be used in an exploitative way."	"I think chatbots are flawed but people are as well". "I know that technology is overtaking all fields. I have to learn and get used to interact[ing] with AI. Maybe I will like it and become less hesitant to engage with chatbots."

Note. AI = artificial intelligence

Table 3

Participants' Comfort Levels With Various Chatbot Scenarios

	Extremely uncomfortable	**Somewhat uncomfortable**	**Neither**	**Somewhat comfortable**	**Extremely comfortable**
Scenario			*n* (%)		
Phone conversation with the chatbot	41 (20.2)	50 (24.6)	64 (31.5)	32 (15.8)	14 (6.9)
Text conversation with the chatbot	25 (12.3)	40 (19.7)	58 (28.6)	44 (21.7)	34 (16.7)
Doctor recommends and trusts the chatbot	31 (15.3)	31 (15.3)	53 (26.1)	62 (30.5)	22 (10.8)
Doctor will follow up in person after chatbot convo	21 (10.3)	18 (8.9)	36 (17.7)	65 (32.0)	61 (30.0)
Chatbot implies it is a real, live person	120 (59.1)	31 (15.3)	29 (14.3)	13 (6.4)	8 (3.9)
Chatbot clearly states it is a chatbot	15 (7.4)	27 (13.3)	56 (27.6)	33 (16.3)	71 (35.0)

Figure 1

Healthcare Contexts for Which Patients Perceived Artificial Intelligence Chatbots to Provide Accurate Information
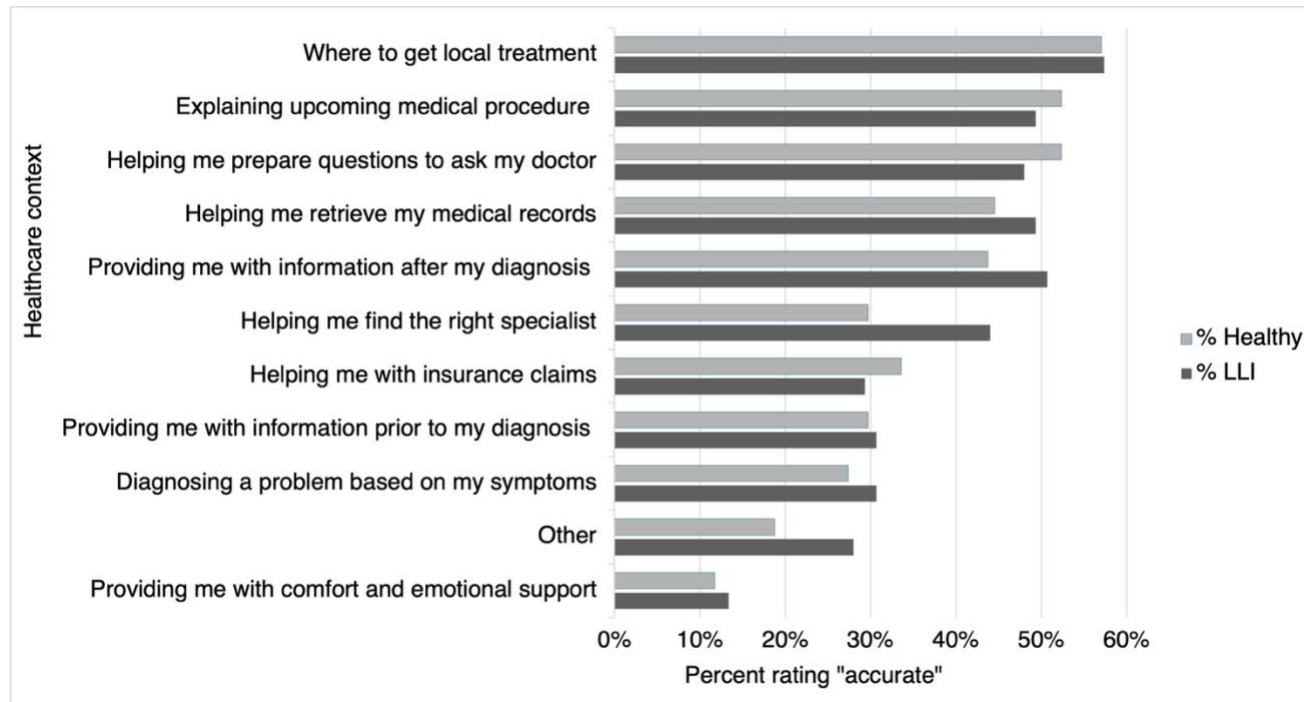
Fig. 1 Bar graph displaying percentage of participants endorsing artificial intelligence chatbots as potentially accurate in each of 11 healthcare contexts; healthy participants are represented with light gray bars and participants with life-limiting illnesses are represented with dark gray bars