therounds

Whitepaper

SYNTHETIC CERTAINTY:

The Double-Edged Sword of AI in Patient Empowerment

by Cheryl Burt,
Chief Commercial Officer The Rounds

Sarah awoke exhausted for the third consecutive day, uneasy about her unexplained fatigue. Instead of calling her doctor right away, she picked up her smartphone, searched Google, and within moments was scrolling through symptom-checkers and health forums. Soon, she wore a smartwatch to track her sleep cycles. By the time she finally contacted her doctor, Sarah had pages of notes, charts, and anxieties built from hours of independent research.

Sarah's story exemplifies a profound shift in today's healthcare. Patients are no longer passive recipients. They are empowered participants driven by accessible digital health information, wearable technology, and now, the pervasive reach of generative artificial intelligence (AI). Yet, Sarah's experience also highlights hidden perils: information overload, misinformation, and heightened anxiety.

This paper explores the promises and perils of digital patient empowerment, highlighting the critical roles and responsibilities of healthcare providers (HCPs), pharmaceutical companies, and technology developers. Specifically, we examine the transformative potential and risks of Large Language Models (LLMs), the evolving trust paradigm, and the crucial role of human oversight.

A 2025 Edelman Trust Barometer survey reinforces this shift, revealing that more than 70% of people want to actively collaborate in decisions about their health, not simply follow instructions — a powerful mandate for a new era of partnership in care.

The Empowered Patient: Promises and Pitfalls

Patients increasingly turn first to technology when facing health concerns. Today, 58% of American adults consult online sources before speaking to a doctor (CDC, 2022). Meanwhile, 37% of Canadians rely on digital health searches due to difficulty accessing providers (Hospital News, 2023). Digital empowerment, whether through symptom trackers, medical websites, or wearable devices, has fundamentally reshaped patient expectations, creating informed and engaged healthcare participants.

Yet this empowerment comes with hidden costs. One study found 23% of Canadians experienced negative health reactions from incorrect online advice (Hospital News, 2023). A well-intentioned search can quickly spiral into anxiety, misinformation, and harmful self-diagnosis, creating a heavy burden for already overwhelmed healthcare providers.

Recent research further underscores the power of AI-enhanced communication tools to directly alleviate anxiety. A randomized controlled trial (RCT) found significant reductions in perioperative anxiety when an AI model (ChatGPT) was used to assist in the informed consent process for patients undergoing total knee arthroplasty (TKA).

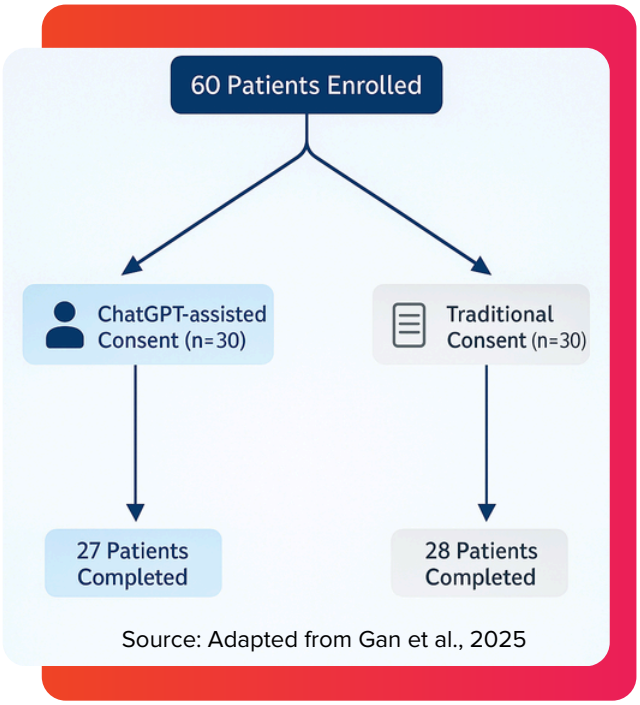


Figure 1: CONSORT Flowchart illustrating the study enrollment and randomization process

Anxiety scores using validated instruments such as the Hospital Anxiety and Depression Scale (HADS-A), Perioperative Apprehension Scale-7 (PAS-7), and Visual Analogue Scale for Anxiety (VAS-A) were notably lower among patients receiving AI-assisted consultations compared to traditional methods (Gan et al., 2025). This demonstrates that, when implemented thoughtfully, AI can positively impact emotional well-being and patient engagement.

