How mHealth is improving health and social care

With five billion smartphone users worldwide, what are the opportunities for mobile health?
# Contents

Introduction ..............................................................................................................................................
- A smartphone society ..............................................................................................................................
- Healthcare professional use ....................................................................................................................
- Uptake and use of mHealth apps ..........................................................................................................

Current healthcare challenges ..................................................................................................................
- Population ageing .................................................................................................................................
- Chronic illnesses .................................................................................................................................
- Mental health ........................................................................................................................................
- Medication adherence ...........................................................................................................................
- Staff shortages ........................................................................................................................................
- Budget cuts ...........................................................................................................................................

Supporting evidence for mHealth apps ...................................................................................................
- The potential of mHealth .......................................................................................................................  
- Case studies of success stories ..............................................................................................................
- Mental health apps ................................................................................................................................
- Gamification ...........................................................................................................................................
- Wearables .............................................................................................................................................
- Connectivity ...........................................................................................................................................

Barriers to mainstream adoption .............................................................................................................
- Private vs. public sector technology gap ...............................................................................................  
- Security and data protection ................................................................................................................
- Lack of interoperability ..........................................................................................................................
- Sorting the good from the bad ................................................................................................................

Looking to the future – beyond the pill ....................................................................................................
- Big data ................................................................................................................................................
- Smarter technology ..............................................................................................................................
- Augmented and virtual reality ...............................................................................................................  
- Implants & the bionic man ....................................................................................................................

The take-home message ............................................................................................................................

References .................................................................................................................................................

About Genetic Digital ...............................................................................................................................
Introduction

With approximately five billion smartphone users worldwide, there are huge opportunities for mobile health (mHealth) apps and other technology to revolutionise healthcare and patient outcomes and experience. This is reflected in economic forecasts and a report by the market research firm Mordor Intelligence suggests that the global mHealth market will reach $62.84 billion by 2021. Among the key drivers of this rapid growth are ever-increasing smartphone penetration rates.

A smartphone society

According to Deloitte’s latest Global Mobile Consumer Survey (GMCS), 81% of the UK population either own or have ready access to a smartphone. Sporting the highest adoption rate of 91%, corresponding to 21 million people, are the 18 to 44 year olds – which include millennials. The 35 to 54 year olds and the over-55 age group follow with adoption rates of 84 and 60%, respectively.

An interesting finding of the GMCS survey is that smartphones have increased quite rapidly over a relatively short time. In 2012, only about 50% of UK adults owned one. And, although the year-on-year growth appears to be gradually slowing down, smartphones are, and are expected to remain, the electronic device with the highest penetration rate, compared with laptops (76%), tablets (63%) desktop computers (48%) and smart watches (4%).

Healthcare professional use

There is evidence to suggest that smartphones are the most successful electronic devices also among healthcare professionals. In 2015, a team from Imperial College, London, conducted a study of over 6,000 hospital doctors and nurses from five NHS hospitals.

The results, published in the British Medical Journal, show that 73.5% of surveyed doctors and 64.7% of surveyed nurses owned a tablet, but 98.9 and 95.1%, respectively, were smartphone owners. Notably, the latter figures are higher than those found in a survey of healthcare professionals worldwide (91%), suggesting that the UK might be a more fertile ground for digital innovations as means to improving health and social care.

Uptake and use of mHealth apps

The Imperial College London study provides another interesting insight: 90% of surveyed doctors and 67% of surveyed nurses said they use mHealth apps in everyday clinical practice, to enhance task efficiency and facilitate communication, data sharing and diagnostics. According to a 2015 report by the IMS Institute for Healthcare Informatics, there are now over 165,000 health apps available from the Apple iOS and Google app platforms. They can gather, share and analyse streams of biometric data such as heart rate, blood pressure, body temperature and physical activity. And, drawing on evidence from medicine and behavioural research, they can facilitate disease prevention by promoting healthy lifestyle behaviours, and assist with the diagnosis, management and monitoring of specific medical conditions. The IMS estimates that the number of iOS apps with these capacities has increased by over 100% since 2013.

To download the full white paper go to: www.geneticdigital.co.uk/mhealth/