

Impact of Smartphone Usage amongst Psychiatry NCHDs

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Abstract

Aim

To investigate trends of smartphone use on work practices of psychiatry NCHDs, as well as associated impact on patient safety and staff wellbeing.

Methods

A 21-item questionnaire was disseminated to psychiatry NCHDs working Ireland via WhatsApp messaging platform, with 63 respondents. The survey initially assessed respondent demographics, with the second part of the survey focused on whether respondents were provided with a work phone. Only respondents who indicated that they were not provided with a work phone were then asked further questions about their mobile phone usage at work.

Results

N=63 total, n=35 not provided with a work phone. n=27 had their personal number listed in a work directory. N=13 were contacted by patients/relatives on their personal phone during working hours, n = 6 were contacted out of hours. n = 32 were contacted by a colleague outside of working hours. n=30 were unaware of GDPR-compliant communication using smart phones. n = 44 believed every NCHD should be provided with a work phone by employer.

Discussion/Conclusion

The widespread use of personal smartphone use has great consequences for patient data safety breaches. Poor digital hygiene practices appeared common, resulting in staff personal information being widely available, as well as inappropriate communication with off-duty staff.

Introduction

The use of smartphones has revolutionised the modern approach to work, and this has filtered down to the practice of medicine. Smartphones are ubiquitous in healthcare settings and have allowed for improved communication and knowledge availability.^{1,3,4,5}

With increasing smartphone use both personally and professionally, this raises concerns around the overlap of these spheres. There are blurred boundaries between personal and professional use of mobile phones as a communication tool in healthcare settings. Non-consultant hospital doctors (NCHDs) become more instantly available to all members of a multi-disciplinary team, this presents challenges in relation to the data of employees themselves. More importantly, communication of patient data on a doctor's personal phone presents a grave concern over security of patient data and good clinical practice.²

These developments have occurred against the backdrop of the General Data Protection Regulation (GDPR). GDPR was introduced in 2018 and standardised data protection law across all EU member states. This legislation ensures that professional organisations must handle citizen data in a way that is respectful to their right to privacy. The implication of this legislation has meant that hospitals and healthcare settings must process patient data in a way that is clearly defined, safe and secure; with breaches of this legislation leaving offending bodies open to sanction.

Overarching the now common use of smartphone use in modern world is the previously documented impacts such technology can have on the mental health of populations.¹⁰

As healthcare provision increasingly relies on digital communication, there are significant associated financial costs. The aim of this study is to seek views on usage of mobile phones for work-related purposes amongst NCHDs working in Psychiatry with hope to help inform individual local guidelines development and provision of device or technology to ensure safe and communication amongst health professionals in keeping with GDPR compliance.

Methods

This 21-items survey questionnaire contains four sections. The first section explored the NCHDs demographics. Second section of the survey looked at preference of having a separate work and personal phone and provision of work phone. Only NCHDs who were not provided with work phone answered detailed questions on personal phone use for work. The last section was open to all respondents looking at respondents' opinion about GDPR compliance, phone security and provision of a work phone by employer.

The survey was disseminated through WhatsApp group chat platform amongst NCHDs working in Psychiatry in Ireland. Descriptive statistics reported frequency and proportion data based on the quantitative survey items. Data was analysed using the survey tool, Survey Monkey and no statistical comparisons were done. This survey was given the Galway Clinical Research Ethics Committee chairman's ethical approval.

Results

This cross-sectional, self-report survey was completed by n = 63 respondents. Table 1 outlines the demographic detail of all respondents. Figure 2 shows the various methods of communication on personal phones for work purposes.

There were n = 35 respondents who were not provided with a work mobile phone. Majority (n = 33 of 35, 94.29%) of respondents who were not provided with a work mobile phone reported use of personal smartphone which are protected by either password, thumbprint, or facial recognition features. Of these 33 respondents, n = 32 (96.97%) reported that their employer contributed nothing toward the expenses incurred from using personal phone for work purposes. Over three quarters (n = 27 of 33, 81.82%) respondents reported that their personal phone number was listed in a work directory list.

