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Medicine's digital revolution
La révolution numérique de la médecine

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La révolution digitale de la médecine

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The digital revolution in medicine represents a transformative shift in how healthcare is delivered, experienced, and taught. At the heart of this transformation is the adoption of Electronic Health Records (EHRs), which has fundamentally changed medical documentation and patient care management. EHRs offer an integrated, digital approach to storing patient information, making it accessible and updatable in real time by healthcare professionals across different settings. This digital centralization improves the accuracy of patient data, enhances the efficiency of care delivery, and facilitates a more personalized approach to treatment plans.[1] Parallel to the evolution of EHRs is the digitization of medical education.[2] Digital platforms and tools have expanded the accessibility of medical training, allowing for a more flexible and interactive learning experience. Virtual simulations, e-learning modules, and online workshops have become integral components of medical education, enabling students and professionals to acquire and refine their skills with greater flexibility and from virtually anywhere in the world. Telemedicine has also emerged as a critical component of medicine's digital revolution, breaking down geographical barriers to healthcare access. Through video consultations, remote monitoring, and digital communication tools, patients can receive timely medical advice, diagnosis, and treatment without the need for physical hospital visits.[3] Finally, the introduction of large language models (LLMs) and AI in healthcare is set to revolutionize medical care further. With their ability to process and generate human-like text, LLMs are ready to enhance diagnostic accuracy, patient triage, and the customization of educational materials.[4] As we look to the future, the continued integration of digital technologies in medicine is set to further shape and enhance the quality, accessibility, and personalization of healthcare. The digital revolution in medicine not only promises to improve patient outcomes but also to redefine the paradigms of medical education and healthcare delivery in the years to come.

Media

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References

1. Mendoza LE, Rivas L, Ganvini C. Digital transformation and adoption of electronic health records: critical success factors. In: Rocha Á, Ferrás C, Ibarra W, eds. *Info Technol Systems*. Lecture notes in networks and systems. Springer International Publishing; 2023:219-231. https://doi.org/10.1007/978-3-031-33258-6_20

2. Jun Xin L, Ahmad Hathim AA, Jing Yi N, Reiko A, Noor Akmal Shareela I. Digital learning in medical education: comparing experiences of Malaysian and Japanese students. *BMC Med Educ*. 2021;21(1):418. https://doi.org/10.1186/s12909-021-02855-w

3. Stoltzfus M, Kaur A, Chawla A, Gupta V, Anamika FNU, Jain R. The role of telemedicine in healthcare: an overview and update. *Egypt J Intern Med*. 2023;35(1):49. https://doi.org/10.1186/s43162-023-00234-z

4. Thirunavukarasu AJ, Ting DSJ, Elangovan K, Gutierrez L, Tan TF, Ting DSW. Large language models in medicine. *Nat Med*. 2023;29(8):1930-1940. https://doi.org/10.1038/s41591-023-02448-8