eHealth

technology in practice

Putting information at the heart of nursing care

How IT is revolutionising health care

Royal College
of Nursing

Introduction

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 online. Email has become a daily routine in the office and at home.

Now technology, and the way we use it, is revolutionising health care. In just the same way as IT has made an enormous difference to commerce and industry, it will just as surely change the practice of every nurse, health visitor, midwife and health care assistant and affect nursing students while on clinical placements.

Nursing staff (nurses and other health care workers) will have to learn new skills. And if IT is to fulfil its promise nursing staff will need to be involved, letting systems developers know what information these systems must contain and how these should fit with nursing practice.

This booklet provides an introduction to eHealth for nursing staff. It describes key concepts associated with eHealth, including the electronic patient record. It also explains the importance of eHealth to nursing and why it is vital for nursing staff to get involved.

Although examples may refer to the NHS in the UK, many of the principles are relevant to other sectors (such as the independent sector) as well as health care organisations operating in other countries.

The jargon explained

eHealth is the term we use to refer to all uses of information and communications technology (ICT) in health and health care. Examples of eHealth include:

- 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)
- a health care assistant using the internet to find out about best practice
- NHS Direct, NHS Direct Wales 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 paper notes with an electronic patient record which is immediately available, subject to appropriate security, 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 record and manage data, process it into information and knowledge, and make knowledge-based decisions about patient care.

IT or more properly **ICT** is the machinery — the hardware (computers, personal digital assistants, 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 health care professional in one place to interact with a patient who is in another place, perhaps miles away. This term has been widened to include **Telenursing** where, for example, nursing staff use 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. Increasingly, the term telehealth is used in the context of managing long-term conditions, covering a range of activities such as managing care over the telephone, providing networks of learning, and remotely monitoring signs and symptoms using electronic devices to record and send measurements.

The importance of eHealth to nursing

There are still nursing staff who believe that eHealth has very little to do with nursing; but nothing could be further from the truth.

eHealth can make a difference in several ways. Today, all nursing staff 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 access to a world of knowledge and resources, including recent research findings, protocols and guidelines.

It is not only nursing staff who benefit from increased access to knowledge. Thanks to the internet, patients can now obtain health information that is relevant and tailored to their needs.

This is already changing the balance of power between professionals and patients, 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 condition, nursing staff can help patients to find, and understand, information about specialists, resources, and alternative treatments. At the same time nursing staff can use information to enable people to keep healthy and to minimise harmful behaviour.

Clinical judgement involves decision-making. Nursing staff, like doctors and other health professionals, use a decision-making process which may involve assessing the patient, diagnosing (or identifying) his/her problems, planning and implementing appropriate interventions, and evaluating the results.

As well as timely alerts, ICT can provide sophisticated decision support, as used by nursing staff working in NHS Direct, NHS Direct Wales, 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 enables nursing staff 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 school children, while environmental sensors in 'smart houses' can allow elderly people suffering from dementia to stay longer in their own homes.

The electronic patient record

In terms of managing information, perhaps the greatest change of all for nursing will be the introduction of electronic patient records across both the NHS and the independent sector.

Instead of the present paper-based records — often held by different people in different places — a single integrated electronic health record can be made available to authorised users (including the patient) at any time and in any place, subject to appropriate security measures.

This could be in an emergency situation at an A&E department, 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 electronic patient record is:

- 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.

The benefits for patients of an electronic record 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 nursing staff include:

- care can be effectively coordinated 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.
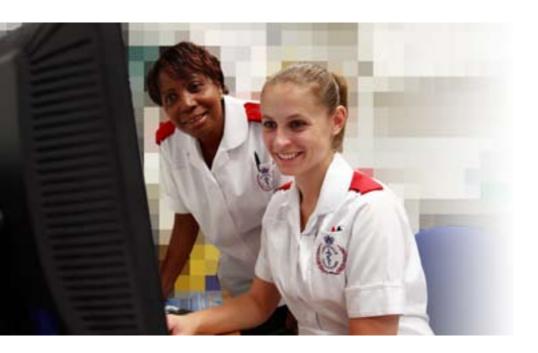
To be useful for nursing, electronic patient record systems must contain the right information and fit with nursing practice — and that depends on us!

All nursing staff are responsible for:

- ensuring that the systems and the way these are used:

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

- ensuring that a nursing view is considered in eHealth developments
- helping to develop and deliver systems that will improve the patient experience and the working lives of nursing staff.

Find out who is responsible for developments in your area and start lobbying.

Improving services through eHealth

Improving services through eHealth is seen as one of the main tools to support modernisation of health care across the UK; billions of pounds are being invested in the NHS and in the independent sector.

All four UK countries now have a national IT programme and the eHealth vision is rapidly becoming a reality. You can find out what is happening in your country by visiting the relevant website:

Scotland
www.ehealth.scot.nhs.uk

Wales
www.wales.nhs.uk/ihc

England
www.connectingforhealth.nhs.uk

Northern Ireland
www.dhsspsni.gov.uk

Health care has experienced record increases in funding and staffing over the last 10 years, but is still facing many challenges to improve quality, safety and effectiveness. To achieve the delivery of high quality person-centred care, there are several significant challenges to be addressed.

Those designing and commissioning services will need to prioritise investment in the most effective and best value care and stop supporting services which fall below standard. What's more, the public's expectation of a better service experience necessitates the intelligent and ongoing engagement of the public in service design and evaluation. In addition, improving patient safety will require a new order of understanding and information about the care being delivered.

In every sense eHealth is an essential component underpinning the drive for high quality, safe and effective care. Given the intense focus on these issues by government, the public and the professions, it is vital that nurses see eHealth as an essential part of, and not just an addition to, their practice.

1   Royal College of Nursing (2010) *Making IT SAFER*, London: RCN. Available from www.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.

The Information in Nursing (IN) Forum is open to all RCN members, not just eHealth specialists. It is the source of front-line expertise in eHealth. As a member of the Forum, you will join a national network of members who share your interest in eHealth.

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**

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