



# Putting information at the heart of nursing care

How IT is set to revolutionise health care and the NHS



Royal College  
of Nursing



## Introduction

### **Welcome to the 21st century!**

Information technology (IT) has become part of our everyday lives. We watch digital television. We draw cash from ATMs. We download music from the Internet. We buy and sell things on eBay. In the office and in many homes too, emailing has become a daily routine. Now technology, and the way we use it, is revolutionising health care.

IT is at the top of the agenda for modernising our health care systems, including the NHS. Just as surely as it's made a world of difference to commerce and industry, IT will change the practice of every nurse, health visitor, midwife and health care assistant. IT will also affect nursing students while on clinical placements.

Nurses will have to learn new skills to use this technology and if IT is to fulfil its promise, then nurses need to be involved in telling the systems developers and vendors what information these systems must contain. If nurses don't do this, other people will, and nurses may find themselves using systems that increase their workload without benefiting patients.



## The jargon explained

**e-Health** is the term we use to refer to the whole scope of IT usage in health and health care.

e-Health includes:

- monitoring patients and managing their care via text messages from a specialist nurse to a patient's mobile phone
- patients using the Internet to find out more about their disease and its management, or what services might be available to them (locally, nationally and globally)
- health care professionals using the Internet to find out about best practice or protocols and guidelines
- NHS Direct and NHS 24 services
- a doctor or nurse using a video link to diagnose and advise on the care of a patient while separated by distance and even by time
- replacing traditional 'patient's notes' with an electronic patient record which is immediately available, via a secured network, to authorised users wherever and whenever a patient is being cared for.

**Health informatics** is the science of generating, recording, classifying, storing, retrieving, processing, analysing, and transmitting health information.

**Nursing informatics** is an exciting field of specialist nursing practice, integrating information and computer science with nursing to enable nurses to collect and manage data, process data into information and knowledge, and make knowledge-based decisions about patient care.

**IT** or more properly **ICT** (Information & Communications Technology) is the machinery – the hardware (computers, personal digital assistants, palm pilots, mobile phones and other devices) and the software (the information systems) – that enable information to be manipulated and transmitted from one place to another.

**Telemedicine** is the use of ICT, such as a video conferencing link, to enable a doctor in one place to examine a patient who's in another place, perhaps miles away. The term has been widened to include **Telenursing** – for example, where a nurse uses a link to a patient's television set at home to monitor medication or provide advice and support.

**Telecare** refers to the remote delivery of care, for instance, using sensors to detect when frail or elderly people fall in their own homes or wander into an unsafe environment.

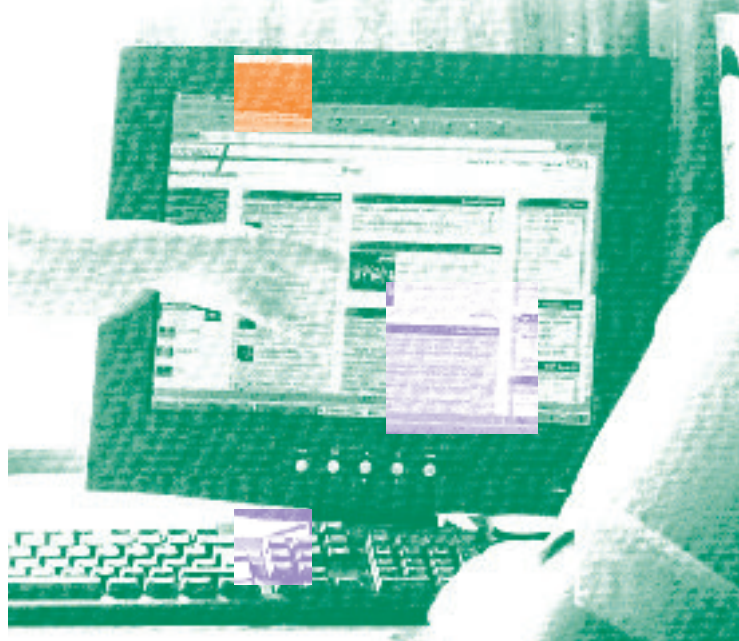
**Telehealth** is the preferred overarching term as it seen to be more inclusive/multidisciplinary in scope and it focuses on health rather than disease and illness.