Over a third (n = 13 of 33, 39.39%) of respondents relayed that they had been contacted by patients or relatives on their personal phone during working hours and under a quarter (n = 6 of 33, 18.18%) had been contacted by patients or relatives outside working hours. Almost all of respondents (n = 32 of 33; 96.8%) reported being contacted by a colleague in relation to a work matter outside of working hours.

There were 50 responses in the opinion section of the survey. Of these, n=20, 40% were aware of GDPR-compliant mode of communication using smart phone and n= 30, 60% respondents were unaware. There was an 88% preponderance (n= 40 of 50) amongst respondents considered encryption an essential security feature on a smartphone. More than half, n = 44 respondents were of the opinion that every NCHD should be provided with a work phone by respective employer.

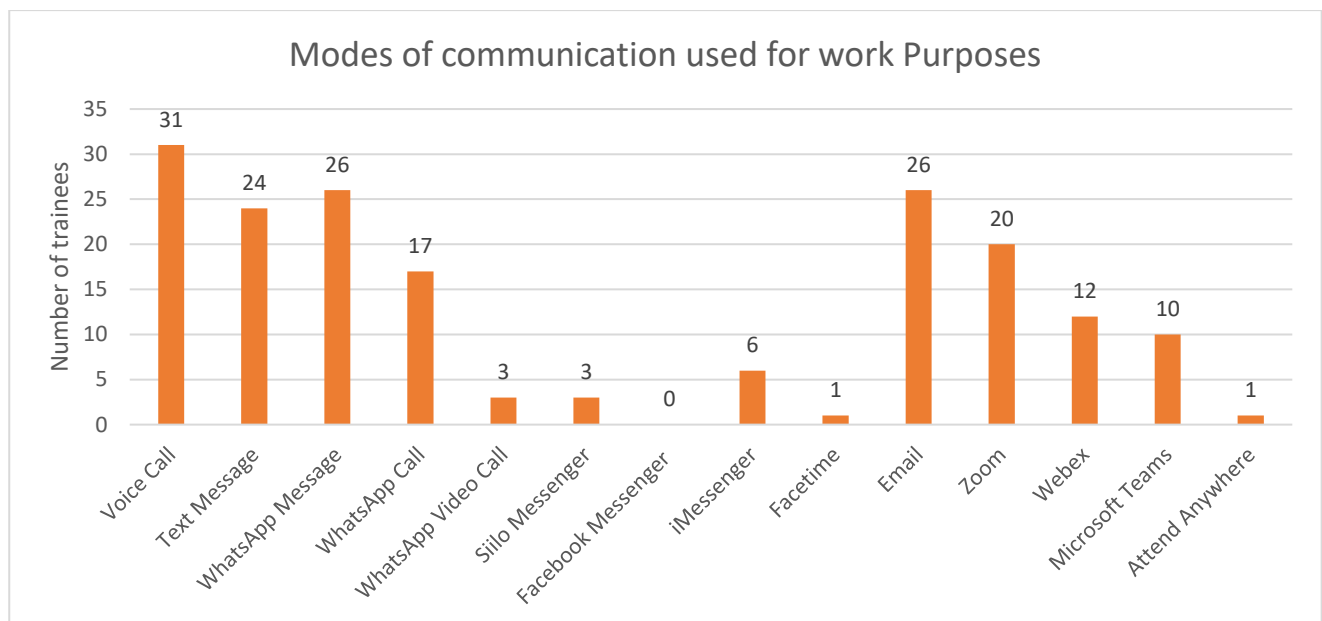
Table 1

Variables		N (%)
Gender	Male	26 (41.27%)
	Female	37 (58.73%)
Age	25 – 30	17 (26.98%)
	31 – 35	23 (36.51%)
	36 – 40	14 (22.22%)
	41 – 45	2 (3.17%)
	46 – 55	4 (6.35%)
	Over 55	3 (4.76%)
Current Grade	Intern	0 (0.00%)