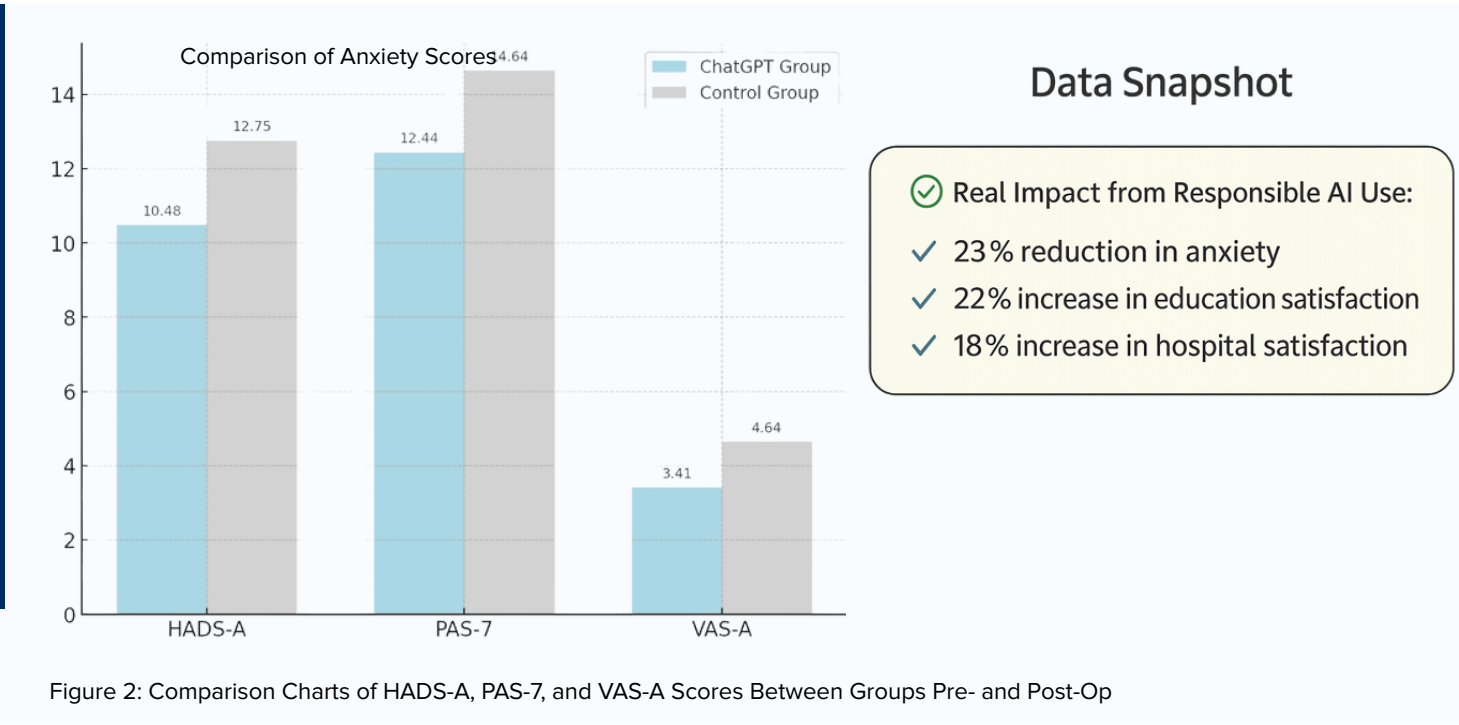


Figure 2: Comparison Charts of HADS-A, PAS-7, and VAS-A Scores Between Groups Pre- and Post-Op

However, findings from the 2025 Edelman Trust Barometer caution that not all patients are equally equipped to benefit. Health information inequality is growing, with low health literacy patients at higher risk of confusion and mistrust — an urgent reminder that empowerment must be coupled with education.