## Why ICT is important to nursing

There are still nurses who believe ICT has very little to do with nursing, but nothing could be further from the truth. The RCN defines nursing as “the use of clinical judgement in the provision of care to enable people to improve, maintain, or recover health, to cope with health problems, and to achieve the best possible quality of life, whatever their disease or disability, until death.” In reality, ICT is primarily about managing information, which is central to nursing practice.

e-Health can make a difference in several ways. Today, all nurses recognise the importance of evidence-based practice, where every care decision is informed by accurate and up-to-date knowledge. But how do you keep up when the knowledge base is expanding and changing so rapidly? ICT, and in particular the Internet, gives you the access you need to knowledge and resources including recent research findings, protocols and guidelines. The RCN, in conjunction with the Department of Health (England), is hoping to develop a Nursing Knowledge Toolkit which will provide a gateway to approved and accredited knowledge sources in a form relevant to nurses' immediate needs. All RCN members, regardless of where they practice in the UK will have access to this new and exciting development.



It's not only nurses who'll benefit from increased access to knowledge. Thanks to the Internet, patients can now obtain a great deal of health information. This is already changing the balance of power between the professional and the patient, and while some professionals may view this as a threat, the RCN strongly believes nursing is very much about empowering and enabling people.

ICT offers nursing a great opportunity to take on the role of 'knowledge broker', actively helping patients to access the information they need, and deciding how to use it. As well as teaching patients about their disease or disability, nurses can help patients to find, and understand, information about specialists, resources, and alternative treatments. At the same time nurses can use information to enable people to keep healthy and well whilst avoiding or minimising stress or risky behaviour.

Clinical judgement involves decision-making. Nurses, like doctors and other health professionals, use a decision-making process which involves assessing the patient, diagnosing (or identifying) his/her problems, planning and implementing appropriate interventions, and evaluating the results. ICT can provide sophisticated decision support systems, like those already being used by nurses working in NHS Direct, NHS 24, walk in centres and Out Of Hours (OOH) centres.

In the management of chronic disease, the remote monitoring of physiological signs such as a patient's blood pressure will enable nurses to care for more patients, more efficiently. Diabetic patients, for example, can monitor their own blood sugar and receive advisory text messages from a specialist nurse on their mobile phones. School nurses can text health education messages to schoolchildren, while environmental sensors in 'smart houses' can enable elderly people suffering from dementia to remain in their own homes, for as long as it is acceptable to the client/carer and safe to do so.

## The electronic patient record

Perhaps the greatest change of all for nursing will be the introduction of electronic patient records. Instead of the present paper-based medical records, often held by different people in different places, every patient will have a single integrated electronic health record that can be made available, using ICT, to an authorised user (including the patient) at any time and in any place. This could be in an emergency situation at an A&E department, or when a patient sees a new doctor in an outpatient department or at a different hospital, or in the transfer process from hospital care to home care. When fully implemented, the record will be:

- a structured set of health information about an individual's health status and encounters across all health care sectors and settings
- held electronically so that the whole record, or a specified part, can be accessed from a wide variety of locations, subject to specified protection and security
- added to, and updated, by both the patient and health professionals
- organised to support continuity, efficiency, and quality care across the complete patient journey.



Work is already in progress to resolve issues about confidentiality, security and the availability of the appropriate infrastructure, and the benefits for both patients and health professionals are enormous.

For the patient, these will include:

- improved safety because of better and more accurate patient information
- continuity of care
- convenience, since patients won't have to repeat basic information over and over again, as they pass along the chain of health providers
- the eradication of appointments wasted because of 'lost' notes
- improved partnership, as patients can access their own records to ensure inaccuracies or misinterpretations are corrected.

