

AI-Augmented Patient Messaging for In-Basket Management

ASHP Artificial Intelligence Case Studies

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Case Study Type: Patient Engagement/Patient Monitoring

Tool Type: Clinician or Internal-Facing, Vendor Product

Case Overview:

Our family medicine patient-centered medical home (PCMH) clinic receives a high volume of patient-initiated electronic messages related to medications, vaccines, refill requests, and chronic disease management. To address this challenge, our health system implemented an AI-assisted response tool embedded within the electronic health record. The tool generates draft responses for clinician review based on the patient's message and selected chart information. The initiative was launched to reduce administrative burden, improve response timeliness, and enhance provider satisfaction while preserving clinician oversight.

Tool and Project Details:

The AI-assisted response tool is embedded within the electronic health record and generates draft responses to patient messages using limited chart data and message context. Clinicians can edit, revise, or disregard the draft before sending a response. Implementation was coordinated through health system informatics, information technology, and operational leadership teams. Because the tool was integrated into existing workflows and software infrastructure, no additional platforms were required. The tool functions as a communication aid rather than an autonomous clinical decision-maker.

Key Elements of Success:

The initiative was selected as an organizational pilot to improve efficiency and user satisfaction. Training was incorporated into existing operational meetings, minimizing disruption to workflows. Frontline clinician feedback was actively collected during implementation and used to refine functionality and identify best practices. No IRB approval or specialized governance structure was required because the tool was implemented as an operational workflow enhancement.

Impact on Outcomes:

Provider efficiency and satisfaction improved following implementation, with clinicians reporting reduced time spent drafting routine patient communications. Objectively, message view time with the AI integration decreased about 8 seconds per message. Staff feedback has been largely positive, particularly for handling common medication-related questions. The tool serves as a useful starting point even when substantial editing is required. Challenges included occasional overly optimistic responses and drafts that lacked sufficient clinical context. These findings reinforced the need for clinician review and oversight. Although formal outcome analyses are ongoing, qualitative feedback suggests meaningful workflow improvements and reduced administrative burden.

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Role of the Pharmacy and Pharmacists:

While not directly involved in the decision to launch the tool, pharmacists were key end users and stakeholders because they manage a high volume of medication-related patient communications. Pharmacy team members participated in training, workflow integration, and ongoing feedback regarding tool performance. Their expertise helped identify opportunities and limitations in discussion with the IT team post launch. No specialized certifications were required; however, pharmacists and other clinicians received training on appropriate use, review expectations, and the importance of maintaining professional accountability for all patient-facing communications.

Budget & Resource Allocation:

The initiative was implemented as part of existing electronic health record functionality and did not require additional departmental funding. Resources included information technology support, informatics expertise, clinician training, and ongoing optimization efforts. Leadership support was based on the potential to reduce administrative workload, improve operational efficiency, and enhance provider satisfaction. Because the tool was integrated into existing infrastructure, implementation costs were relatively low compared with stand-alone AI solutions.

Lessons Learned:

The most significant lesson was that AI-generated content does not need to be perfect to provide value. Clinicians found even partially useful drafts could improve efficiency. Human oversight remains essential because the tool may generate responses that are incomplete, overly optimistic, or insufficiently tailored to the clinical situation. Leadership support, interdisciplinary collaboration, and continuous user feedback are critical to ongoing success. The hard stop requiring the clinician to edit the content before sending helped ensure clinicians understood that AI-generated messages do not replace professional judgment or complete associated clinical tasks.

Future Goals & Ongoing Monitoring:

Future plans include continued monitoring of provider adoption, satisfaction, and workflow impact. Additional evaluation of patient perceptions and satisfaction with electronic communication is being considered. Ongoing optimization efforts focus on improving draft accuracy, role-specific communication, and workflow integration. Educational opportunities are also being explored to prepare pharmacy learners and trainees to appropriately use AI-enabled tools in future practice.

PHOTO:



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