UK doctors and nurses routinely using own smartphones for patient care

Practice raises prospect of inadvertent privacy breaches in absence of digital security policy

UK doctors and nurses are routinely using their own smartphones—including apps and messaging systems—for patient care, reveals a survey of frontline staff, published in the online journal BMJ Innovations.

But the current lack of data encryption could result in the inadvertent disclosure of "highly sensitive and confidential data" in the absence of an active organisational strategy on digital security, suggest the researchers.

Almost three out of four of the UK population own a smartphone, while around one in four owns a tablet. And there are more than 90 000 mobile health apps available. By 2017, an estimated 3.4 billion people worldwide will own a smartphone, half of whom will be using a mobile health app, the evidence suggests.

To find out how healthcare professionals are using digital technology on the frontline, the researchers invited more than 6000 clinical staff at five different hospitals of varying sizes in London to complete a questionnaire on ownership and use of portable devices and mobile health apps in the workplace.

The results are based on the responses of 287 doctors and 564 nurses from different specialties.

Virtually all the doctors (99%) owned a smartphone, and almost three out of four (73.5%) said they owned a tablet. The equivalent figures for nurses were 95% and just under 65%, respectively.

When asked about the usefulness of smartphones for carrying out clinical duties, more than 92% of doctors and over half (53%) of the nurses stated these were 'very useful' or 'useful.'

Most (94%) of the doctors used their smartphone while at work to communicate with their colleagues, compared with under a third of nurses (28.5%). Half the doctors used their smartphone instead of a traditional bleep.

Almost eight out of 10 of the doctors (78%) and just over a third of nurses (35%) had downloaded a medical app to their device, with almost 90% of the doctors and two thirds of nurses saying that they used these apps as part of their clinical work.

One in three of the doctors who owned an app used them daily, compared with around one in five (22%) nurses. The apps included drug formularies, medical calculators, and those for disease diagnosis and treatment, reference and education, documentation and drug preparation.

When asked if they had ever sent patient data over their smartphones using SMS (short message script), app based messaging, such as WhatsApp, and picture messaging using their smartphone camera, many respondents said they had done so.

Almost two thirds of the doctors had used SMS (65%); a third had used app based messaging; and almost half (46%) had used their phone’s camera and picture messaging to send a photo of a wound or x-ray to a colleague.

The corresponding figures for nurses were much lower—around 14%, 6%, and 7.5%, respectively.

Doctors were significantly more likely to send clinical patient data using all these methods, and one in four (27.5%) of the doctors believed they still retained clinical information on their smartphones.

A substantial proportion of respondents wanted to be able to use their own devices at work. And many (70%) of the doctors and over a third (37%) of nurses wanted a secure means of sending patient data to colleagues using their own smartphone.

Fully secure messaging services for smartphones are not yet available in the UK, added to which the data are unlikely to be encrypted, say the researchers. And they urge NHS organisations to make sure their staff understand the potential risks of sharing patient information via their unsecured smartphones.

"The results provide strong evidence that healthcare organisations need to develop policies to support the safe and secure use of digital technologies in the workplace and that strategies are needed to secure further innovations in digital health," they conclude.