



technology in practice



Making IT SAFER



Introduction



Whenever you use something for the first time, it makes sense to check the item is safe and that it works. It is the same with computer systems and other types of information technology in health care. Computers are widely used in clinical environments and new systems, such as for electronic patient records and electronic prescriptions, are currently being developed to support the care that nursing staff (nurses and other health care workers) provide.

This technology has the potential to improve the quality of care that patients and clients receive and the flow of information between clinical teams. But there are also risks. Any technology must first be subjected to rigorous assessment and testing before it is incorporated into patient and client care.

All systems and the way they are used must be SAFE. Safe for nursing staff and safe for patients. When people's health and safety and the confidentiality of their personal information are at stake, this quality assurance is vital.

This booklet has been produced by the Royal College of Nursing to help nursing staff, working in any sector within or outside the UK, to assess the safety and effectiveness of systems that have been or will be introduced into clinical practice. It emphasises the need for risk management of all IT systems so that potential hazards are identified and addressed as systems are introduced and used to support care.



SAFER systems

If nursing staff are to use computer systems when caring for patients and clients, they have to know – and their organisations must take steps to ensure that they know – these are SAFE and are risk managed.

Systems and the way they are used must:

- S** conform to **STANDARDS**
- A** be **ACCEPTABLE** to patients, clients, carers and health care workers
- F** be **FIT** for purpose and practice
- E** be supported by **EVIDENCE**
- R** be **RISK MANAGED**

Standards

From the UK's Nursing and Midwifery Council (NMC) guidance on record keeping to government guidance on the use of monitoring devices in the home, most aspects of working with information are covered by standards.

A number of standards have already been developed by the RCN for the safe and effective use of information and information and communications technology. For example, the RCN has published guidance on the use of abbreviations in patient/client records, on the content of electronic records, and on creating amending, accessing, and sharing eHealth records².

Nursing staff need to be sure about what standards apply when it comes to data protection, telephone consultations, the use of email, and so on.

The content of electronic patient records and the way the electronic patient record systems work do not necessarily reflect the way nursing staff use paper records. But they must still conform to professional standards and nursing staff must be able to record all aspects of nursing practice.

Acceptable

Most patients and members of the public recognise the value of IT in health care and are willing to have information shared electronically to ensure their safety and to improve the continuity of their care.

However, not everyone trusts computers. Some people are unwilling to have private information about themselves stored or shared electronically.



Nursing staff are well placed to ensure that patients are empowered to question the use of computers in their care and the way that information is held about them or shared.

Systems and the way they are used must be acceptable. For example, do they fit with professional values and do they support team working?

If the team values include partnership working with patients/clients and client-held records, the systems used should not introduce barriers to this way of working.

Well designed systems should improve the delivery of patient focused, evidence-based care and treatment.

Fit for purpose and practice

Evidence from pilot tests and live use will indicate whether an IT system, such as a cardiac monitor or electronic prescribing system, is fit for the purpose for which it was designed.

But the system must also fit with practice – in other words, it has to suit the way people work and the environments in which care is delivered.

For example, there must be an adequate number of computers on a ward or for staff who are more mobile. There must be robust and reliable access to systems for people working in the community, and the technology they use must be portable.

Training schemes should be designed and provided with the needs of clinical staff firmly in mind. Even the amount of time it takes to 'log-in' to a system should be considered.

Properly designed computer systems can lead to better ways of working. In those cases, some changes to working practices can be expected.

It is important to remember that the development of systems can often be incremental. For example, a particular piece of software may only be the first phase of a longer term plan. The system used at first may need to be modified or added to in order to fully support nursing work. Therefore it is important that nursing staff are actively involved.

If you have concerns, you should first consider whether they are to do with having to change the way you work rather than a fault with the system or the way it is being implemented.

Of course, the change you are experiencing may be clinically unacceptable or potentially unsafe, in which case you will need to prepare a risk assessment, an adverse incident report or impact assessment with the help of your line manager.

Evidence

The World Health Organization (WHO) defines evidence-based technology in the following way:

‘Health technologies are evidence-based when they meet well-defined specifications and have been validated through controlled clinical studies or rest on a widely accepted consensus by experts.’³

Any new system used in health care must be developed according to best available evidence.

And anyone who approves systems for clinical use in an organisation should carry out an evaluation prior to introduction, to assure themselves and the staff who will operate them, that these systems meet the SAFER criteria.

It is not good enough to test and pilot a system in just one area. The IT implementation plan should include a full assessment of the benefits and risks of using the new system at every location it will be used.

You should know what the risk management plan is for any system introduced in your area of work. This will tell you who to contact if you have concerns so that lessons can be learned and new evidence developed.

Risk managed

Risk management and patient safety processes are core aspects of clinical governance – and in this respect IT is no different to any other aspect of health care. Harm may arise from the way systems are designed or the way they are used in practice, and any risk of harm must be managed.

For example, in England (but applicable in principle elsewhere), health IT risk management standards recommend that each organisation has:

- a named lead for IT clinical risk who must report independently to the clinical governance lead within the organisation – not to an implementation project manager or IT lead
- a clearly documented set of procedures covering clinical risk management of IT systems. This will include procedures for identifying and addressing hazards, and audit procedures to ensure the safety procedures are followed and are effective. There must also be clear lines of escalation for safety concerns within the organisation.

Proactive safety risk management will help to reduce the likelihood of incidents. Nursing staff who have concerns about the safety of IT systems or the way these are being used have a duty to act on their concerns. This responsibility extends to those who work for the companies that design and supply systems. For registered nursing staff, the NMC Code applies, irrespective of work setting⁴.

Checklist

When a new system is being introduced, ask yourself these questions:

- has the software been designed with my clinical practice in mind?
- have nursing staff been involved in the system's development?
- have I received the right training to use this new system?
- is there evidence that this system works?
- are there enough machines available for my team and others to use?
- do I understand the risks associated with using this technology?
- what processes are in place for ensuring any concerns about the system or the way it is used are addressed?

Reporting problems

If you believe a system or the way it is used does not meet the SAFER criteria outlined in this document, please report your concerns immediately either through your line management structure or your clinical governance lead.⁵



- 1 Nursing and Midwifery Council (2009) *Record keeping: guidance for nurses and midwives*, London: NMC. Available from www.nmc-uk.org
- 2 Further information and resources on eHealth are available via the RCN website www.rcn.org.uk
- 3 Further information on essential health technology, and the particular challenges associated with eHealth can be viewed on the WHO website at www.who.int
- 4 Nursing and Midwifery Council (2008) *The Code: standards of conduct, performance and ethics for nurses and midwives*, London: NMC. Available from www.nmc-uk.org
- 5 The RCN would like to know if you have concerns about the systems you are using. If you have information that can support our work, please email makeitsafe@rcn.org.uk



Find out more and get involved

The Royal College of Nursing supports the direction of travel of eHealth in each of the four UK countries. And we recognise that the people who use IT are key to realising its potential.

For more information on eHealth, and to discover how you can get involved, visit the RCN's eHealth and Information in Nursing (IN) Forum web pages at the RCN website **www.rcn.org.uk/ehealth**

The RCN represents nurses and nursing, promotes excellence in practice and shapes health policies

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