LETTERS

Integrating mHealth and Mobile Technology Education Into the Pharmacy Curriculum

To the Editor. Never in man’s history has an individual had access to the sum of human knowledge in the palm of his hand. While the benefits of mobile devices (eg, smartphones, tablet computers) can easily be seen impacting daily activities in the general population, the practice of medicine is facing a disrupting force with the advent of readily available mobile technology. Mobile health (mHealth) has become a new area of medicine targeting the use of mobile technology to engage patients in their care.1 Patients now use mobile applications as pill reminders as well as to monitor their physical activity, and track their diet, vital signs, laboratory test results, and medications. Expanding beyond applications (apps), peripheral devices such as physical activity recorders, EKG recorders, blood pressure cuffs, glucose monitors, sleep monitors, and weight scales, are being tethered to smart phones. The availability of this technology is creating increasingly self-aware patients who are able to track their health and report it back to their clinicians.

mHealth technology offers the chance to revolutionize telemedicine and increase the ability to gather objective data on patients in any setting. A study in JAMA demonstrated that pharmacists working with patients in a telemedicine setting were able to use mobile technology to impact patient outcomes.2 By using home blood pressure telemonitoring, pharmacists were able to evaluate and assess patients’ blood pressure and make appropriate therapeutic decisions that resulted in improved blood pressure control. This is one example of new services that are being explored, using mobile devices to impact patient care and quality of life, especially for those in rural areas or with transportation difficulties. In addition, many community pharmacy settings are exploring the use of mobile applications to engage patients. Walgreens, CVS, and Rite Aid offer their own apps, with a variety of purposes, such as allowing patients to refill medications and check drug interactions, and offering patients the ability to communicate with pharmacists through an online portal.

A large issue is that the rise in this technology is quickly outpacing current education regimens. Future pharmacists will likely see mobile technology and mHealth play a significant role in practice. Issues that present themselves include educating students on the appropriate use of mobile technology. With recent research demonstrating the shortfalls of some mobile apps, it becomes pertinent to teach our students how to evaluate and use these new clinical tools.3 Concurrently, interprofessional practice will likely increase through mobile technology as pharmacists are able to communicate more readily with other members of a health care team and patients. As such, methods must be taken to educate students on appropriate methods and techniques using electronic tools, and develop a sense of e-professionalism.

If pharmacy education does not consider the integration of mobile health technology into the practice of medicine, future pharmacists will be at several disadvantages. First, they will not have the required professional attitude or knowledge to appropriately use technology that will become a mainstay of practice. Second, other healthcare professions that are choosing to adapt mobile technology into their curriculum will outpace pharmacy in practice. Last, and perhaps most damaging, innovation from the pharmacy sector will be slowed, presenting other healthcare professionals opportunities to delve into areas in which pharmacists could be major players, such as using technology to increase medication adherence.

Pharmacy educators should begin discussing the role mHealth and mobile technology will play in the practice of pharmacy in the near future and decide what to teach pharmacy students. Possible ways to address these educational opportunities may include a step-wise approach through currently implemented curriculum. The evaluation of mobile applications and technology could be introduced in courses that introduce students to drug literature or informatics. In such courses, educators can introduce reliable mobile applications and teach students how to properly assess information found in mobile applications and through other electronic resources. Integration of how to use mobile devices in clinical practices could be used in patient care management laboratories, where new technology could be demonstrated to show students how to use them in practice. While these are the first steps, further research needs to be conducted on how to best teach students proper methods and techniques to use mobile technology in their clinical activities and how to engage patients and other professionals through mobile communication while maintaining proper professionalism. By doing so, it may be possible to increase pharmacy’s future role in this field and foster a new level of engagement in a quickly developing market that will impact everyone involved in the medical field.

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REFERENCES