



Ethics of Smartphone Usage for Medical Image Sharing

Alexander Zargaran¹ · Javier Ash² · Georgina Kerry³ · Dara Rasasingam² · Shyam Gokani² · Aaina Mittal² · David Zargaran⁴

Received: 18 July 2017 / Accepted: 22 November 2017 / Published online: 28 November 2017
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Abstract

Technology advances in medicine have led to increased usage of smartphones and applications in facilitating provision of care. As the increased power of technology paves the way for advances, it is fundamental that ethical considerations are comprehensively explored. This paper explores the importance of consent, confidentiality, and data security in use of smartphone applications for transferring medical information.

Keywords Smartphones · Ethics · Applications · Consent · Confidentiality

Letter:

In 2016, there were 2.1 billion smartphone users worldwide, with this number projected to exceed 2.8 billion by 2020 [1]. Arunagiri et al. [2] provide an interesting insight into the perceptions of medical practitioners working in India, correctly postulating that smartphones can revolutionize the delivery of healthcare. It is encouraging that the power of technology is being leveraged to improve quality of care through opinion sharing. However, as technology advances pave the way for new mechanisms of care delivery, it is fundamental that ethical considerations are comprehensively explored. For simplicity, this ethical dilemma can be divided into three major categories, between which there is significant interplay: consent, confidentiality, and data security.

Informed consent and confidentiality underpin the doctor-patient relationship, upon which much of modern medicine relies. The authors report that well over half of the doctors in the study did not gain consent to share medical records through smartphone applications. However, there are certain circumstances, including emergency situations, where

doctors must instead act in the best interests of their patient, and it would be interesting to see the original survey questions and whether this scenario was caveated. Consent typically covers details of the procedure, risks, and benefits among other things, and it is interesting to note that nearly 10% of medical practitioners in the study responded yes to “do not know what is encryption” [2]. This suggests an incomplete understanding on the medical practitioner side about the extent of the risks of sharing unencrypted information, highlighting a need for additional training about these risks before seeking consent.

Confidentiality of medical information is typically a proviso for informed consent yet the authors do not consider confidentiality of data shared. It would be interesting to explore how many of the 207 medical practitioners involved in the study shared patient identifiable information, breaching confidentiality. This should be a core consideration for the authors in weighing up the ethical case for smartphone usage.

Finally, the authors consider the case for data security, with 86.52% of medical practitioners that did not share patient details in smartphone applications, preferring to do so if there was “end data encryption.” Data encryption is an important aspect of data security but there are other vital considerations that need to be explored. For example, do doctors keep patient identifiable information on their smartphones, which they then take offsite. This presents a new dimension with respect to security, as this data may be backed up onto their personal cloud accounts and their smartphones may be misplaced, bringing into question what level of security medical practitioners employ to mitigate this risk. Hospital-provided

✉ Alexander Zargaran
M1301157@sgul.ac.uk

¹ St. George's, University of London, London, UK

² Imperial College London, Faculty of Medicine, London, UK

³ Chelsea and Westminster Hospital NHS Foundation Trust, London, UK

⁴ Imperial College Healthcare NHS Trust, London, UK

smartphones, with approved application encryption, that are not taken offsite may solve this issue.

With advancing technological innovations, it is highly likely that smartphone usage will be increasingly used to facilitate medical work, rendering it increasingly important to safeguard information shared. The authors raise interesting issues, and with the further considerations suggested, this offers a platform for future scoping of smartphone application perceptions and usage among medical professionals.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

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