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Editorial

Beyond the hype: Artificial intelligence at the service of clinical care

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ABSTRACT

Artificial intelligence (AI) has generated significant expectation in the healthcare industry, particularly as a transformative factor in diagnosis, treatment, and patient care. Although its implementation continues to evolve, the majority of current AI applications remain limited to administrative and non-clinical functions, such as chatbots, computerized scheduling, and electronic triage systems. For AI to have a transformative impact on clinical practice, clinicians with first-hand knowledge of patient care dynamics and healthcare systems' real-world demands must lead the deployment of AI. In cardiovascular medicine, AI can make a considerable impact by integrating data from diverse sources—like wearable sensors, laboratory tests, and patient-reported outcomes—to detect early clinical changes and enable personalized follow-up. General public use of wearable devices provides an opportunity for continuous monitoring of patients, if the data thus created is filtered and interpreted through a clinically sound framework. Such a transformation helps develop adaptive and efficient models of follow-up that not only optimize resource use but also improve quality of care. The active engagement of doctors as designers of medical technology is imperative to make sure that digitalization is kept patient-centric and not focused on system efficiency only. If well integrated, AI has the potential to augment clinical responsiveness, enhance the doctor–patient relationship, and help create a more efficient, sustainable, and human-oriented healthcare system.

KEYWORDS: Artificial intelligence; digital health transformation; patient monitoring; physician leadership; personalized care.

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Artificial intelligence (AI) has raised great expectations in healthcare, being presented as a transformative technology with the potential to alter diagnosis, treatment, and patient care.[1] However, beyond all the hype, its tangible impact on clinical practice has been modest thus far. Most current uses are still in peripheral activities, such as chatbots to answer frequent questions, automated appointment booking, and electronic triage systems. While such applications bring practical benefits, they have yet to fundamentally change the patient's experience of navigating the healthcare system.[2] To make the leap from promise to practice, AI must reach beyond administrative tasks and become firmly integrated into patient care. Such a necessary evolution demands leadership from individuals who understand clinical workflow intricacies and day-to-day realities of healthcare delivery. Above all else technologist- or engineer-led, though, the actual application of AI needs to be physician-led by doctors who have everyday experience with patient care and who understand where AI can most impact quality.[3]

In cardiovascular medicine, where disease evolution can be subtle and where early intervention is everything, AI presents huge potential. By integrating data from wearable sensors, laboratory results, imaging, and patient-reported outcomes, AI has

the potential to enable more responsive and tailored follow-up.[4] AI-powered systems enable clinicians to detect early warning signs, track response to treatment, and note deviations from expected recovery, allowing timely, tailored interventions before clinical decompensation occurs. Although so-called smartwatches and other wearables are being promoted aggressively for wellness, their integration into clinical practice has not been fully harnessed. These devices, although costly and attention-grabbing, often provide unproven clinical assertions. The greatest challenge is not the development of new technologies, but the use of existing information—bridging it with clinical insight and transforming it into actionable clinical decisions.[5]

This vision redefines follow-up care from interval-based visits to dynamic, personalized care. Proactive clinical evaluations can be scheduled in high-risk situations or postponed during quiescent periods, optimizing health outcomes and resources. Remarkably, these adaptive models require minimal additional investment because much of the facilitating technology—from smartphone sensors to advanced algorithms—is already at hand.[1] Discerning use of such tools can reduce healthcare spending through avoided visits, preventable hospitalization, and delayed interventions. For digital transformation to be successful, it must be clinically led by those most directly involved in the delivery of healthcare.[6] Clinicians, through their system-wide view and clinical expertise, are well positioned to lead the effective implementation of digital solutions. They must work not as passive recipients, but as active creators of medical technology.[1]

The value of a doctor today is not only in clinical proficiency but also in his or her ability to understand the patient journey and the complexity of healthcare ecosystems. Such understanding, when combined with AI proficiency, can define scalable, effective, and sustainable solutions adapted to the real world.[7] There has already been a lack of clinical involvement in digitalization that has generated inefficiencies. Most electronic medical record systems, for example, have become bureaucratic obstacles rather than clinical enablers—prioritizing administrative compliance more than meaningful use.[8] Data captured are therefore often unreliable, and accreditation-driven protocols can become detached from clinical reality, producing tokenistic ritual like the much-feared "accreditation week" in most institutions.[1]

Automated systems also possess the capacity to continuously assess treatment between visits, monitoring adherence and therapeutic efficacy dynamically. Physicians can be given timely feedback, with early intervention and modification of care supported. Individualized automation enables patients to receive immediate, personalized responses to routine inquiries—not based on generalized internet information but on their physician's protocols.[9] These types of programs reduce unnecessary physician interruption while offering patients accurate, 24/7 medical information. Rather than alienating patients from providers, this technology supports physician–patient rapport through integrated, personalized, continuous, and affordable care.[10]

Well integrated, AI has the potential to address current system weaknesses by getting back to the patient. Clinically guided intelligent systems can eliminate irrelevant information, prioritize the key data, and allow physicians to make timely decisions.[11] Not only does this confirm but also doctor–patient relationship and quality and responsiveness of care. The main challenge is clear: doctors must be the leaders in the digital evolution of medicine. Their role should not be to simply fill available technology, but to create and implement technology into clinical workflow. And lastly,

technology must remain in service to care—enhancing but not dictating the direction of healthcare delivery.[1]

CONCLUSION

In conclusion, AI has vast potential in reshaping the provision of healthcare, particularly when properly integrated into clinical practice by physicians who fully understand the complexities of caring for patients. Instead of being used as a simple administrative tool, AI needs to be harnessed to aid in decision-making in medicine, enable improved monitoring of the patient, and enable more customized, responsive, and effective follow-up treatment. With the application of accessible technologies like wearable devices and clinically guided automated solutions, digital transformation of health can happen without imposing a high cost burden on the healthcare sector, without sacrificing an unyielding physician–patient relationship based on quality of care. Active clinician leadership may still play a crucial role in ensuring that technology reinforces rather than degrades the humanistic roots of medicine.

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We have no conflict of interest

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