Understanding Rural Healthcare Attitudes Toward AI

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Abstract: Artificial Intelligence (AI) has the potential to revolutionize healthcare by enhancing diagnostics, personalized medicine, and operational efficiency. While its benefits may be manifold, AI's adoption in rural healthcare faces unique challenges. Rural populations, often characterized by limited healthcare access, present distinct barriers to AI adoption, including skepticism, privacy concerns, and algorithm aversion. These challenges may be influenced by socioeconomic status (SES), population density, and exposure to technology. This study investigates the perceptions of AI-mediated healthcare among rural patients and examines factors affecting trust and compliance with AI-generated medical recommendations. Drawing on insights from consumer behavior and services literature, the study explores how source credibility, transparency, and customization impact trust and compliance. Algorithm aversion may also pose a significant obstacle, particularly in healthcare decisions. Using a mixed-methods approach, the research includes semi-structured interviews to describe AI perceptions in rural populations. Key objectives include understanding the role of SES and population density in shaping attitudes toward AI and identifying strategies to build trust through transparent and personalized AI systems. The findings aim to inform public policy and AI governance frameworks, ensuring equitable healthcare access for underserved rural communities.