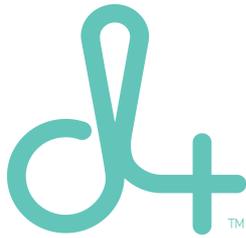


December 2010



A survey of mobile phone usage by health professionals in the UK



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Executive Summary

Introduction

Mobile phones have been shown to improve patient care and their use in a clinical environment is becoming more widely accepted. Poor communication is a significant waste of clinician time and healthcare resources. Few studies have quantified the use of mobile phones for communication by health professionals in the UK.

Methodology

d4 carried out an online survey inviting health professionals to state both their usage of, and attitudes to, mobile phones in the work place. Respondents were approached via email and the internet over 6 weeks during August and September 2010. We received 474 complete responses from registered health professionals. [Alternative editions are available that segment this into (i) 161 GMC registered doctors, (ii) 223 NMC registered nurses and midwives and (iii) 76 registered allied health professionals.]

Results

- 99% of registered health professionals surveyed use a mobile phone
- 81% use a smart phones (phoned enabled for internet or email use)
- 80% of registered health professionals surveyed carry a mobile phone while at work
 - 82% use a mobile phone for communicating with colleagues
 - 46% for accessing information on the intranet/internet
 - 18% for running work related software/applications
 - 18% for communicating with patients
- Even though
 - Only 8% of health professionals who incur a work related expense receive compensation for the cost incurred
 - 25% believe their employer does not allow mobile phone use at work
- Of the remaining 20% who do not carry a mobile phone at work
 - 92% stated that they would use one for a work related purpose if provided
- Across all registered health professionals surveyed
 - 16% disagreed with the statement: “I would be more productive if I had a mobile phone for use at work”

Conclusion

Mobile phone usage by registered health professionals for work related purposes is significant, despite the potential barriers of economics and policy. More should be done to improve clinical communication using mobile technology in order to improve patient care, raise productivity and maximise economic resources.

Foreword

Love them or loathe them, mobile phones are a feature of modern life. Almost every adult in the UK has one, and is familiar with their use as a portable telephone and two-way pager via SMS. From when we wake until we fall asleep, the mobile is, for many of us, always within arm's reach.

The lexicon is evolving alongside the technology. In developed markets, the term "mobile phone" is ceding ground to "smart phone", a hybrid device that boasts components and functionality more closely resembling a computer than a telephone.

This combination of both physical proximity and digital capability means that we are increasingly able to work anywhere, anytime. This is particularly important for professionals who are constantly on the move and rarely have the opportunity to sit down in front of a desk with a networked computer and/or a landline telephone.

The need for good communication in such an inherently mobile and highly complex industry as healthcare, where addressing patient needs is paramount, is perhaps unparalleled. Yet our survey shows that the provision of mobile devices to health professionals by employers is very low.

Fortunately for patients, our survey suggests that a high proportion of health professionals are bridging the gap left by their employer and are supporting their duties by carrying their own mobile at work. We applaud this pragmatic and selfless solution to a perceived system failure, particularly given negative employer attitudes to the

use of mobile devices in the workplace as reported by some survey participants.

The costs incurred by health professionals using their own mobiles for work purposes are not insignificant however. Based on our survey data, d4 estimate these out of pocket expenses, currently absorbed by UK health professionals, are as much as £100 million per year.

The lack of financial support for mobile phone usage by UK health professionals is difficult to understand when one considers the cost of poor communication within the healthcare system. Leveraging US research published this year, d4 estimate that poor communication costs NHS hospitals in England alone in excess of £1 billion¹, using conservative figures for wasted doctor time, wasted nurse time, and patients remaining in hospital beds for longer than necessary. The full social impact is likely to be a magnitude higher.

Alternatively consider this: the cost of a patient bed day is estimated at £400 and up. This is comparable to the total cost of ownership for a smart phone *for an entire year*. So, if a smart phone saves one patient bed day per year, it has immediately paid for itself.

d4 was founded to address a number of concerns in response to these observations. We believe health professionals should receive more support while the supply of modern technology by their employers fails to meet their needs.