The benefits for professionals will also include the following:

- care can be effectively co-ordinated across multi-professional teams
- new models of care – care pathways, clinical networks, changing roles – can be supported in a way that's not possible with today's fragmented and dispersed paper records
- records can be analysed retrospectively to identify outcomes, and for audit and research purposes
- documentation will be legible and structured, so relevant information can be quickly and easily found
- valuable time spent on writing, filing, finding (lost) records will be saved, releasing more time for patient care.

**To be useful for nursing, the electronic patient record must contain the right nursing information – and that depends on us!**



## What's happening in the NHS?

Across the UK, government is investing billions of pounds in developing ICT within the NHS and the e-Health vision is rapidly becoming a reality. Seen as one of the main tools for achieving modernisation, all four countries of the UK now have national programmes for ICT. In England the programme is called *Connecting for health*; the programme in Wales is called *Informing health care*; Scotland has the *e-Health programme*; and Northern Ireland has the *HPSS ICT programme*. The detail of the programme, and the stage of development in each country differs, but top of the agenda in all four countries is the development of a single electronic patient record.

You can find out about the programme in each country by going to the following websites:

- **England** – [www.connectingforhealth.nhs.uk](http://www.connectingforhealth.nhs.uk)
- **Wales** – [www.wales.nhs.uk/ihc](http://www.wales.nhs.uk/ihc)
- **Scotland** – [www.ehealth.scot.nhs.uk](http://www.ehealth.scot.nhs.uk)
- **Northern Ireland** – [www.dhsspsni.gov.uk](http://www.dhsspsni.gov.uk)

## How can I get involved?

It's vital you do. Decisions are already being made about which systems will be used, how they will be used, and what they will contain. If these systems are well designed and contain the right kind of nursing information, they will help greatly improve care planning, demonstrate the nursing contribution to patient care alongside other disciplines, and enable us to identify and measure the outcomes of our practice.

