

10 ways health care AI could transform primary care

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Augmented intelligence (AI) promises to be a transformational force in health care, especially within primary care. Experts outline ways that innovations driven by AI—often called artificial intelligence—can aid rather than subvert the patient-physician relationship.

“AI implemented poorly risks pushing humanity to the margins; done wisely, AI can free up physicians’ cognitive and emotional space for patients, and shift the focus away from transactional tasks to personalized care,” wrote the authors of an article published in the *Journal of General Internal Medicine*.

The AMA is committed to helping physicians harness AI in ways that safely and effectively improve patient care.

The authors—Steven Y. Lin, MD, and Megan R. Mahoney, MD, associate clinical professor of medicine and clinical professor of medicine, respectively, in the Division of Primary Care and Population Health at Stanford University School of Medicine, and AMA vice president of professional satisfaction Christine A. Sinsky, MD—reviewed promising AI inventions in 10 distinct problem areas.

Risk prediction and intervention. Drawing on EHR data, AI-driven predictive modeling can outperform traditional predictive models in forecasting in-hospital mortality, 30-day unplanned readmission, prolonged length of stay and final discharge diagnoses.

Population health management. With the move from fee-for-service to value-based payments, AI could help identify and close care gaps and optimize performance with Medicare quality payment programs.

Medical advice and triage. Some companies have developed “AI doctors” to provide health advice to patients with common symptoms, freeing up primary care appointments for patients requiring more complex care.

“Rather than replacing physicians for some conditions, AI support can be integrated into team-based care models that make it easier for primary care physicians to manage a patient panel,” the authors wrote.

Risk-adjusted paneling and resourcing. EHR data on utilization can be used to create algorithms for weighing panel sizes in primary care. This can be used to determine the level of staffing support needed for primary care practices based on the complexity and intensity of care provided.

Device integration. Wearable devices can track vital signs and other health measures, but their data’s volume and its incompatibility with EHRs make it unwieldy without the help of AI. Apple’s Health Kit is one tool that integrates data from multiple wearable devices into the EHR, enabling care teams to map trends and spot deviations that suggest illness.

Digital health coaching. Companies are now offering digital health coaching for diabetes, hypertension and obesity, and similar programs integrated in health systems have shown reductions in cost per patient through reduced office and hospital visits.

Chart review and documentation. Technology companies with expertise in automatic speech recognition are teaming up with health systems to develop AI-driven digital scribes that can listen in on patient-physician conversations and automatically generate clinical notes in the EHR.

Diagnostics. AI-powered algorithms for diagnosing disease “are now outperforming physicians in detecting skin cancer, breast cancer, colorectal cancer, brain cancer and cardiac arrhythmias,” the authors wrote, citing numerous tools, such as IDx-DR, Aysa and Tencent. “This could reduce the need for unnecessary referrals, increase continuity with patients and enhance mastery for primary care physicians.”

Clinical decision-making. Next generation platforms do much more than provide alerts and best practice advisories. eClinicalWorks, for example, is developing a new version of its EHR that will feature an AI assistant that provides evidence-based clinical suggestions in real time.

Practice management. AI can also automate repetitive clerical tasks. Eligibility checks, insurance claims, prior authorizations, appointment reminders, billing, data reporting and analytics can all now be automated using AI, and some companies have developed AI-powered category auditors to help optimize coding for quality payment programs.

Discretion is key

“As AI becomes the second great wave of technological innovations to offer power and possibility for modern healthcare, a key question is: Will AI augment, rather than subvert, relationships? Or will

managing and being managed by AI add yet another technological master and burden to the lives of physicians?" the authors wrote. "The human challenge will be to have the wisdom and willingness to discern AI's optimal role, and to determine when it strengthens and when it undermines human healing."

The AMA's House of Delegates uses the term augmented intelligence (AI) as a conceptualization of artificial intelligence that focuses on AI's assistive role, emphasizing that its design enhances human intelligence rather than replaces it.

The AMA partners with tech and health care leaders to bring physicians critical insights on AI's potential applications and ensure that physicians have a voice in shaping AI's role in medicine.