Using technology to complement nursing practice: an RCN guide for health care practitioners

Royal College of Nursing
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Contents

1. Foreword 1
2. Introduction: the changing health care landscape 2
3. Your guide to using technology to complement clinical practice 3
4. Why establish an eHealth programme? 5
5. Safe practice support frameworks and principles 8
6. Competencies, training and support 10
7. The future of care delivery using eHealth 11
8. References 12
9. Glossary of terms 13

For information
The term health care practitioner is used throughout this document to include all practitioners who deliver health care services across health and social care settings: clinicians, nurse practitioners, registered nurses, health care support workers.
1. Foreword

The health care revolution...

In an increasingly busy world, people rightly expect health care to meet their needs quickly and where possible, be tailored to their requirements. Technology helps to deliver these elements, putting the power back in the hands of the patient. For example, patients provided with remote monitoring equipment in their homes can track their own symptoms, which in turn alert nursing staff if something isn’t right. The benefits are obvious, the patient feels empowered, can remain where they are comfortable and staff are only involved when they need to be.

It is this relieving of pressure on staff and services where technology really comes into its own. Nearly three quarters of those who visit NHS Direct would have gone to their GP or A&E department instead, while home treatments are recommended for nearly half of patients. The RCN firmly believes that making use of modern technologies is the future of health care and has already had marked benefits for numerous patients.

However, we now need to be bold. We know technology such as telehealth works, so let us improve access to it right across the UK. The regularly asked question of how to build care around the patient has been answered; we need these services championed and powered by expert nursing staff – now is the time to put the power back in the hands of the patient.

Dr Peter Carter, RCN Chief Executive & General Secretary
2. Introduction: the changing health care landscape

For all health care practitioners delivering health care services, the changes in our ageing population are presenting challenges but also creating new opportunities for transforming patient care. People are now working beyond the age of 65. And, while life expectancy has been rising, so has the number of years we can expect to live with a long-term condition or disability that limits our lifestyle (ONS, 2011a, 2001b). Public policy groups have acknowledged the need for health providers to understand how these demographic changes will affect their patients, carers, clinicians and practitioners. They have also recognised the need for greater invention in supporting the needs of an older population and the importance of home-based care to reduce costs and help improve the quality of life (GGI, 2011; IPPR, 2011). The role of technology in delivering cost-effective solutions through technology and eHealth services has been encouraged and health groups have been urged to identify and evaluate suitable eHealth solutions as part of an overall strategy for developing quality care services (Dilnot, 2011; GGI, 2011).

While increased demand for health care alongside budget constraints are challenging the delivery of health care services across the UK, better access to technology, and particularly to the internet (Ofcom, 2011) is opening up the way for innovative approaches to health and homecare delivery. eHealth services – such as telephone health advice, text messaging, web-based support and remote monitoring of patients’ vital signs – are facilitating individuals, families and communities to improve their health and wellbeing through information communication technology (ICT). eHealth is helping to improve patients’ self-management, preventing the deterioration of health, and decreasing the need for surgery consultations and hospital admissions.
3. Your guide to using technology to complement clinical practice

In the contemporary approach to clinical practice, there is now a vast skill set involved in delivering health care using eHealth services. To ensure safe practice and to support all practitioners, it is important that there is guidance for staff new to this area, and for those advancing in the field.

There is much guidance for different types of service delivery, available across the UK in various locations, online and in print. The RCN has produced this guidance to chart the complexities of using eHealth technology and draw together some of the key principles and advice for health care practitioners investigating an eHealth approach for their current clinical practice. Health care leaders and managers will also find it a useful checklist for considering eHealth when redesigning a service or establishing a new service to provide advice and support to patients, their families and carers.

The guidance provides an overview, covering the broad principles and key issues to consider for safe and effective eHealth services. It complements separate, short guides that include checklists and advice for:

- **Using telephone advice for patients with long term conditions** (RCN publication code 004 229)
- **Using text messaging services** (RCN publication code 004 230)
- **Developing and using websites** (RCN publication code 004 231)
- **Using telehealth to monitor patients remotely** (RCN publication code 004 232)

Health care practitioners in this field may wish to also read the Good Governance Institute’s publication *Better care for people with long-term conditions: the quality and good governance of telehealth services* (GGI, 2011).

