

Editorial

Teaching Evidence-Based Medicine in the Age of Infodemics: A Call to Action

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The rise of the digital era has transformed not only how healthcare information is disseminated but also how misinformation spreads. The COVID-19 pandemic starkly revealed the fragility of public trust in scientific knowledge, giving birth to what the World Health Organization termed an “infodemic” - an overabundance of information, both accurate and false, that makes it difficult for people to find trustworthy sources and reliable guidance when needed most.¹ In this milieu, teaching Evidence-Based Medicine (EBM) to future healthcare professionals assumes unprecedented importance.

The Threat of Misinformation in Clinical Practice

Health misinformation has real consequences, including vaccine hesitancy, inappropriate medication use, and mistrust in healthcare systems.² Even trained health professionals are not immune; studies suggest that clinicians can sometimes be influenced by widely circulated but unsubstantiated claims, especially when clinical workloads are high and critical appraisal skills are lacking.³ Thus, the current environment demands that medical education not only imparts knowledge but also equips learners with the tools to critically appraise, synthesize, and apply scientific evidence amidst an ocean of noise.

Shortcomings in EBM Education

Despite being recognised as a core competency, EBM training remains inconsistently integrated into medical curricula globally.⁴ Often, EBM is introduced as a theoretical module rather than an applied, continuous process embedded in clinical reasoning. This superficial engagement leaves young practitioners vulnerable to cognitive biases, overreliance on clinical anecdotes, and susceptibility to misinformation propagated via social media, search engines, or even poorly conducted studies published in predatory journals.⁵

Teaching EBM as a Defensive and Constructive Skill

A modern approach to teaching EBM must prioritise defensive skills against misinformation while fostering constructive critical appraisal skills. Students must be taught not just how to locate and interpret high-quality research but also to discern credible sources, understand research design limitations, and recognise red flags in exaggerated claims

or conflicts of interest.⁶ These skills are not intuitive; they require systematic teaching through case-based discussions, journal clubs, simulated misinformation scenarios, and hands-on critical appraisal of published articles.

Moreover, training should emphasise understanding the hierarchy of evidence, statistical literacy, and the ability to interpret effect sizes, confidence intervals, and relevance to individual patient care.⁷ Without this competence, even the most motivated clinician may misapply evidence or fall victim to the “authority bias” of misleading expert opinions.

The Role of Faculty and Institutions

Medical educators themselves must stay current in EBM to model best practices for learners. Faculty development programs should include training in infodemiology—the science of managing and countering infodemics.⁸ Institutions must also integrate EBM teaching longitudinally across clinical postings, ensuring that students learn to apply evidence consistently rather than treating it as a separate or optional academic exercise.

EBM and Digital Literacy: An Unavoidable Union

In the digital age, EBM and digital literacy are inseparable. A modern EBM curriculum must teach students how algorithms prioritise content on social media, how echo chambers form, and how misinformation campaigns are structured.⁹ Without this awareness, young doctors may underestimate the influence of non-peer-reviewed sources on patients and even on their own decision-making.

A Call to Action

We propose an urgent revision of medical curricula worldwide to address the following priorities:

1. Mandatory longitudinal EBM training across all years of medical education.
2. Incorporation of misinformation case studies to simulate real-life challenges.
3. Faculty development in EBM and infodemiology to equip educators with contemporary tools.
4. Digital health literacy modules that prepare students for a hyperconnected, data-rich environment.
5. Collaborations with public health experts to design curricula that reflect real-world information ecosystems.

The cost of inaction is high. Without deliberate educational reforms, we risk graduating doctors who are less prepared to serve as gatekeepers of truth in an increasingly confused public sphere. In an era where misinformation travels faster than science, the medical profession must reaffirm its commitment to evidence, critical thought, and transparent

communication. Teaching EBM is no longer a luxury - it is the bedrock of professional integrity and public trust. The time to act is now.

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