How does ChatGPT 4omni perform in consenting for common orthopaedic and musculoskeletal interventional procedures

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Background

Informed consent is a key part of patient care, especially for complex procedures like orthopedic surgery where risks, benefits, and alternatives must be thoroughly discussed. Current consent practices face challenges such as limited clinic time, making it hard to provide detailed explanations of complex procedures. There's also variability in how clinicians communicate, which can affect patient understanding.

ChatGPT 4o, launched in 2024, integrates text, vision, and audio for real-world applications. It is able to hold real-world human conversations and offer individualised yet comprehensive information on complex topics. In this study, we examined the role of the new ChatGPT 4o, for the first time, to enhance the consenting process in surgical practice.

Research Objectives

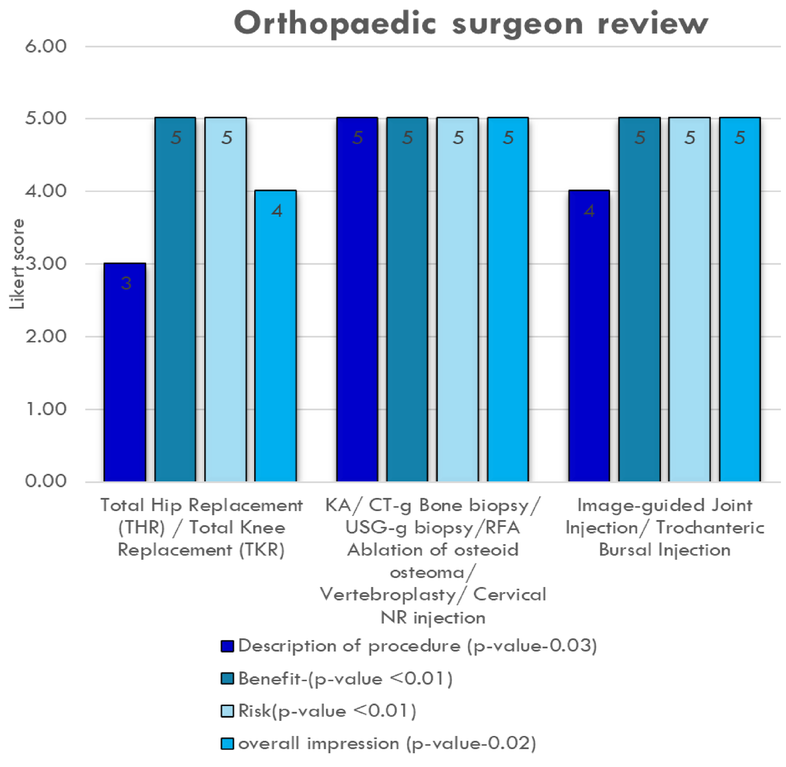
1.Assess ChatGPT 4o's utility in enhancing the consent process for 10 common orthopaedic and musculoskeletal procedures.

2.Compare its performance to established clinical consent standards.

Methods

Ten commonly performed procedures at the Royal Orthopaedic Hospital, a tertiary referral orthopaedic centre orthopedic and musculoskeletal procedures were selected, and ChatGPT 4.0 was used to consent patients. The consent information provided was scored by an orthopedic surgeon and musculoskeletal radiologist based on four parameters: description, benefits, risks, and overall impression using a Likert scale. Data was collected in Excel and analyzed with SPSS 24.0 for statistical significance. The scores and p-values for each parameter were compared between the two assessors.

Results



In contrast**, The radiologists gave a score of 5 across all domains in each of the procedures** with no additional comments made.

Discussions and Implications

1. AI tools can standardize information, reducing variability and enhancing patient understanding.

2. Opportunity to supplement traditional consent, triage unanswered queries, and reduce clinician workload.

3.AI can bridge knowledge gaps where junior doctors may lack extensive experience compared to senior consultants.

4. Repeated interactions with ChatGPT 4.0 enhance patient understanding and recollection of their procedures, both before and after the intervention.

5. Ethical and medicolegal challenges, Including accountability and patient acceptance, must be addressed.

6. Meticulous governance is essential during AI implementation in healthcare to ensure safety and reliability.

7. Successful integration relies on patient trust in AI as a tool for consenting, addressing concerns about human interaction.

Future scope

1.Larger trials to validate AI efficacy against clinical guidelines.

2.Integration with governance frameworks and patient partnership initiatives to ensure safe adoption.