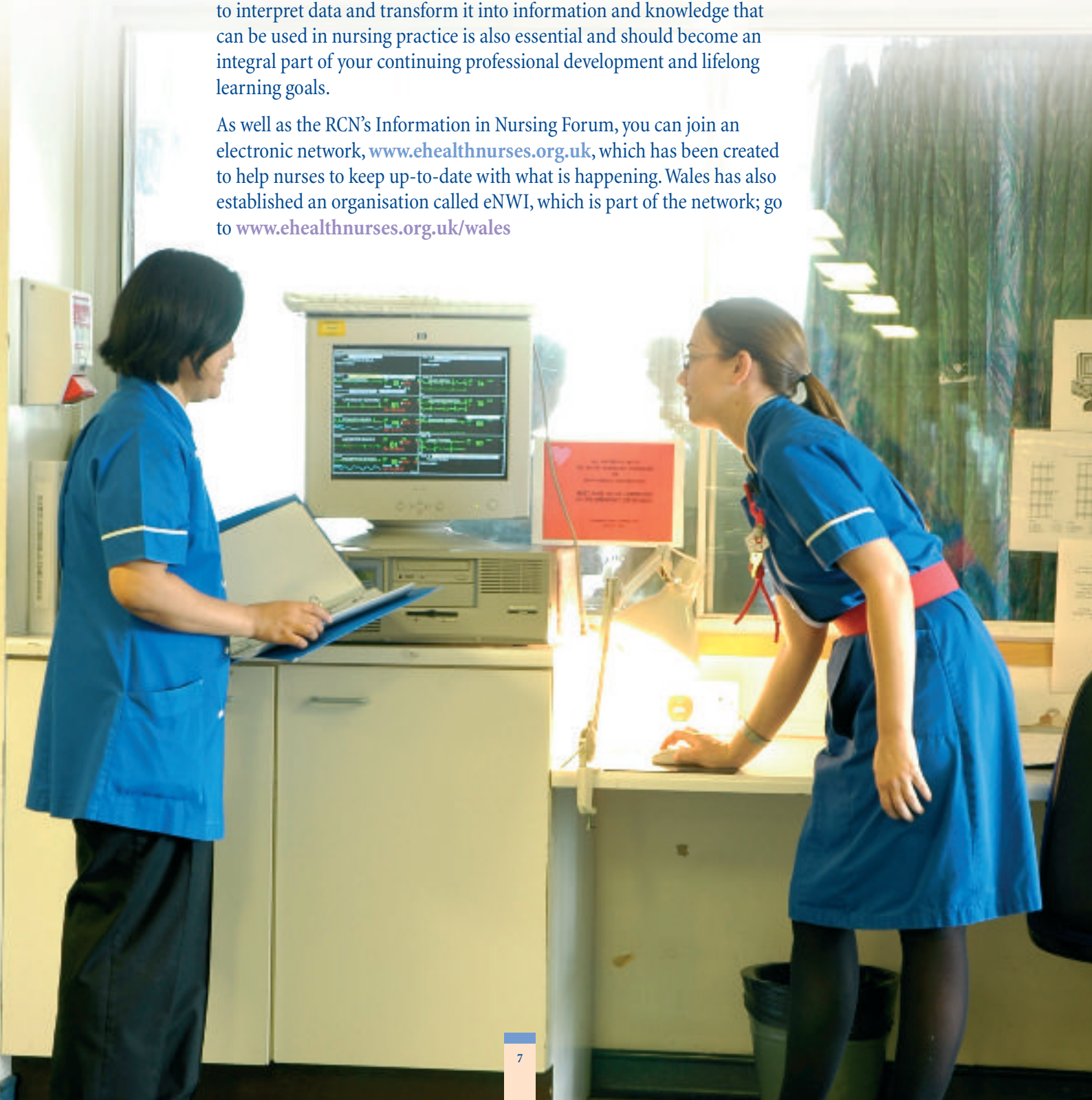
Find out what is happening in your Trust, Health Board or Community Health Partnership. There will certainly be an identified person who has been designated as the lead person for implementing your national programme – but is there a lead nurse? If there is, make contact and ensure that they are well briefed on the needs of front line nurses and they feed back information about developments. If not, challenge your Director of Nursing – make sure they understand the important implications for nurses, and ensure that the nursing view is incorporated into new developments. Be ready for specialist IT/ICT staff and business managers to ask you about the way you deliver care and how it can best be represented in information systems.

You can also learn about e-Health and develop basic computer skills. Contact your RCN learning representative, as well as your in-service training department, to find out what is available in your area.

## How can I learn more?

Training in basic ICT skills is available through a programme called the European Computer Driving Licence (ECDL). It's available to all NHS staff, either as a distance learning programme or through in-service continuing professional development (CPD) programmes. Gaining ICT skills through training is just part of the challenge. Understanding what ICT can do, how to interpret data and transform it into information and knowledge that can be used in nursing practice is also essential and should become an integral part of your continuing professional development and lifelong learning goals.

As well as the RCN's Information in Nursing Forum, you can join an electronic network, [www.ehealthnurses.org.uk](http://www.ehealthnurses.org.uk), which has been created to help nurses to keep up-to-date with what is happening. Wales has also established an organisation called eNWI, which is part of the network; go to [www.ehealthnurses.org.uk/wales](http://www.ehealthnurses.org.uk/wales)



## About the RCN Information in Nursing Forum

The RCN Information in Nursing Forum (the IN Group) is open to all RCN members, not just informatics specialists. It is the RCN's source of expertise in e-Health and ICT in health care. We work closely with all national programmes for ICT, Trusts, Health Boards, academic institutions, and international organisations concerned with e-Health.

As a member of the Forum you will receive our regular newsletter, and network with other nurses interested in e-Health, to share information and ideas. Membership is free if you name it as one of your three free RCN forums – additional forum memberships cost £15 each. To join contact RCN Direct on **0845 772 6100**

[www.rcn.org.uk/information](http://www.rcn.org.uk/information)



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