

Patient perspective

IT-enabled primary care: what quality gains might the NHS IT programme offer to patients?

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ABSTRACT

Much of the debate about the NHS IT programme has been around process not outcomes. At this stage of climbing the mountain of implementation, people's concerns understandably centre on costs, timing, security, resources, training, interoperability and process re-engineering. For the patient, though, there are wider quality issues about what quality gains an implemented system might deliver and what the vision of care might be.

This paper examines diverse aspects of the NHS IT programme and discusses the patient benefits in primary care that may flow from the various initiatives. It evaluates which will be especially helpful and to whom. It also considers which initiatives at present seem in need of major development in order to realise the benefits for patients.

Keywords: informatics, patient perspective, primary care, quality improvement, telemedicine

How this fits in with quality in primary care

What do we know?

Development in information technology to support patient care as part of the NHS programme for IT is a central plank of national policy in the UK.

What does this paper add?

This paper examines the NHS programme for IT and how this could contribute to developments in quality improvement. It draws together the strands of a large complex programme and indicates which patient groups in primary care might benefit.

Introduction

Much of the public and professional debate about the National Health Service Information Technology (NHS IT) programme has been around process not outcomes. At this stage of climbing the mountain of implementation, people's concerns understandably centre on costs, timing, security, resources, training, interoperability and process re-engineering. For the patients, though, there are wider quality issues about what quality gains an implemented system might deliver and what the vision of care might be.

Fully briefed health professionals

Patients are reassured by encounters with doctors or other primary care professionals who have their details on hand whether in the surgery or in out-of-hours. Knowledge of the patient's history and current medical problems makes the encounter safer for patients and potentially less time-consuming for patients and staff. Information held in primary care is especially important during the transfer to secondary care. A sizeable proportion of the UK population

lives alone (over 7 million),¹ and many of these are elderly (3 million),² and may enter the emergency healthcare sector unsupported by anyone to brief healthcare professionals. Even some elective surgery patients have been shown to arrive into secondary care with inadequate information about medication (e.g. with incomplete referral letters or forgetting to bring current medicines with them and so on).³ Access to the patient's healthcare information would increase patient safety in these contexts.

Shared healthcare information

In the primary care setting, a fully implemented system involving hand-held devices could make it possible for all primary healthcare professionals in a locality including general practitioners (GPs), practice nurses, district nurses, midwives and dentists, to access the patients' information with patient consent round-the-clock. The Western Cheshire Primary Care Trust reports success using such a system in 2006 for 'out-of-hours care'.⁴ The paramedics in ambulance crews would equally find the information valuable. This would be of particular value during out of hours, in walk-in centres, for home visits and emergency department admissions when patients are frequently seen by healthcare professionals who may lack background knowledge about them. These various healthcare providers can also confer about the patient's needs much more readily if they can simultaneously access the same information.

Patients' understanding of medical conditions

GPs' patients increasingly wish to understand more about their health and the treatments they are offered. In the Healthcare Commission Primary Care Trust Survey of Patients 2005, around 30% appeared to find shortcomings in this respect.⁵ The rate may well be higher than this, given that only 47% of patients who were contacted actually returned their questionnaires and non-responders may well have included patients inhibited by literacy or language problems. This is a problem for busy GPs with limited appointment time, but there will be cases where IT systems in the surgery could help. The systems could allow downloading of national leaflets which would follow literacy guidelines and could be tailored to meet differing understanding levels or language abilities. Patients could take the leaflets away and seek appropriate assistance

in understanding what they have been given (this might be by seeking help from other healthcare professionals such as practice nurses, or by seeking community help with language and literacy problems). Children, who have very special needs, could look at versions specially tailored for them, perhaps before procedures are carried out. Such systems would not meet all information needs but could contribute significantly.

The summary care record

The national database of summary care records is in pilot stage. In primary care, it should eventually mean that all those who attend patients found unconscious after falls, or through medical conditions such as diabetes, heart disease, epilepsy etc, will have valuable information on hand to help in initial diagnosis. Care could be planned more safely if medication history and alerts were on hand. People will be able to view their own summary care record through HealthSpace.

