

# LETTER TO THE EDITOR



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## The use of smartphones or tablets in surgery. What are the limits?

*Dear Sir*

the wider use of smartphones/tablet in medical practice is contributing to change healthcare delivery, and the new term m-Health (mobile health) is used to describe the mobile telecommunication, medical sensor technologies for the delivery of healthcare<sup>1</sup>. Such form of communication is faster becoming a routine component of the complex health care delivery because the multifactorial evident advantages for patients, resident, consultant, hospital management, and family life<sup>2,3</sup>. From our point of view we need a more deep insight to clarify the value of this new technology in a surgical unit.

High resolution devices such as tablet computers and smartphones enhance clinical care, playing an increasingly important clinical role involving surgeon/physicians, patients, and residents. For example, because image files (x-rays, CT-scan, angiography etc.) can be included in the message, the consultant can see the images in few seconds from home or where she/he is, and consequently medical opinions can be delivered to the resident without hesitation and without needing to reach the hospital<sup>4</sup>.

The m-Health comes also to help those units with shortage of doctors, who often live a poor quality of life because they spend most of their free time in hospital to follow patients, and because the enormous numbers of on calls. When on call, a surgeon (every doctor on call) could see postoperative images chest-x-rays on their tablet computer from home or where she/he is, and after reviewing the chest-x-rays the surgeon can decide to go the hospital to have more information or perform a surgical procedure on patients.

Another important advantage is the possibility to give quick clinical advices to colleagues in remote hospitals where there is not a thoracic service. In such circumstances it is possible to give surgical opinion seeing the CT scan images forwarded to the specialist's tablet.

One more useful use of mobile technology is the possibility to insert a devoted "app" (application) which permits delivering critical patient information including virtual real-time waveform data to remotely monitor.

Informations can go directly from the patient's place to a doctor's mobile tool so patients can avoid traveling to hospitals. Such "apps" are on a regular basis reviewed on iMedicalApp.com, and have been used to help patients understand what procedure are being proposed, and post-operatively to include Surgical Logbook (5). Moreover it is important to recognize the palpable value of instant messaging service (such as a group created with known application such as "whatsApp") applications to simultaneously inform all components of the team regarding the clinical situation and decision taken about every single patient in the unit<sup>5</sup>. Since 3 years, this form of communication is routinely used in our unit with great benefit for patients, and the entire team<sup>2,4</sup>.

Although the reported several advantages of using smartphone/tablet in healthcare (4,6), several limitations of using E-health technology could arise (7). The first is that the use of this form of communication could change human and professional relationship between colleagues, and between doctors and patients. The second is the possible challenge to patient privacy, and consequently medico-legal issues could arise.

Moreover, it is probably better using this form of technology between doctors and residents than doctors and patients because the most important obstacles to widespread adoption are potentially difficult clinical communications between patients and doctors which can flow in patient harm. Ethic imposes a face to face relationship to fully understand patient's wishes and to fully explain our surgical decisions. A prospective well designed trial is necessary to confirm or not the advantages of using smartphones or tablets to communicate between physician and patients.

Finally, although smartphones and tablet computers and applications for these computers are proliferating, and surgeons need to remain up-to date for the benefit of our patients, an ethical vision is necessary to balance the advancement of "cold" technology in healthcare.

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