Navigating Digital Dilemmas: Cardiac Health Case Study

Consider cardiovascular disease, Canada's leading cause of death. Despite 84% of Canadians believing themselves knowledgeable, only 47% demonstrate basic cardiac health literacy (Ipsos & Heart and Stroke Foundation, 2025). Persistent myths underscore serious gaps in health literacy.

This disconnect between perceived knowledge and actual understanding is deepened when digital habits go unchecked. Over one-third of Canadians use online tools when experiencing symptoms, yet nearly 40% fail to share digital data with their doctors.These statistics point toward an urgent need: better integration between digital patient behaviour and healthcare delivery, enhanced patient education, and strengthened trust between providers and patients.

Large Language Models: A New Frontier in Trust

Increasingly, patients turn to AI-driven tools, especially Large Language Models, for real-time advice.These generative AI tools provide instant, synthesized responses to health queries, but unlike traditional sources, LLM outputs offer no easy way to verify origins or credibility.

Ethan Mollick highlights these ethical concerns, emphasizing biases inherent in AI training data, which can subtly influence healthcare advice (Mollick, 2024). He argues for rigorous human oversight.

Further strengthening this argument, expert evaluations in the previously mentioned RCT rated ChatGPT-generated answers as highly accurate, objective, and complete, underscoring the critical importance of human oversight to verify AI-generated content (Gan et al., 2025).

Even so, public perception remains cautious. According to Edelman, only 51% of people trust AI in healthcare, despite 70% acknowledging its future importance. This gap between potential and trust underscores why transparency, validation, and human context are non-negotiable.

Ethical Dilemma Spotlight: Deepfake Health Experts

The 2023 Russian Doppelgänger Campaign

In late 2023, an alarming case emerged that highlighted the darker capabilities of AI in health communication.

A Russian disinformation network, known as the Doppelgänger campaign, launched a series of deepfake videos and AI-generated content impersonating Western health authorities and medical experts.These false personas shared misleading information, spread vaccine distrust, and mimicked legitimate health campaigns. All of it was crafted with high realism using generative AI.

While the campaign focused on geopolitical disruption, its implications for digital health are profound. If malicious actors can fabricate entire healthcare personalities with false credentials, how can patients distinguish trustworthy sources from deceptive ones?
This cautionary example illustrates the double-edged nature of AI in healthcare. The same tools that aim to educate and empower can also mislead and undermine when transparency, regulation, and oversight fall behind the pace of innovation.
This is the cautionary tale to keep in mind. AI is not inherently ethical. Its safety depends on who is using it, how it is used, and for what purpose.

Human Oversight: The Indispensable Element

No matter how advanced AI becomes, human discernment remains vital. Clinicians and healthcare organizations must augment AI, not abdicate to it. Only human professionals bring the context, critical thinking, and empathy that algorithms inherently lack.

This is more than theoretical. In the previously referenced TKA study, patients who received AI-assisted education contextualized by physicians reported significantly greater satisfaction with both preoperative communication and their overall hospital experience (Gan et al., 2025).