HealthSpace

The online patient portal HealthSpace,⁶ was not envisaged originally as part of the core NHS IT programme, but is increasingly important for patients, allowing checking of the details held in their online personal information. Patients may well not be able to remember all the information contained in HealthSpace, so it will no doubt also be a valuable aide mémoire. They will be able to use entries in HealthSpace to access further information – for example, clicking on 'migraine' in their summary care record will lead to advice on the prevention and treatment of migraine. They will also be able to record information such as their next of kin, carer and preferences for organ donation in HealthSpace. It will no doubt be necessary to set up a system to assist those who are unable to access or use their Healthspace.

The single assessment process

The single assessment process, whereby information from social care and healthcare agencies is combined in an overview, is moving forward. It should enable a more streamlined approach to complex cases where there are healthcare and social care problems.

The National Library for Health

The development of the National Library for Health will put a valuable resource in the hands of healthcare professionals and patients.⁷ In the US nearly two-thirds of adults have now looked online for health information, and this trend is also seen in the UK.⁸ Understanding and self-care will become easier for the patient who can access information from what should be validated and up-to-date sources. For the healthcare professional, it will be easier than ever before to keep up to date, to follow developments in health care and to access information to assist in diagnosis and treatment plans, all of which can be of immense benefit to patients. The clinical knowledge summaries will provide knowledge and evidence-based information for the conditions that are commonly managed in primary care.⁹ Information can be kept up to date from one parent database so the latest knowledge can be disseminated quickly. For the more obscure cases the National Library should be able to pinpoint authenticated information.

Self-care and electronics

Self-care is seen as important by both healthcare providers and patients, especially as the incidence of chronic disease rises. A Pfizer study has shown that both American and European patients with chronic disease perceive a positive impact on their health when they receive health information.¹⁰ Electronic systems may eventually offer notable benefits to patients who can be monitored at home, e.g. heart patients on anticoagulant therapy, blood sugar levels in diabetes patients etc, entering the results into HealthSpace for their health professional to read and monitor. The *BMJ* has published a review by Australian, British and Canadian researchers of 14 randomised controlled trials of telemonitoring in the community by health professionals of 4264 patients with chronic heart failure.¹¹ They found the studies suggested that problems tended to be picked up earlier and there was a reduction in both hospital admissions and length of stay. They also concluded that remote monitoring might be of special value to patients 'who have difficulty in accessing specialised care because of geography, transport or infirmity'.

Imaging

PACS (Picture Archiving and Communication System) is revolutionising radiology in the acute sector by moving it into the electronic age.¹² Imaging is stored electronically immediately, and reporting times are speeding up where PACS is in place. Gradually, GP surgeries will be linked into this system so that GPs can call for images. Some simpler imaging could also in time take place in primary care, with the results read by radiologists elsewhere.

Telemedicine

Similarly, teledermatology is enabling transfer of images of skin conditions for initial review elsewhere by a trained dermatologist. The best use of this potential tool in primary care is still being debated and evaluated and studies of experience and best practice are being undertaken, some on an international basis.¹³ Other forms of telemedicine are emerging and it will be interesting to see which areas offer the best outcome for patients.

Electronic prescribing

Electronic prescribing is beginning to be able to offer a raft of new patient benefits.¹⁴ Already over 100 000 prescriptions are transmitted electronically daily.¹⁵ Decision support, safety alerts and medication reviews can now be an integral part of the prescribing system. Patients will no longer have to contact their GP surgery to order regular repeat prescriptions of medicines that they are happy taking, and drug regimes can still be monitored at appropriate intervals. Patients will be able to obtain prescriptions through their preferred pharmacy. The transfer of prescribing information from secondary to primary care should also be easier, an important point of safety for the over 12½ million patients discharged from hospital episodes of care in England every year.¹⁶ There can be reductions in paperwork and error, and improved audit trails. Fraud should be easier to combat. Patients can already look up profiles of adverse drug reactions and send in details of their own adverse drug reactions to the Medicines and Healthcare Products Regulatory Agency using the patient online yellow card (or a paper version, or by telephoning).¹⁷

