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Title

Replies Written With vs Without Generative AI Assistance and Association with Perceived Empathy and Quality in Real-World Patient–Physician Communication

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Background: Patient portal message volume has grown substantially, increasing provider non-face-to-face work efforts. This increased workload has been documented to increase physician burnout, which can be correlated with lower-quality and subjectively less empathetic physician responses. UC San Diego Health implemented Augmented Response Technology (ART), an EHR integrated generative artificial intelligence (AI) tool that drafts responses to Patient Medical Advice Request messages for physician review and editing.

Objective: To examine whether physician use of ART is associated with higher perceived clinical quality and empathy in real-world patient–physician electronic communication.

Data and Methods: We analyzed 442 de-identified replies to patient messages by 59 physicians in 5/2023–3/2026 by 20 raters (10 physicians, 10 laypersons) on clinical quality and empathy (1–5 scale) and likelihood to recommend (1–10 scale). Linear mixed-effects regression models adjusted for physician and patient demographics.

Results: ART was used in 210 of 442 replies (47.5%). ART use was associated with significantly higher physician-rated clinical quality ($\beta=0.32$, 95%CI 0.17–0.48, $p<0.001$) and likelihood to recommend ($\beta=0.52$, 95%CI 0.31–0.73, $p<0.001$), as well as layperson-rated empathy/bedside manner ($\beta=0.80$, 95%CI 0.56–1.03, $p<0.001$) and likelihood to recommend ($\beta=0.86$, 95%CI 0.53–1.19, $p<0.001$). Physician and patient demographics were not significantly associated with ou