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Editorial

Recent barriers to technology in healthcare education

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Recent barriers to technology in healthcare education include lack of infrastructure, digital literacy gaps, concerns about data privacy and ethical issues, and financial costs. Additionally, there's a need for effective change management to address resistance to new technologies from staff and patients, and the need for robust faculty development to effectively integrate and evaluate new technologies.[1]

1. Infrastructure and technical barriers

a. Lack of access: Limited network coverage, unreliable internet infrastructure, and inadequate access to devices (like computers and smartphones) hinder the effective use of digital health tools, especially in underserved areas, according to a study on digital health in India on Nature.

b. Technical complexity: The complexity of some technologies and the need for specialized skills can create a learning curve for both educators and learners, as reported in the National Institutes of Health (NIH) study on the use of technology in healthcare education.

2. Digital literacy and user-related barriers

a. Lack of digital literacy: Some patients, especially older adults and those in low-income areas, may struggle with the technical skills required to use digital health tools, according to the National Institutes of Health (NIH).

b. Resistance to change: Staff and patients may resist adopting new technologies due to concerns about workload, fear of job displacement, or lack of understanding of the benefits, as noted in a Taylor & Francis Online article on the implementation of technology in healthcare entities.

3. Data privacy and ethical concerns

a. Data security: The sensitive nature of health data raises concerns about privacy and security, particularly with the increasing use of digital health platforms, as discussed in the National Institutes of Health (NIH) study on digital health.

b. Ethical issues: Issues like informed consent, data ownership, and algorithmic bias can arise with the use of digital health technologies, according to the National Institutes of Health (NIH).

4. Financial and institutional challenges

a. High costs: The financial burden of acquiring, implementing, and maintaining new technologies, along with the costs of training and support, can be a major hurdle for institutions.

b. Lack of resources: Limited funding, lack of qualified personnel, and inadequate support systems can further impede the adoption of technology in healthcare education, according to a study on the implementation of technology in healthcare entities.

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5. Other barriers

a. Over-reliance on technology: While technology can enhance learning, over-reliance on digital tools may hinder the development of critical thinking, communication, and clinical skills, as noted in a Contemporary Educational Technology article on the impact of healthcare digitalization on medical education.
b. Need for robust faculty development: Educators need to be adequately trained on how to effectively integrate and evaluate new technologies.[2]

Robust faculty development is crucial for good healthcare education because it equips educators with the knowledge, skills, and tools needed to effectively prepare students for the evolving healthcare landscape. This development helps faculty adapt to changes in pedagogy, learning styles, curriculum models, and evaluation philosophies, ultimately improving the quality of education and training.[3]

1. Evolving Healthcare Landscape

Healthcare is constantly changing, requiring educators to stay abreast of new technologies, treatments, and approaches. Faculty development ensures they are equipped to teach students these advancements. [4]

1. Improved teaching skills: Robust programs can enhance teaching effectiveness by providing training in different teaching methodologies, classroom management, and engaging students.
2. Enhanced curriculum and assessment: Faculty development can also improve curriculum design and assessment strategies, ensuring they are relevant and effective for modern learning.
3. Positive impact on learners: Better-trained faculty lead to more engaging and effective learning experiences for students, ultimately contributing to their professional development.
4. Increased faculty satisfaction: Faculty development programs can also enhance the careers of educators, improve their sense of belonging, and boost their self-efficacy.
5. Institutional benefits: Strong faculty development can strengthen a medical centre's academic profile and define its educational approach.
6. Addressing barriers to participation: Faculty development programs should be designed to overcome barriers such as lack of protected time, competing responsibilities, and a perceived lack of recognition.
7. Need-based and hands-on: Faculty development should be tailored to the specific needs of the faculty and offer hands-on training opportunities.
8. Continual improvement: Faculty development is an ongoing process, as healthcare and education are constantly evolving.

2. Conflict of Interest

None.

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