Chapter 5
Health Kiosk Technologies

Robert S. McIndoe
Logica UK, UK

ABSTRACT

This chapter examines the recent rise in the adoption and spread of kiosks in UK healthcare: The leading players in the healthcare market, their technologies, the main uses of the kiosks and software, including possible future developments into clinical care.

INTRODUCTION

Health kiosks can be used to deliver a wide range of personal health services as they enable patients to carry out administrative tasks themselves and have the functionality to dispense printed information or medications.

ADMINISTRATIVE AND INFORMATION GATHERING

The major worldwide technology vendor NCR offers an extensive range of healthcare self-service solutions with software modules that cover pa-tient self-registration, patient demographic self-update, clinic management, hospital wayfinding and patient surveying which run on its robust kiosk hardware. The systems integrator Logica has deployed four patient self-registration kiosks and four hospital wayfinding kiosks with NCR at City Hospitals Sunderland NHS Foundation Trust. NCR is also deploying kiosks at King's College Hospital NHS Foundation Trust in London and Heart of England NHS Foundation Trust in the Midlands.

Other smaller, health-focused kiosk and systems vendors have deployed their packaged healthcare systems into other Trusts. So, for example, Intouch with Health Ltd – which has its own software and chooses to use kiosk hardware from the larger vendors like NCR – has deployed

a whole out-patient flow and kiosk patient self-registration and clinic calling system at the Mid Yorkshire Hospitals NHS Foundation Trust and at University Hospitals Birmingham NHS Foundation Trust in the Midlands. It is currently deploying its patient self-registration and calling system at North Bristol Healthcare NHS Foundation Trust.

Savience is another smaller operator that has achieved a market leading position having deployed its patient self-service system at Shrewsbury and Telford, Salford Royal, Countess of Chester, Sherwood Forest, Hereford Hospitals, Rotherham General, Chesterfield Royal, Liverpool Womens', Hillingdon, Lancashire Teaching, and Blackpool, Fylde & Wyre, NHS Foundation Trusts amongst other sites. Further deployments are ongoing at Barking, Havering and Redbridge, Morecombe Bay and Sandwell and West Birmingham NHS Foundation Trusts. Other small vendors are now forming and storming the market. There is about to be a wave of adoption of kiosks in UK out-patient departments for these functions, particularly patient self-registration, patient wayfinding and patient calling and flow management which will occur prior to other kiosk functions being discovered and deployed, some of a more clinical nature. This is the 'thin end of the wedge' in administrative and clinical robotics. Let us hope the multi-functional healthcare robot turns out to be 'The Rejuvinator' rather than 'The Terminator'. However, looking ahead, it may not be too long before kiosks are able to adminster injections or plaster broken limbs in fracture clinics, particularly bearing in mind that we already have 'robot surgeons', where surgeons can digitally operate on patients using inter-hospital and inter-continental telecare.

DISPENSING

Intouch with Health Ltd has specialised in producing a comprehensive hosted web service that can be delivered to its own or other vendors' kiosks in a wide range of languages that offers the patient a public health information service on a touchscreen. The information has been validated by the Department of Health and the Intouch with Health Public Health Information Service is now in over 70 NHS Trusts in the UK. Logica is deploying four NCR touchscreen kiosks with the Intouch with Health Public Health Information Service on them at the City Hospitals Sunderland NHS Foundation Trust. This is an example of public health information 'dispensing' with patients empowered to surf the web service while awaiting their clinic appointment, and enabled to print out an 'information prescription' about their condition to read in preparation for their clinic appointment. The hope is that this will lead to a more interactive consultation with the doctor or nurse and a more informed patient.

However, kiosks can also dispense other types of goods and services, other than pure information. In the banking sector, this is evidently cash and account statements, in healthcare this can be discharge medications, or even prostheses or dressings, if they are integrated to 'robot pickers'.

City Hospitals Sunderland NHS Foundation Trust has just installed a 'robot picker' into its out-patient department for the purpose of dispensing out-patient medications to patients. When married to a kiosk such a 'robot picker' can automatically dispense discharge medications on presentation by the patient of a barcoded prescription, code, PIN or token, or, indeed, payment.

PERSONAL HEALTH SERVICES AND WELLBEING

The Wellpoint 6000 is the leading technology for kiosk-based provision of personal health 'MOTs'. Wellpoint Group Ltd is an entrepreneurial start-up company marketing citizen and employee wellbeing kiosks into UK healthcare and the wider 'public health' community. The Wellpoint 6000 offers citizens the opportunity to monitor their own

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