Better-quality information for GPs

It is planned that the work of GPs and other primary healthcare professionals will be assisted by the Personal Demographic Services (PDS) Scheme which should eventually provide for each registered NHS patient in England to have an electronic record containing important patient information. This is being set up to include not only basic demographics but also more detailed information such as up-to-date contact details, preferred contact time and method, special communication needs (e.g. language interpreters, Braille or hearing loop etc), previous GP, next of kin and carer details, nominated pharmacies, willingness to share NHS Care Record Information etc.

A new system of allocating unique NHS numbers from birth (NN4B) has been in place for some years, and from June 2006 the information about newborns has been linked into PDS, with the result that in future babies' records will enter the NHS system immediately, and not after a gap of around two months as has previously been the case, offering a much safer system for newborns. All of these records should improve communication of patient information to the healthcare professionals who need it and should facilitate communication with the patients.

GP2GP systems

When people change practice at present, it can take many weeks for their records to arrive in their new practice. The GP2GP IT systems should greatly streamline this by allowing the immediate transfer of the records electronically. Three and a half million patients change GP each year,¹⁵ so seamless movement from practice to practice can offer substantial benefit to large numbers of patients and GPs alike.

Hospital discharge into primary care

Electronic transfer of information may also serve to help to remedy the shortcomings GPs identify in the present system, where patients are discharged from hospital back into their care with insufficient information. A recent survey has shown that 58% of GPs claim clinical care of discharged patients has been compromised in the previous 12 months by late or inadequate discharge summaries.¹⁸ One suggested remedy is that adequate and timely discharge

information should be part of the provider contract, where again IT has a key role.

Choose and Book

The patient choice agenda is a challenging one. Booking appointments at times that are convenient is of real benefit to patients. However, the Choice agenda is barely underway. The 2006 National Patient Choice Survey indicated that only 35% of patients recall being offered a choice of hospitals by their GP.¹⁹ Patients, in most cases, lack the basic knowledge to make choices of secondary provider and these choices will be facing them all too soon. By the summer of 2007, government policy is for elective treatment like hip replacement to be offered to patients at over 200 hospitals. Some comparative information is being gathered and promulgated. In addition, patients are gradually being offered a facility akin to 'Trip Advisor' where they can publish and share reviews of care received in the primary and secondary sectors, but this seems likely to be relatively superficial. In the important area of the outcomes of medical care, much more robust and patient-friendly information will be needed and needed quickly.

Audit appraisal and performance monitoring

Audit, appraisal and performance monitoring within GP practices will be aided by IT, and this will feed into revalidation, which offers important safeguards for patients. Anomalies should stand out and a Shipman would be flagged up by the new Primary Care Mortality Database.²⁰ Other lessons learnt from Shipman include providing patient access to the General Medical Council (GMC) register and arranging for primary care trust (PCT) files to follow doctors moving practice, both of which will enhance patient safety.

The commissioning process

The commissioning process can be significantly helped by accurate performance data from secondary and tertiary care. The key is that there should be one set of agreed data shared between acute and primary care. With the NHS IT programme, patients and taxpayers can hope in future for better statistics than have sometimes been available in the past. Clinical pathways are

being devised (e.g. Cancer Networks²¹) and it should be easier to identify and monitor the pathways so that patients feel less and less that they are passing through a series of 'silos'.

Conclusion

There are any number of initiatives, and just as many teething problems. However, patients have reason to be grateful to those who grapple with the problems of implementation and data security because the ultimate prizes for patients could be substantial. Not only can NHS resources be used more efficiently, the outcome could be a 21st century information system fit for purpose and contributing to patients' improved health and greater safety from harm.

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CONFLICTS OF INTEREST

None.

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