



# Indian Journal of Ophthalmology

## HIGHLIGHTS

Outsmarted by the smartphone!

Factors affecting treatment  
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Changes in choroidal thickness  
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## Outsmarted by the smartphone!

Most of us not only use smartphones to make phone calls and send text messages but we seem to have also become slaves to this ubiquitous device by making it the sole portal through which we conduct all our social interaction: both real and virtual. As literature shows, smartphones have found uses in patient assessment, patient education, record keeping, as a reference tool and not to mention using the phone camera to obtain anterior segment and fundus photographs.<sup>[1-3]</sup>

Any list enumerating the uses of mobile phones among doctors would be incomplete without mentioning “WhatsApp.” It is an instant messaging platform for smartphones that uses the Internet to send text messages, images, video, user location and audio media messages to other users of WhatsApp. The use of WhatsApp within a closed group of colleagues working in the same hospital has been found to be useful in swifter and efficient handovers and WhatsApp as an intradepartmental communication tool can bring about an improvement in patient-related awareness, communication and handovers among residents according to one study.<sup>[4]</sup>

Now, all of us are participants in many such groups: childhood acquaintances, medical college alumni groups, ophthalmology colleagues and specialty groups. An increasing trend that the authors have noted from personal experiences is the use of these groups to share information regarding patients and diseases. We must remember that sharing clinical data – clinical information, external photographs, radiological images and other patient data through which the identity of the patient may be revealed could be considered as a breach of patient–doctor confidentiality if consent is not obtained. Previously, when faced with a vexing case, one would refer the patient to a colleague or present the case at a clinical meeting/conference where one could get a different perspective on it from experts and perhaps a solution. However now, thanks to WhatsApp, a second opinion is literally just seconds away. Images and clinical information are shared in an instant. While the identity of the patient may not be revealed through slit lamp images or fundus photographs; in the case of periocular trauma, oculoplastic disorders – it is a completely different story. And looking beyond ophthalmology, this subject is relevant for practitioners of other specialties as well. This, we believe, is a serious issue that could snowball into a medicolegal nightmare for medical practitioners across all specialties in India. There are a few issues worth pondering over:

- The data sent over the Internet are not encrypted and can be accessed by anyone skilled enough to seek it. Recently introduced “end-to-end” encryption is only available on the Android platform and is available only when the message is sent to a single recipient and not in multi-recipient group messages<sup>[4,5]</sup>
- Most patients consent to have their clinical photographs taken during the examination. However, none of the consent forms explicitly seek the patient’s permission to allow the transmission of their images over the Internet to other medical professionals. This transmission is irreversible and the images, once transmitted are permanently stored in the archives of the recipients – the further usage of which, the original sender has no control over. Any recipient who views the photograph on WhatsApp can easily download it and use it in a presentation, publication, or any other similar platform; not only flouting the tenets of ethical practice but also stealing intellectual property. At present, there is nothing to prevent anyone from doing so. And what if the data are sent unintentionally to the wrong number or an unintended recipient?
- Patients too take the liberty of sending photographs to the doctor, seeking an opinion, or advice regarding further plan of action or simply as a way of following up. There is no ambiguity: “Online consult” or “teleconsultation” is no substitute for a clinical examination. Responding to such patient interaction and giving clinical advice legitimizes this mode of correspondence and should be forbidden, especially if the doctor has previously not examined the patient. While doctors may choose to respond to such communication at their own peril, should something go awry as a result of “tele-advice,” there is no safety-net for the medical practitioner to fall back on. How does one escape this? Only essential advice only in case of an emergency with a caveat? Or perhaps is abstinence indeed the best form of protection in this case?
- National Health Service England pointed out certain issues with the clinical use of instant messaging and directed that it never be used for clinical information exchange because of lack of relevant data security certification.<sup>[5,6]</sup> WhatsApp also violates both Dutch and Canadian copyright laws and has been accused of violating international copyright law too. In the United States, the Health Insurance Portability and Accountability Act (HIPAA) protects and secures confidential healthcare information. WhatsApp does not meet the standards required for transfer of clinical data within the United States in accordance with HIPAA. Therefore, it is evident that globally the use of WhatsApp as a means of transmission of patient information is not only frowned upon but also is considered illegal.<sup>[5]</sup>

### So Where Do We Stand on This in India?

As of today, there is no authoritative or legal framework in India to help doctors and patients on e-consultations. Aspects such as patient-confidentiality, security and intellectual property need to be specifically addressed. This becomes more relevant when more of us are shifting to electronic medical record systems and cloud computing. The Union Ministry of Health and Family Welfare has issued a concept note for a proposed National e-Health Authority, which states that the authority would monitor and standardize among other things, the use of mobile technology in healthcare.<sup>[7]</sup> Hopefully, in the days to come, healthcare

providers and stakeholders in the healthcare governance sector will overcome the resistance to change and soon there will be more clarity regarding the guidelines and legality of this potentially vexing issue.<sup>[8]</sup>

In the past, WhatsApp may have shown that it can play a vital role in transmitting medical information and images in resource-limited situations.<sup>[9]</sup> While the intentions in most cases are noble and better patient care is what most clinicians have in mind when they share such data among peers; there are pitfalls in doing so with no legal framework in place, nor any secure, standard platform to enable such communication.<sup>[10]</sup> Until such a time, let's be vigilant, cautious and above all ethical in our practice and communications, lest our own little smartphones outsmart us!

**Sundaram Natarajan, Akshay Gopinathan Nair<sup>1</sup>**

Editor, Indian Journal of Ophthalmology, Chairman, Managing Director, Aditya Jyot Eye Hospital Pvt. Ltd., Wadala (W), Mumbai,  
<sup>1</sup>Ophthalmic Plastic Surgery and Ocular Oncology Services, Advanced Eye Hospital and Institute, Navi Mumbai, Maharashtra, India.  
 E-mail: editorjournal@aios.org, akshaygn@gmail.com

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