	Senior House Officer	12 (19.05%)
	Registrar	19 (30.16%)
	Senior Registrar	31 (49.21%)
	Other (please specify)	1 (1.59%) Research Fellow
Training Scheme	Psychiatry BST	20 (31.75%)
	Psychiatry HST	29 (46.03%)
	GP Training Scheme	3 (4.76%)
	Other (please specify)	11 (17.46%) <ul style="list-style-type: none"> ● 8 Not in training ● 1 Military medicine ● 1 Locum ● 1 Stand-alone post
Medical Degree	Irish Medical School	47 (74.60%)
	International Medical School	16 (25.40%)
Number of years since graduate medical school	< 2 years ago	1 (1.59%)
	2 - 5 years ago	20 (31.75%)
	6 - 10 years ago	27 (42.86%)
	11 - 15 years ago	8 (12.70%)
	Over 15 years ago	7 (11.11%)

Demographic details of survey respondents

Figure 2



Outline of different communication pathways used amongst NCHDs

Discussion

While we note that a significant minority of NCHDs were provided with a work phone, the majority were not provided with such equipment. Furthermore, only one respondent not provided with a work phone had the expenses incurred from work related phone usage paid for by their employer.

Concerningly, over 80% of NCHDs contacted report that their personal mobile number is available on a public work directory. This is alarming as it raises a clear potential breach of personal privacy and could lead to harassment of doctors by staff or patients.

The huge majority of NCHDs contacted by staff outside of working hours raises concerns on the ability of doctors to adequately rest and decompress outside of rostered shifts. This is a potential cause of annoyance, reduced work effectiveness and burnout among clinical staff.

The fact that nearly 1 in 5 NCHDs have been contacted out of working hours by a patient or family member is troubling and raises many questions about hospital policies around the proper safeguarding of staff data.

It is noted that a majority of doctors feel that a work smartphone should be provided by the employer to all NCHDs. This reflects the drastic change in work practices over the last 10 years, and the significant costs associated with this. By providing work phones, this will minimise the chance of patient data being shared via personal social media channels, thereby strengthening data security.

There is a dual benefit to this proposal as it separates personal and professional spheres. By having a personal and work phone, doctors can turn off their work phone outside rostered hours and thereby eliminate inappropriate phone calls and reduce stress.

This principal was honoured by the Irish government in 2021, when the *Right to Disconnect* was included in a new code of practice for Irish workers. One of the pillars of this code of practice is the “duty to respect another’s right to disconnect – for example not routinely calling or emailing them outside of work hours.”⁶ There is not currently a European framework on the right to disconnect, however this is indirectly referred to in the European Working Time Directive (EWTD), which outlines the minimum daily and weekly rest periods required to maintain employee safety.⁷

Finally, there remains a widespread use of communication media amongst NCHDs that does not comply with data protection law. The communication has sector has adjusted to this need with the development of secure messaging apps specifically designed with healthcare practice in mind. One such example is the Siilo messaging app which is GDPR compliant and adheres to international data privacy regulations around the world.⁸ It also allows for secure exchange of messages, images and voice calls with end-to-end encryption, and access to the app is pin code protected.⁹ Furthermore, any data transferred via Siilo is retained within the app and is not stored in general photo libraries, as with other secure messaging apps – thus reducing the risk of accidental data transmission.⁹ Siilo also allows users to set an “out of office” reply for when staff are not in work, thereby reducing inappropriate communication outside work hours.⁹

As a comparison, a recent 2019 survey of 500 office workers found that the majority were working on company provided laptops, tablets and smartphones.¹¹ This evidences a desire on behalf of private companies to protect sensitive data breaches, and a recognition on their part of the role that personal phone usage can play in this.

While there has been a rapid development in the role of smartphone use over recent years, it appears that work practices and employer responsibility has not yet evolved at the same rate. This has led to considerable disconnect between a junior doctor’s day to day expenses and privacy, while also identifying a potential data breach of patient details. We recommend that employers and hospital groups make providing work phones to junior doctors a priority to improve employee morale and expenses, while also protecting patient data more rigorously.

We would urge government in Ireland to provide work phones to all employees handling clinical data in order to protect against breaches. Furthermore, the provision of such equipment would allow staff to appropriately disconnect from work outside working hours, thereby increasing morale, productivity and job satisfaction, while protecting against burnout.

Declaration of Interest:

The authors have no conflicts of interest to declare.

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