Mobile Apps and Neurosurgery

LETTER:

We thank Maugeri and colleagues for their interest in our review of Italy’s iconic contributions to neurosurgery during the Renaissance. The authors discuss the process of learning under the apprenticeship of experienced anatomists and dissectors that prevailed during the time of Renaissance and meticulously contrast these traditional mass teaching methods occurring in large theaters with modern-day practices. The restraints of the primitive teaching methods such as the “intrinsic distance” between the demonstrator and the observers and its limitation on a global outreach are well depicted. We commend the authors for sharing their experience with diligent use of a live video streaming application, Periscope (Twitter Inc., San Francisco, California), in sharing knowledge-based information to support their proposition of using scientific technology in closing the gap between the surgeon and students while being able to witness the intraoperative procedure in real time. Other pertinent uses of the application, such as its compatibility in integrating with diverse interfaces or social media such as Twitter, as a forum for live interaction using instant messaging, and its easy accessibility, are well outlined.

Like Maugeri and colleagues, Thapa et al. report their experience with the Viber app as an effective and economic mode of communication in clinical neurosurgery. The authors show the usefulness of the Viber app in a neurosurgical emergency setting in enabling a remotely located off-duty consultant neurosurgeon to guide on-duty residents in decision making via receiving neouroimaging of complex cases across Viber. The revolutionary evolution witnessed in the digital world and exponential growth in mobile computing devices, with modicum conviction, has enhanced communication and accessibility of information. Several applications exists that offer similar features to Viber, if not more. The adoption of mobile technology and applications has occurred across all specialties of medicine. Nonetheless, guidelines regulating their use in clinical practice are limited or not widely known.

Although we agree with Maugeri et al. about the usefulness of Periscope in aiding the learning process, we encourage precautionary measures complying with the Health Insurance Portability and Accountability Act (HIPAA). There are concerns over the use of mobile applications in sharing critical protected health care information (PHI). The Federal Working Group outlines the possibility of HIPAA violation by health care providers even while communicating using mobile devices with their patients. The Department of Health and Human Services Office of Civil Rights reported that between 2009 and 2011, 116 of over 500 incidents in data breaches resulted from loss or theft of mobile device. This inadvertently exposed PHI of over 1.9 million patients. Although several mobile apps have been depicted as HIPAA compliant for physician communication, the mechanism of encryption is often debated. Therefore, appropriate administrative, technical, and physical measures to safeguard PHI in mobile devices are recommended. In view of stringent compliance with HIPAA policies to safeguard PHI, we appreciate the efforts by Maugeri et al. to educate residents and younger surgeons using Periscope.

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