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Title

Navigating the doctor-patient-AI relationship - a mixed-methods study of physician attitudes toward artificial intelligence in primary care

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Background

Artificial intelligence (AI) is a rapidly advancing field that is beginning to enter the practice of medicine. Primary care is a cornerstone of medicine and deals with challenges such as physician shortage and burnout which impact patient care. AI and its application via digital health is increasingly presented as a possible solution. However, there is a scarcity of research focusing on primary care physician (PCP) attitudes toward AI. This study examines PCP views on AI in primary care. We explore its potential impact on topics pertinent to primary care such as the doctor-patient relationship and clinical workflow. By doing so, we aim to inform primary care stakeholders to encourage successful, equitable uptake of future AI tools. Our study is the first to our knowledge to explore PCP attitudes using specific primary care AI use cases rather than discussing AI in medicine in general terms.

Methods

From June to August 2023, we conducted a survey among 47 primary care physicians affiliated with a large academic health system in Southern California. The survey quantified attitudes toward AI in general as well as concerning two specific AI use cases. Additionally, we conducted interviews with 15 survey respondents.

Results

Our findings suggest that PCPs have largely positive views of AI. However, attitudes often hinged on the context of adoption. While some concerns reported by PCPs regarding AI in primary care focused on technology (accuracy, safety, bias), many focused on people-and-process factors (workflow, equity, reimbursement, doctor-patient relationship).

Conclusion

Our study offers nuanced insights into PCP attitudes towards AI in primary care and highlights the need for primary care stakeholder alignment on key issues raised by PCPs. AI initiatives that fail to address both the technological and people-and-process concerns raised by PCPs may struggle to make an impact.