News and Perspectives

The Rise of Shadow AI in Health Care: What It Means for Patient Care

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Abstract

In response to unrelenting burden, many health care professionals have been turning to mainstream AI tools that haven't been approved by their institutions. In this *News and Perspectives* article, JMIR Correspondent Jenna Congdon reports on this "shadow AI" use in health care.

Key Takeaways:

- Clinicians are increasingly using unauthorized AI tools to reduce documentation and administrative burdens.
- Shadow AI creates significant concerns around accuracy, patient privacy, cybersecurity, accountability, and overreliance on AI-generated information.
- Health care organizations should focus on practical AI governance, clinician input, education, and appropriate guardrails.

Health care providers are increasingly asked to do more with less: more patients, more documentation, faster throughput expectations, and worsening staffing shortages leave clinicians struggling to keep up. One study reported that for a primary care physician to provide guideline-recommended care to each of their patients and complete all administrative tasks, they would need a physically impossible 26.7 hours per day.

AI tools have the potential to make clinicians' workflows more efficient. They can assist with documentation, support clinical decision-making, pull up quick answers to common questions, summarize notes, organize schedules, and draft patient education or discharge instructions in seconds. It's unsurprising that clinicians in many roles within the health care system are reaching for AI tools for support.

However, many hospital and health care systems have historically been slow to adopt AI into their clinical workflows due to concerns surrounding patient privacy, potential for error, the potential for loss of patient trust, and financial and organizational barriers. In OffCall's 2025 report, 81% of physicians were dissatisfied with their employer's AI adoption speed, with 71% stating that they have little to no influence on which AI tools get approved for use by their employer, and nearly half reporting poor employer communication about AI.

Therein lies the pain point: clinicians badly need workload support, and they believe that AI is a useful tool—but in many cases, they aren't getting employer-approved access to the tools they find most helpful.

Why Clinicians Are Using "Shadow AI"

Often, clinicians reach for these unvetted tools anyway—a phenomenon dubbed "shadow AI." A survey of more than 500 health care professionals revealed that 58% of respondents admitted to using free, general-purpose AI tools in their job, and 40% reported that they saw their peers using such tools. While health care has picked up the pace of AI adoption, the blistering pace of innovation vastly outstrips that of policy, legal, and organizational change. Health care workers simply reach for the tools they need, when they need them, because employer approval and integration could take months or years, with no guarantee that eventually approved tools would meet their needs.

Cynthia Odogwu, MD, is a board-certified family medicine physician based in Bowie, Maryland. She shares an example: "Clinicians will commonly use unapproved AI tools to help with reducing documentation burden...In the case of an elderly patient who needed a letter to justify modifications within the home to allow for safety, AI was able to review the criteria for approval as well as extract relevant patient history to then draft a letter in a few minutes, leading to significantly reduced time that the clinician would have had to spend on that task."

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> Courtney Mansbridge, BSN, RN

Courtney Mansbridge, BSN, RN, a nursing instructor in Calgary, Alberta, states that she frequently sees her students reach for unapproved AI tools "...to understand what they're seeing in a clinical aspect" while completing assignments and working through their clinical rotations. She goes on to say that "...people are going to outsource [AI] and find better ways or different ways to use it, and I think that to be smart about it, [there] should be more education around what is smart use of AI [in health care]."

Many clinicians cite lack of approved alternatives as a major driver for shadow AI use. Sharonda Davis, an RN from Atlanta, Georgia, and the Co-Director of the Acute Care and Surgical Division of the Global Nursing AI Alliance, states that the tools clinicians need simply aren't always available: "I think that there needs to be more options for documentation and clinical decision support for nurses included in the [electronic health records]." Shadow AI isn't inherently about health care providers ignoring policy; it simply reflects a gap between their daily workflows and their employer's policies and AI adoption practices.

The Risks Behind Shadow AI

Davis sums up the risks related to shadow AI: accuracy, safety, and privacy. She says, "Even though you're not entering the [patient's] exact name, date, or MRN [medical record number], the geolocation and metadata that is exposed could help identify your patients." Cybersecurity was described in one paper as a major issue related to shadow AI use in health care.

Davis adds that "...hallucinations, inconsistency, and accuracy" are additional issues. "[Large language models] speak with such confidence versus their reliability," which she sees as an issue for new or inexperienced health care workers who may unwittingly believe inaccurate responses.

Finally, Odogwu addresses concerns regarding patient consent: "There is also an ethical concern with the use of unapproved AI as oftentimes, the clinician will not have obtained consent from the patient to use the tool."

Clinicians' Suggestions for Addressing Shadow AI Use

Both Davis and Mansbridge broach an important point: working in health care brings a tremendous learning curve, and even experienced clinicians frequently come across questions they're unsure how to handle. AI is not only convenient, but also avoids the potential for being shamed over asking a question. Both nurses agree that mutual support between members of the health care team creates an environment where asking questions feels safe, which means that members may reach for AI answers less often. "I think the culture of nursing right now needs to cultivate learning," Davis sums up.

All three clinicians agreed that any AI tools offered by a facility must be approved in concert with those who will actually use the tool, rather than being chosen by administrators who do not understand their daily workflow and needs. Odogwu says that "Another reason for [shadow AI use] is that the tools that an organization might opt to prioritize might not address the pain points that clinicians may be experiencing during their work day, causing them to turn to unapproved AI tools."

The problem of shadow AI use is multifaceted, but offering tools that fit clinicians' real needs and working to cultivate a culture where workers feel comfortable going to peers or leaders with questions are two good places to start.

The Future of AI Governance

Alex Tyrrell, Executive Vice President and Chief Technology Officer at Wolters Kluwer Health, says, "In 2025, shadow AI surged across health care organizations, as staff across all aspects of care sought ways to improve efficiency amid persistent burnout, staffing shortages, and other factors. As a result...health care leaders will be forced to rethink AI governance models and implement more formalized organization-wide frameworks that ensure the responsible use of AI, including proper training around the technology and appropriate guardrails to maintain compliance."

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Rather than simply banning shadow AI use, organizations must seek to understand why clinicians are turning to unauthorized tools before they can successfully replace them with safer alternatives that address clinicians' pain points and meet their needs.

Shadow AI use is likely not leaving health care any time soon, and the risks are real. Clinicians and leaders must work together to adequately guardrail supportive AI tools and be willing to adapt those tools and policies and provide ongoing staff education about safe AI use as both the tools and systems evolve.

Keywords: artificial intelligence; health personnel; digital health; electronic health records; patient safety; clinical decision support systems; confidentiality; workload; AI

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