

# **Bridging Gaps in Rural Healthcare: Patient and Provider Readiness to Integrate Mobile Health and Artificial Intelligence Technologies into Remote Care**

Ryan Kingrey, MS-2<sup>1</sup>, Frank T. Materia, Ph.D., MHS<sup>2</sup>

<sup>1</sup>The University of Kansas School of Medicine-Kansas City, Kansas City, Kansas

<sup>2</sup>The University of Kansas Medical Center, Kansas City, Kansas, Departments of Otolaryngology and Population Health

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**Introduction.** Digital health (DH) technologies hold immense potential to enhance access to care for rural populations; however, many barriers to adoption exist. To better understand implementation of DH across Kansas, this study explored patient and provider readiness for integrating mobile devices (video otoscopes, digital stethoscopes) and artificial intelligence (AI) into remote healthcare.

**Methods.** Mixed-methods study was conducted including adult patients and physicians from Kansas. Surveys (N = 20 items, 1-5 Likert scale) assessed attitudes/beliefs. Interviews (N = 18 questions) captured deeper feedback on perceived barriers to utilizing DH. Descriptive statistics were used to analyze survey data. Interviews were transcribed and inductive thematic analysis was used to identify salient themes in qualitative data.

**Results.** Patients (N = 5; *M* age = 41.8) and physicians (N = 4; *M* age = 27) exhibited differing perspectives. 80% of patients “strongly agreed” they: would use DH for remote appointments; trust AI efficacy; felt little pressure to adopt. In contrast, 75% of physicians “strongly disagreed” with integrating mobile devices into practice and trusting AI; 75% “strongly agreed” to organizational pressure to adopt AI. In both groups, qualitative analyses indicated perceptions of safety, usability, and skepticism about reliability, as barriers to adoption.

**Conclusions.** Patients are enthusiastic about using mobile devices and AI as part of care, while providers remain cautious. As DH utilization grows, to ensure effective uptake of DH at scale, patient marketing in rural areas should focus on device safety/ease of use; provider marketing of DH should focus on diagnostic reliability and high patient acceptance.

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