

Letter To The Editor

Smartphone Apps for Orthopaedic Surgeons

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To The Editor

We read with interest the article “Smartphone apps for Orthopaedic Surgeons” by Franko in the July 2011 issue of *CORR*® [5]. We welcome any technology that would augment surgical training and lead to prudent use of time and resources, and even more so in the UK health system. The introduction of the European Working Time Directive [2] has meant shortening of total time spent in training.

Although Franko reported that there are few specific highly ranked orthopaedic apps available [5], we think there are numerous applications that may be used to meet the needs of an orthopaedic trainee.

Anatomy is the fundamental basis of surgery, and titles such as *Grays Anatomy for Students* [3], *Instant Anatomy* [11], *Netter’s Atlas of Human Anatomy* [8], and others are available as apps in various formats such as flashcards, three-dimensional animation, quizzes, video lectures, and podcasts. *Pastest* (PasTest Ltd., Knutsford, Cheshire, United Kingdom) also produces a handy revision application that allows access to question banks and podcasts via the smartphone or iPad (Apple Inc, Cupertino, CA), but it requires an existing subscription.

(Re: Franko OI. Smartphone apps for orthopaedic surgeons. *Clin Orthop Relat Res*. 2011;469:2042–2048)

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AO Surgery Reference (AO Foundation, Davos, Switzerland) is a free comprehensive trauma application. It discusses fracture diagnosis, classification, management of the fracture and the surgical approach to the area in question. The app also explains the evidence basis behind management options. *Campbell’s Operative Orthopaedics* [1] also has an app that includes images and videos for 242 trauma and elective procedures. *CORE* (Clinically Relevant Technologies, Philadelphia, PA, USA) is a clinical examination application that uses images, video, and text to show techniques and diagnostic tests and is ideal for clinical examinations and revision. *Surgical Instrument* app (DD Surgical LLC, Allentown, PA, USA) teaches commonly used surgical instruments via a game. Furthermore the popular resource *Orthobullets* [9], which has comprehensive information for trauma, elective subspecialties, anatomy, physiology, pathology, and an extensive question bank, is aimed at senior trainees preparing for postgraduate examinations. *Orthobullets* is free and has a mobile version of its desktop site and is in the process of developing an app.

The Kindle app (Amazon Mobile LLC, Seattle, WA, USA) allows many books available on Amazon to be available as ebooks on a smartphone or tablet device. Thus popular titles such as *Review of Orthopaedics* [7], *Netter’s Concise Orthopaedic Anatomy* [10], and other books that do not have apps are available on your smartphone.

Other useful applications include the *Oxford Handbook of Clinical Surgery* [6] and the *British National Formulary* (MedHand International AB, London, UK) which are useful in perioperative and postoperative management of patients, especially for junior doctors. *The Journal of Bone and Joint Surgery* and many other journals are available as apps, which are useful at numerous levels, but often require a subscription, but provide free abstracts.

The eLogbook [4] is an integral part of British surgical training, and Mobile eLogbook app (NRIT LTD, Gravesend, Kent, United Kingdom) that can be used to store and upload operation data to this website is available. Other functions of a smartphone include internet connectivity, email, calculator, camera, voice recording and dictation, and calendar can facilitate organization, administration, and communication between professionals. Many smartphones also can store policies and procedures specific to one's local hospital.

Finally, the use of certain apps and functions of smartphones can be fraught with danger regarding medicolegal and ethical issues. The Mobile eLogbook is one such app that stores patient data such as hospital number, age, sex, date of birth, and operative details. The app has enhanced security in place for users to be sure that patient confidentiality and data are protected.

Other functions of a smartphone such as the use of the camera, video, and email have the propensity to breach patient data and confidentiality. Thus, surgeons must remain vigilant as power comes with responsibility, and patient confidentiality and data, and the surgeon's integrity and professionalism must be safeguarded when using new technologies.

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