Figure 3: Patient Satisfaction Ratings

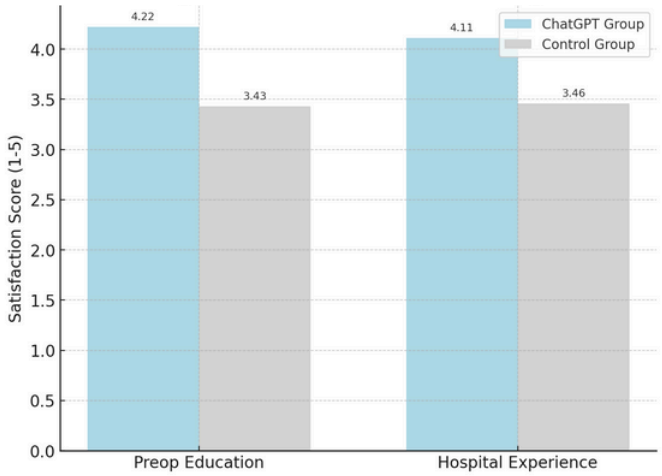


Figure 3: Satisfaction ratings were significantly higher for the ChatGPT group compared to the control group across both preoperative education (4.22 vs 3.43) and hospital experience (4.11 vs 3.46), highlighting the value of contextualized AI support.

When AI and humans collaborate not compete, the result is smarter, safer care. This matters even more given that patients trust individual clinicians (78%) far more than they trust pharmaceutical companies (56%) or health tech firms (57%), according to the Edelman Trust Barometer.

“Trust in tech is fragile. Trust in people is enduring." — Edelman Trust Barometer 2025

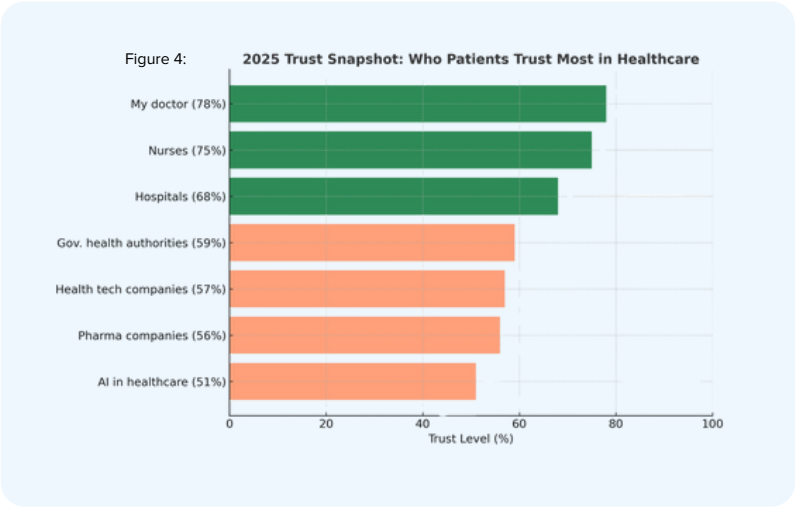


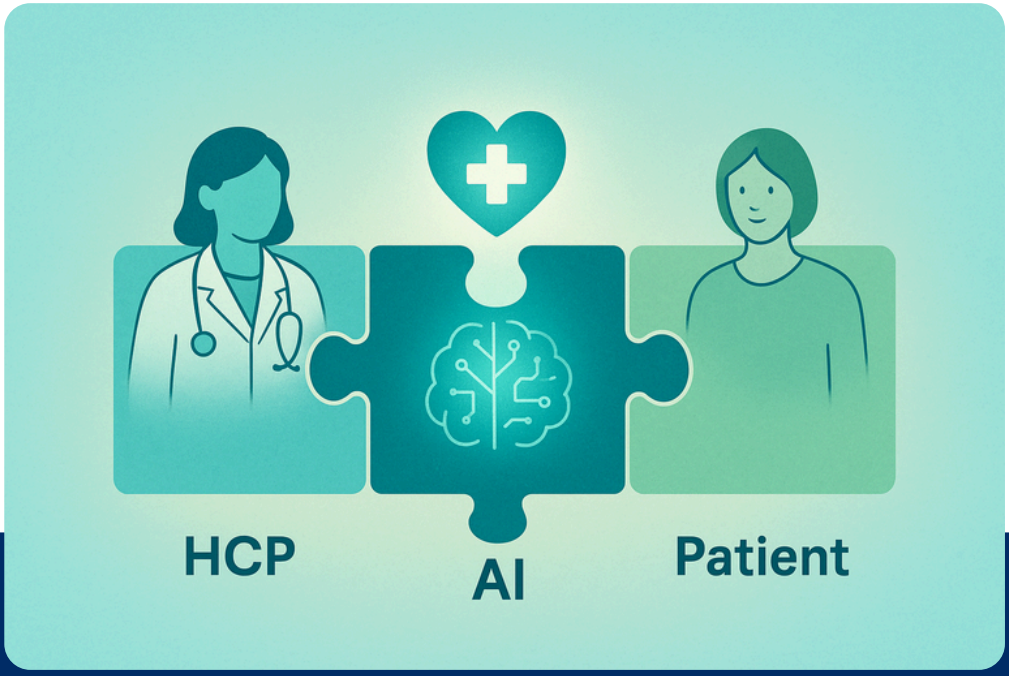
Figure 4: According to the 2025 Edelman Trust Barometer, patients express the highest trust in individual healthcare providers like doctors (78%) and nurses (75%), while expressing less trust in health tech companies (57%), pharmaceutical companies (56%), and AI in healthcare (51%). This trust gap underscores the importance of human oversight and credibility in AI integration. When AI tools are integrated into care, they must be guided and contextualized by the most trusted voices in healthcare.