At present, the majority of health professionals are purchasing mobile technology through standard retail

¹ <http://blog.d4.org.uk/2010/09/inefficient-communication-a-1bn-problem-for-nhs-hospitals-in-england.html>

channels. We suggest this has the following drawbacks

1. By acting individually or in small groups, health professionals do not achieve the buying power that should come with belonging to one of the largest sectors in the UK workforce. Over 1.4million health professionals are listed on the nine statutory registers in the UK.
2. Network operators are unable to differentiate the needs of health professionals if they purchase through standard channels and therefore receive the same standard service as per any other retail customer, with limited access to any central service architecture typically deployed across large workforces.
3. Health professionals receive little support to aid their purchasing decisions given a specific use case they might have due to the nature of their work.
4. Despite using a mobile at work to support their duties, health professionals are rarely compensated for this usage. Further, the procurement of this technology is predominantly made from their post-tax income.

We want d4 to become a social enterprise at a national level, co-ordinating the significant existing personal expenditure on technology by health professionals to:

- Improve patient safety, care, and outcomes
- Reduce the cost of ownership for the individual
- Raise security awareness and compliance
- Support enhanced productivity and effectiveness
- Encourage greater use of mobile devices in the workplace

Instead of purchasing products and services as individuals from their post tax income to support their healthcare

work, health professionals will be invited to become members of d4 and receive benefits in return, leveraging group purchasing power and tax efficiencies. This will range from the provision of mobile devices (i.e. hardware), digital applications for their mobile devices (i.e. software) and supporting products and services according to an individual's needs.

Our goal is to be able to provide health professionals with mobile devices and key applications at prices that are better than they can achieve through typical retail channels. In parallel, we also want to support our members' use of this technology in a manner that recognises their professional status, e.g. bespoke, priority assistance from suppliers that differentiates health professionals from retail customers. Over time, we want to help our members further by providing additional good services as directed by them.

We are currently working hard to put all the necessary building blocks in place to make this a reality. This includes raising finance to fund the initial start-up, negotiating with suppliers to source the technology that health professionals currently use and to build the infrastructure for further growth and innovation. We are also working with the government and other stakeholders to ensure a sustainable future for d4.

This survey marks the beginning of the development of d4, by providing an evidence base of current mobile phone usage by health professionals. We hope you find this an interesting and informative document, and we welcome your feedback.



James Sherwin-Smith
Chief Executive, d4

Introduction

Mobile technology has the potential to transform the provision of healthcare in the UK. However looking beyond the hype that surrounds “mHealth” and its significance for society, we believe there should be a focus on the needs of health professionals, an area that is consistently over looked.

After all, if patients are to embrace the freedoms of having access to their own healthcare data to manage their treatment (see the recent consultation paper² “Liberating the NHS: An Information Revolution”), it is imperative that health professionals are suitably equipped at the point of care, and are therefore in a position to advise patients based on their own assessment and experience of the technology available.

The primary purpose of this survey was to establish a simple fact base of UK health professionals usage of, and attitudes to, mobile phone technology. Few studies have attempted to benchmark usage, despite evidence that suggests that this can deliver significant benefits for patients^{3,4} and that poor communication^{5,6} costs healthcare systems billions of pounds each year.

The key questions we wanted the survey to answer were:

1. Are mobile phones used by health professionals at work?
2. Which phones and networks do health professionals use and why?
3. For what purposes are mobile phones used by health professionals, and how often?
4. Are health professionals paying for work related mobile phones use and to what extent?
5. Is employer policy an inhibitor to mobile phone use by health professionals?
6. Do health professionals believe that mobile phones raise their productivity?

We believe this document will be useful for a variety of different audiences

- Health professionals and executives
- Organisations representing the interests of health professionals and patients
- Policy makers and regulators
- Healthcare employers, managers and governors
- Mobile devices manufacturers
- Mobile network operators
- Software developers
- Patients and the general public as a whole

² Department of Health (18 October 2010) retrieved from http://www.dh.gov.uk/en/Consultations/Liveconsultations/DH_120080 on 9 Dec 2010

³ Roy G Soto et al, “Communication in critical care environments: mobile telephones improve patient care,” *Anesthesia and Analgesia* 102, no. 2 (February 2006): 535-541.

⁴ K Fitzpatrick and E Vineski, “The role of cordless phones in improving patient care,” *Physician Assistant (American Academy of Physician Assistants)* 17, no. 6 (June 1993): 87-88, 92.

