Encouraging nurses to develop effective electronic documentation

Paula Procter and Ian Woodburn explain why it is important that front line staff take a leading role in translating paper-based record-keeping into fit-for-purpose digital file systems

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Abstract

This article is the first in a series that explores the growth in the use of, and reliance on, information management systems in health and social care. Its aim is to help nurses understand how effective information management systems can improve their practice. Problems faced by nurses in the past, when they have been required to use these systems to record, store and retrieve information, tended to be generated by poor or inappropriate systems. The series offers examples of how the vital role that nurses play in increasingly information-intensive healthcare environments can be developed. This first article sets the scene and considers the health and social care information agenda in light of the Department of Health (2012) information strategy.

Keywords
Information management systems, record-keeping

IT WOULD be difficult to imagine a world without technology. Some technological systems are obvious, such as laptops and tablet computers, while others, such as car-engine management systems, are not so prominent. Some forms of technology, such as mobile phones, are intended for individuals; others, such as satellite navigation or patient administration systems, for collective use, and yet more, such as the internet and web for understanding the world in which we live.

According to the Office for National Statistics (ONS) (2011), in August 2011, 77 per cent of households in England, Scotland and Wales had internet access, and 32 million people, or 66 per cent of this population, purchased goods or services online.

As a population, the UK has taken to mobile technology easily, with 91 per cent of adults owning or using mobile phones (Ofcom 2011). The next major technological breakthrough in terms of communication is expected to be smart television, which integrates information and communication technologies for use at home.

Smart TVs are television sets that are web enabled: they are connected to a home's broadband network and combine interactive television with web surfing and downloading, offer access to other content, such as films, and can run apps. The major television manufacturers are already making and selling them.

Technologies that have been successful in people's everyday lives demonstrate a 'reward value', in that users find these technologies helpful and thus valuable to them. The challenge is to ensure that this 'reward value' is incorporated in the information systems used in our professional lives.

Successful information management systems identify the best possible way of gathering, using and disseminating information, so that everyone using them in their work finds them valuable. Furthermore, although information management systems are often regarded as involving the use of costly computers and software, the case study presented in the panel on page 23 shows that this is not always the case.

The example highlights how staff directly involved in particular services can come up with realistic and valuable information management systems that suit the needs of their service and that of the people in their care. Furthermore, the changes fit in with existing systems seamlessly.

Problems can arise, however, when aspects of information management systems are the

responsibility of other departments or even other disciplines, which can hamper the flow of information. This is frequently noticed by patients and manifests in phrases such as: 'But I already told the other nurse' and 'I thought it had been recorded once'.

The lack of joined-up thinking in the development of information management systems can lead to frustration and confusion for nurses and can undermine patient care.

Without the involvement of all clinical staff, including nurses, and without communication between all parties across patient pathways, there may be none of the added value that should come from using information systems.

If nurses have access to relevant, recorded information, they can provide evidence to improve the efficiency and effectiveness of care delivery.

Observation of nursing practice demonstrates that, where there are obvious direct benefits to patient care from the use of technology, for example through better vital-signs monitoring, staff are willing to use it in practice.

Record-keeping

Technology-based information management systems in health care usually involve three activities: input, process and output. Nurses are most frequently involved in inputting information, but are rarely involved in information processing and output. They, therefore, appear to be 'feeding' the system with little or no reward value, in the form of useful information. If nurses simply enter data into forms displayed on a computer screen, all that is achieved is the transcription of handwritten forms to computer documents without looking at how the information is used in practice.

Transferring forms to digital files designed to have the same content and look as paper-based documents when used on screen is easy. In some types of organisation, such as banking or warehouse distribution, it is appropriate to do this as part of record-keeping information systems (Saran 2011). The reason this method of information storage works well in such organisations is that, before the move to computers, they had developed well structured and functionally meaningful systems of paper documentation.

Record-keeping is one of the key requirements for nursing practice (Nursing and Midwifery Council 2008), yet one study (Ward *et al* 2004) that examined 200 anonymised full patient case notes found poor nursing documentation in almost all cases. This may contribute to the profession's reluctance to implement technology-based

information management systems because they would find it difficult to develop an adequate computerised version of the inadequate paper-based documentation. As Urquhart *et al* (2005) points out, a poor manual system becomes a poor or inappropriately used system that is supported technically.

Awareness

Before moving to a technology-based information management system, the information processes and pathways already in use must be examined carefully to avoid replicating a system that may be inadequate on paper.

Some possible barriers to the profession's use of technology-based information management systems include lack of (Lee 2007):

- Awareness of the need for accurate and timely entry of information.
- Understanding of the output from poorly entered information.
- Involvement in the development of such systems.

It is often front line nurses who are required to input data into clinical information management computer systems, but little useful information is fed back to them. This suggests that they may perceive their inputting of data to be of little or no organisational importance (Lu *et al* 2012), and this can result in disenchantment in their work and lack of reward value for nurses.

Nurses need to engage meaningfully in the development of information management systems to use the information to inform and shape

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Staff-led changes bring improvements

This case study demonstrates how improving the flow of information in an already functional paper process can provide more effective ways of working.

Nursing staff in one hospital department noticed that target times were being missed for a patient pathway.

About 150 patients attended the department daily and a system was in place whereby each patient attending for any pathway had a white referral card that had black lettering. To improve the system and meet the individual patient-pathway targets, staff introduced coloured referral cards for patients on specific pathways. The cards contained the same information, but were different colours, so there was no extra cost.

The hospital continued to use the white cards, using the coloured cards only for patients on an NHS target pathway. The effects of introducing the system were immediate and valuable to all concerned. It also turned out that the coloured cards were cheaper.

The cards provided a visual information management system in the department, and staff who received coloured referral cards booked patients' appointments within the target time. As a result, patients started receiving timely investigations, which improved treatment times and patient outcomes.

practice. This may mean greater demand for more training and equipment such as computers, but this will be reasonable if it can lead to better patient experiences.

Nurses are usually the first points of contact for patients and may have ongoing interaction with them, their carers and relatives 24 hours a day. They are therefore well placed to be the linchpins for information management systems in health care. However, to be successful in this role, nurses need information management knowledge, leadership skills, and access to usable and valuable information.

Effective information systems allow users to record information once and re-use it many times, rather than record many times and never use. Effective systems, therefore, reduce duplication and ensure that the information that is recorded is meaningful and reflects nursing practice.

Conclusion

Nurses at all levels have a choice, to continue to shy away from involvement in the development, implementation and evaluation of information management systems, or take a leadership role and add information management wisdom to their professional knowledge. Choosing the latter will enable nurses to:

- Understand, improve, influence and use new technologies and information management systems, including remote care.
- Find the most reliable sources of information to support evidence-based practice.
- Guide patients through publicly available information sources.
- Incorporate information and communications technology in patient consultations.

- Manage nurse-patient relationships when nurses are not physically with patients.
- Perform quick, accurate and clinically meaningful data entries at the point of care.
- Understand the legal and ethical issues associated with managing and sharing patient information.
- Extract data to support decisions and monitor practice outcomes.
- Understand the role of technology in the delivery and organisation of care.
- Train others, including patients and carers, on how to use relevant information and communication technologies, as well information management systems.

The final decision about whether, and how, nurses choose to use technology-based information management systems must be decided at a national level. Complex technologies that will be increasingly relevant to healthcare environments are already in development or are expected to be seen soon. They range from nano- and biotechnology to radio frequency identity and remote home monitoring.

Nurses will need to engage with and lead on the development of these technologies to ensure that they can continue providing patients with high quality and safe care.

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The next article in this series examines how using information can improve care.

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