Enhancing Medical Education through Effective Use of Pharmacological Databases

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Healthcare professionals increasingly depend on drug databases for informed decision making and patient care. The reliability of these databases depends on data quality, timeliness, and accuracy, which users must often verify because of variability[1]. Additionally, user confidence and satisfaction are influenced by time constraints and prior familiarity with these resources[2].

To address these challenges and improve the proficiency of medical students in researching medication information, we introduced a novel educational platform. This platform facilitates guided interactions with pharmacological databases, enabling students to navigate the drug efficacy and associated risks.

We evaluated the platform's effectiveness through student surveys, assessing changes in drug research skills and perceptions at three stages: at the course's onset, at its conclusion, and 1-4 years post-completion. A significant shift was observed in students' preferred sources of drug information, moving from general search engines to professional evidence-based resources. Remarkably, 94% of the students highly valued the course for their professional development, with 6% agreeing and no negative responses. The course's structure and pedagogical approach also received high ratings, placing them in the top 20% of their academic curriculum.

Follow-ups graduates, now in their clinical practice, acknowledged the course's substantial contribution to their practical drug knowledge and peer education. The skills and tools acquired remain in active use, and there is a strong advocacy for integrating this course into the medical curriculum.

Our model synergizes medical pharmacology, health informatics, and active learning, offering an immersive approach to drug utilization education. Survey analysis suggested that this innovative method significantly improves long-term understanding and proficiency in drug database navigation, which is essential during clinical rotations. We believe that this approach not only advances decision-making skills for future physicians, but also equips them for the rigors of clinical practice.

1. Hoogland MA., How Medical Students Discover and Use Medical Information Tools (2019) Med Ref Serv Q 38: 347–357.

2. Bradley-Ridout G, Nekolaichuk E, Jamieson T, Jones C, Morson N, Chuang R, et al. UpToDate versus DynaMed: a cross-sectional study comparing the speed and accuracy of two point-of-care information tools (2021) J Med LibrAssoc. 109: 382–387.