⁵ Ritu Agarwal, Daniel Z Sands, and Jorge Díaz Schneider, “Quantifying the economic impact of communication inefficiencies in U.S. hospitals,” *Journal of Healthcare Management / American College of Healthcare Executives* 55, no. 4 (August 2010): 265-281; discussion 281-282.

⁶ <http://www.hospitaldr.co.uk/blogs/dr-blogs/mobile-devices-offer-a-step-change-in-communication>

Methodology

The target group for this survey was registered health professionals in the UK.

Total responses:	639
Complete responses:	565
Valid responses:	474 registered health professionals
Specialties:	All specialties
Survey period:	6 weeks during August-September 2010
Method:	Online questionnaire
Survey type:	Multiple choice questions
Sampling:	Random, voluntary, anonymous

This was an independent survey funded by d4 (Devices 4 Limited) and devoid of commercial influence. The survey was designed and executed by d4, incorporating feedback from external advisers in both the healthcare and market research communities.

The chosen design was a balance of different requirements. The aim was to achieve appropriate coverage of the subject area via concise and efficient data capture, using a question set that delivers both insightful and reliable responses.

However mobile technology is a fast evolving field. The results of this survey are therefore subject to change over time. It is therefore the intention of d4 to repeat this survey on an ongoing basis.

Appendix 1: Sample characteristics

Sample size	474 registered health professionals
Gender	96 Male 158 Female 220 not disclosed
Location	397 England 7 Northern Ireland 33 Scotland 19 Wales 18 not disclosed
Professional Experience	252 0-5 years 66 6-10 years 55 11-20 years 55 21-30 years 35 30+ years 9.7 years average professional experience.

Appendix 2: Survey questions covered

1. What gender are you?
2. Which employment band (or nearest equivalent) are you?
3. Which regulatory body are you registered with?
4. Which year did/will you start working in health care?
5. Which Health Authority area do you work in predominantly?
6. Do you have a mobile phone?
7. What is the brand of your mobile phone handset?
8. What was your main reason for choosing this handset?
9. How did you receive your mobile phone?
10. Is your phone enabled for internet or email use?
11. Which mobile network operator do you have a phone with?
12. What was the main reason for choosing your network operator?
13. What type of deal do you have with the mobile network operator?
14. On average, how much do you spend on your mobile?
15. On average, how much of this is work related?
16. On average, what proportion of your bill do you claim back as a work related expense?
17. Do you carry a mobile phone while at work?
18. During a typical shift, how often would you use a mobile phone?
19. During a typical shift, what would you use your phone for? Please tick all that apply.
20. How is mobile phone usage viewed by your employer?
21. "I would be more productive if I had a mobile phone for use at work." How do you feel about this statement?

Order form

To order electronic copies of the d4 survey, please send this completed form to d4.

Nursing and Midwifery Edition	£200	<input type="checkbox"/>	2010-Survey-NMC
Medical Edition	£200	<input type="checkbox"/>	2010-Survey-GMC
Allied Health Professionals Edition	£200	<input type="checkbox"/>	2010-Survey-AHP
All Health Professionals Edition	£200	<input type="checkbox"/>	2010-Survey-ALL
Total	£		

Name

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Town

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Post code/Zip

Country

Payment card type

Card number

Card expiry date

Last 3 digits from the back

Name on card

Cardholder's address same as above? Yes No (If No, please complete the section below)

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Post code/Zip

Country

Data Protection: The details supplied will be used to process the payment and will not be passed on to any third party except for the sole purpose of facilitating this payment. Additionally, from time to time we may wish to contact you to update you on our work and activities. If you do not wish us to contact you, please tick here .

>> Please send completed form to d4 via Fax +44 845 686 3435 or Email research@d4.org.uk <<



d4 is a non-profit organisation that aims to improve patient care by placing modern technology in the hands of doctors, nurses and other health professionals.

Simply put, we believe that better communication means better care.

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Devices 4 Limited
Registered in England & Wales
Registered charity no. 1135435
Registered company no. 0711788.

Registered office: 275 Wandsworth Bridge Road, London, SW6 2TX

Tel: 0845 686 3434
Fax: 0845 686 3435
Email: info@d4.org.uk