

RESEARCH INSIGHT

From Ambiguity to Action: How Healthcare Organizations Engage in Disruptive Sensemaking to Implement Generative AI

Successful generative-AI adoption in healthcare depends far less on the technology itself than on six interwoven “sensemaking” practices through which clinicians, administrators, and IT staff collectively turn uncertainty into workable action.

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Healthcare organizations are investing heavily in generative artificial intelligence (AI), yet many implementations fail. The reason is rarely the model; it is the human, cognitive, and organizational work of adoption, which remains poorly understood. This study asks a simple question: how do healthcare professionals collectively make sense of a generative-AI tool as they put it to work, and what distinct forms of sensemaking emerge along the way?

To answer it, the authors conducted an interpretive case study of “HealthCo,” a major Florida health system of more than 1,200 beds across five hospitals, during its rollout of an AI-enabled communication tool called the Physician Inbox. The large language model–driven system integrates with the Epic electronic health record to analyze patient messages and generate context-sensitive draft replies, while physicians retain full editorial control. Drawing on 19 semi-structured interviews with clinicians, administrators, and IT staff (conducted February–July 2024) and a hybrid thematic analysis grounded in sensemaking theory, the study traces how meaning was built in real time.

The central finding is a multidimensional process the authors term “disruptive sensemaking,” comprising six interconnected practices that operated simultaneously rather than in sequence: sense breaking (deliberately disrupting existing mental models and assumptions), sense demanding (building governance structures and guardrails), sense specification (creating metrics and compliance standards to judge AI’s value), resourceful sensemaking (collaborative adaptation through feedback loops and prompt engineering), risk sensemaking (perceiving and acting on threats such as hallucination and data exposure), and future-oriented sensemaking (projecting AI into long-term, mission-aligned strategy). The texture of this work comes through in participants’ own words. Early AI policy was so immature that, as one leader recounted, when asked whether anyone had a written policy, peers joked they were “in the process of asking ChatGPT to draft a policy.” Clinicians described the tool as capable of being “really right [...] and

really wrong,” demanding constant oversight, while data governance anxieties centered on the many vendors “all of whom have access to some form of data from us.”

By showing that these practices unfold concurrently and cyclically driven by generative AI’s opacity, adaptivity, and evolving capabilities the study extends sensemaking theory beyond the linear, event-based accounts developed for more deterministic technologies. It reframes sensemaking as a continuous user AI interaction sustained by boundary spanners such as clinical informaticists who translate between technical and clinical worlds. For leaders, the practical implications are concrete: develop governance frameworks that articulate clear policies and narrative accountability for ambiguous AI outputs; establish structured, iterative feedback loops to keep AI-generated communication aligned with clinical workflows; and deliver role-specific training tailored to the distinct sensemaking challenges of clinicians, administrators, and IT professionals.

The broader significance is a shift in emphasis. Success with generative AI in high-stakes clinical settings depends less on the sophistication of the model than on how professionals collectively interpret it building governance, metrics, feedback loops, and safeguards while balancing innovation against patient safety. By naming six sensemaking practices and showing how they operate together, the study offers leaders a usable framework for guiding AI integration and gives researchers a new lens for studying opaque, adaptive technologies in support of safer, mission-aligned adoption.

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