Building Digital Health Literacy: A Shared Responsibility

Digital health literacy must encompass:

- Understanding source reliability
- Recognizing AI limitations and biases
- Effective digital communication with providers
- Integrating digital insights into personal health management

As Edelman's data shows, trust is fragile and unevenly distributed across healthcare stakeholders. Without intentional support, the rise of digital and AI tools risks leaving behind those who need them most.



Stakeholder Responsibilities: A Coordinated Trust Network

Building a safe digital health ecosystem requires clearly defined stakeholder efforts:

- Clinicians guiding digital conversations and patient-shared data.
- Pharma becoming digital health allies, offering transparency and patient support tools.
- Tech developers designing for clarity and ethical use.
- Policymakers establishing frameworks protecting patient rights and promoting equitable innovation.

A leading example is Google Health, which recently outlined a four-pillar strategy to responsibly integrate AI into healthcare: meeting people where they are, advancing AI capabilities, transforming healthcare systems, and fostering a thriving health ecosystem. Their work includes MedLM and Med-Gemini, tools designed to help clinicians summarize medical records and improve diagnostic support. Importantly, Google emphasizes training its models on diverse, representative data sets, reinforcing the importance of ethical, inclusive design in building trust and performance in digital health tools (Google Health Strategy, 2025).

From Informed to Insightful

Digital empowerment has given patients unprecedented control but also new vulnerabilities. Sarah's story illustrates two possible outcomes: guided engagement or overwhelmed isolation. By integrating robust evidence from the TKA study, it is clear that structured AI integration, complemented by human oversight, can lead patients from anxiety to insight (Gan et al., 2025). Clinicians can embrace their roles as guides and educators, pharma companies can evolve into active digital partners, and tech innovators can build transparency into platforms.The goal is not merely informed patients but insightful, empowered healthcare partners confidently navigating digital health.

therounds

Learn More About The Rounds

Email
growth@therounds.com

LinkedIn
LinkedIn- The rounds

Website :
https://business.therounds.com/

THANK YOU !

References:

Gan et al., 2025. ChatGPT's role in alleviating anxiety in total knee arthroplasty consent process: a randomized controlled trial pilot study. International Journal of Surgery, 111, pp.2546-2557. CDC, 2022; Hospital News, 2023; Ipsos & Heart and Stroke Foundation, 2025; Mollick, 2024; Zao-Sanders, 2025; DHC Group, 2025; Kirkup, 2025; Graphika, 2023; Edelman Trust Barometer, 2025. Trust and Health Report. Google Health. (2025). How Google is building AI-powered health tools for patients and providers.