



**The role of mobile phones  
in increasing accessibility and efficiency in healthcare**

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Good morning everybody.

This seminar is the culmination of a 12 month research programme by Imperial College London, NHS Direct, the Office of Health Economics Consulting and the University of Dundee.

I would like to thank all who have contributed and, in particular, the team here at Tanaka Business School who kindly host us this morning. Today's presentations and the accompanying report have been written by leading academics and researchers. It is their work and their views. We provide the platform and they write on the issues with a mobile telecommunications perspective in mind.

It is only within the last 5 years that mobile ownership has become the norm in Western Europe.

The rapid growth in mobile has been driven by the human demand for communications the convenience of being able to make or change arrangements at short notice or stay in touch when on the move. We have all forgotten how inconvenient life was before mobile phones. The benefits of mobile to the individual are obvious we have all experienced them. But what is more difficult is quantifying the potential productivity benefits in business and service industries alike.

This was the motivation behind our research.

Most people now own a mobile and it is often provided as a main point of contact.

But we may not yet have fully grasped the opportunities for the service sector both private and public to utilize mobile for ubiquitous, convenient, low-cost communications to the broad population. These opportunities only arise when we approach near-100% mobile phone penetration levels in a market. In Western Europe we are there now.

This report looks at the healthcare sector but I see the report more broadly than that, the insights can be extended to any customer-centric, communications-intensive business or service. In that sense the healthcare sector is an example of how mobile can improve more generally the efficiency of business and service sector communications. From a policy perspective, healthcare costs are becoming increasingly significant. In 1960 – average healthcare spend in today's 15 EU member states was approximately 4% of GDP. Today it is almost 10% and still rising.

This increasing spend is coupled with rising patient expectations. Health service financial deficits and rising costs are headline news prompting Governments to explore new methods of service delivery that drive efficiency and improve levels of service. We believe that mobile communications can contribute towards this goal and this research is the first that assesses its potential in a systematic way.

This morning I want to focus on the role of mobile phones in healthcare and in particular:

1. The characteristics of mobile;
2. The accessibility benefits created by mobile; and
3. The future role of mobile technology in healthcare delivery

Later you will see several examples of how mobile can improve efficiency and accessibility in the

<b>1. So... what is it about the characteristics of mobile that delivers these benefits?</b>
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Mobile is well suited to these needs.

In many ways it epitomizes the essential requirements for customer centric communications on health matters:

- Privacy;
- Confidentiality;
- Timeliness; and
- Direct personal communication.

The Mobile phone is a personal not a shared device.

It offers a more private means of communication than a fixed line phone and more immediate than a letter. In short mobile brings the patient and healthcare provider closer together.

The characteristics of messaging applications such as SMS enable patients to access and manage their healthcare more effectively. These applications are low cost, immediate and can be stored on a mobile phone and are widely accepted.

~~So mobile is suitable for use in healthcare but new technologies often exclude large segments of~~

## **2. How accessible is it? and**

### **Is it really appropriate as a primary means of communication?**

low income groups. The entry cost of mobile is low, the technology is simple and widely accepted and this has been central to its success. Mobile penetration is high in Western Europe but not all groups will have a mobile phone. Recent research by Ipsos MORI in the UK indicates that:

- Over 95% of people between 15 – 54 use a mobile phone whilst only 71% have access to the internet at home;

Mobile enables the young and working age group, those who are often busy, and on the move to have access to healthcare services at times most convenient to them.

Mobile is also being used by lower income and lower social groups:

- 78% of people where household income is less than £17,500 use a mobile whilst only 41% use the internet; and
- 78% of social class DE use a mobile whilst only 39% use the internet.

Groups that were previously hard to reach such as the young, low income and lower social class are using mobile.

It is this level of accessibility that makes mobile potentially so attractive for health service delivery.

We recognize that mobile is not the panacea for all challenges in the healthcare sector. It is not widely used in the over 65 age group where penetration is currently around 58% and SMS usage 16%. Its use may also be limited in areas such as geriatric care or in cases of serious mental health.

However, conversely the technology will be suitable in areas of the health service used by the young, busy and transient community. Consider ante-natal and post-natal for example. This is

### **3. But what about the future..... what will mobile offer in 5, 10, or 15 years time?**

developing quickly and the degree to which wireless will transform healthcare in the future depends on several factors.

- How will people respond to the technology?
- Will they accept it?
- Will they trust it?
- Will costs be low enough to enable widespread accessibility?

3G and future technologies will make many services possible. For the health sector this could mean:

- Remote video diagnosis; or
- Electronic monitoring that communicates your health details through your mobile phone.

Once basic applications in healthcare become accepted the potential is there for technological advances to deliver even more. But for the moment we are concerned with what is possible today.

We see other industries using mobile and developing new ways of accessing their customer base today:

- Garage owners send SMS to customers when they estimate tyres need replacing based on mileage assumptions made at the last service;
- High Street Banks allow customers to access their balance and other details via SMS;
- Airlines use SMS to update customers of flight arrivals or delays; and
- London cab drivers use a location based service that enables customers to call a number and be automatically connected to the cab nearest their location.

These services are based on the advantages that can be derived by *better, more efficient, personalized* communications *through mobile*. The benefits described in the research are based on the same concept they are not based on future technologies. They can be realized today.

Our report focuses largely on healthcare in the developed world but we should not conclude that mobile is not relevant to the developing world as well. Indeed the evidence suggests that the potential may be even greater particularly in the important area of communicable diseases:

- ‘The Sizophila Project’ is an AIDS treatment program near Cape Town. It piloted an SMS project to support drug compliance and monitor patient’s health the clinic maintained drug adherence rates of more than 95% by using this system.
- Another pilot again in South Africa used motorcycles to collect TB samples from remote patients and return the results via SMS the time taken to receive test results was cut from weeks to hours resulting in more patients being tested. Referrals grew by over threefold in the months after the project was initiated.

The report is rich in examples that illustrate the benefits that mobile can provide and these are the benefits that can be achieved with simple applications that are widely accepted. The report suggests that there will be an important and growing role for mobile in healthcare and other service-based customer centric sectors.

**Thank you for your attention.**