**eHealth services**

The terminology differs across the UK, so we have used the term eHealth as a broad term to include use of ICT in telehealth and telecare. For full definitions, please see the glossary of terms.

In times of reduced health care budgets, eHealth services are helping to meet the increasing demands for health care services while controlling the costs of care provision. New applications of ICT mean that eHealth services are able to complement health care delivery and enable faster, efficient and effective clinical communication between the patient and health care provider, including monitoring health status and delivering health care services when they are most needed.

**The benefits of eHealth**

eHealth is ‘revolutionising ... the care pathway, and ultimately what it means to be a patient’ (GGI 2011). For practitioners, it is allowing for innovative health care as well as reducing the costs of delivery. For patients, eHealth offers a range of potential benefits, such as improved monitoring of conditions, more targeted access to service providers, reduced travel and quicker clinical discussion and diagnosis. Services also play a pivotal role in promoting self-management of long-term conditions and enabling the patient to live at home longer and to have a more independent lifestyle.
Types of eHealth

There are many different forms that eHealth can take. It can involve:

- a telephone consultation between patient and a health care practitioner to triage symptoms, provide advice, monitor vital signs and provide guidance on the use of medication
- telephone or text on health promotion advice and management or appointment reminders
- patient-submitted health information using a mobile device – for example, a mobile phone or hand-held computer applications (apps) – resulting in a referral or consultation appointment
- a remote consultation between a patient and doctor using video conferencing
- patient-initiated contact with practitioners
- local internet-based support group with a chat room, blog or social network for sharing information with other users.

There will be many more examples to add as technology changes and patients become more comfortable with new approaches. This guidance focuses on the range of eHealth technology currently available and used by health care practitioners.
4. Why establish an eHealth programme?

When considering eHealth and the use of ICT to complement the delivery of your health care service, you will first want to establish who the service is for, why it is needed in your community and how you will measure its success. There are key personnel you will need to consult or collaborate with, and the service must be supported by existing governance requirements.

There may be a number of reasons for establishing an eHealth programme. But the over-riding objective should always be to improve the level of service and quality of life for patients and carers. Specific aims of particular programmes may include:

- improved access to services
- enhanced access to specialist services
- delivering services of a similar or improved quality at a reduced cost
- gaining a competitive advantage
- meeting the specific health needs of a community's population.

Planning your eHealth service: setting scope and measuring success

The service aims and objectives will determine the scope of eHealth programme provision – that is, the specialties involved, the physical environment, the equipment and technical infrastructure required and the number of service providers needed.

The objectives of an eHealth programme will help to determine how its success is measured. For example, success may be measured in terms of number of consultations, number of referrals, improvements in health status, cost reductions, and so on. As well as considering how you will determine the success of your eHealth programme, there are also a number of other issues to consider before you begin.

Questions to ask before you start

Before establishing any eHealth programme, you will need to find out as much information as possible about existing services and available options. This may be through training, site visits, or by talking with eHealth consultants and those involved in existing programmes.

It makes sense to build on the success of existing services and to ensure that services complement routine practice, and clinical governance frameworks. Regardless of the technology used, compatibility with existing systems, flexibility and fit with current practice are essential points to consider. While cost is an issue, the quality of communication is also important. For example, while they might be more expensive, higher bandwidths are likely to yield better results and improve service access.

To gather the initial information you need, there are five key questions to ask.

1. What is the aim and rationale of the service?
2. What are the local needs – have you asked patients and carers?
3. Does the local community have access to the technology needed to support the services?
4. What is currently available and could it be enhanced?
5. How much will it cost to set up, maintain and sustain?

Key contacts to involve

There are key personnel you will want to involve in your planning and preparation processes, including all nursing practitioners who will be involved in using the ICT and the commercial companies providing the ICT equipment.

To ensure alignment within your local clinical team and make sure you can access the best local expertise, you should identify and contact the following key people:

1. ICT infrastructure manager – to ensure integration of all media channels and IT equipment.
2. ICT relationship manager – to help maximise the patient/health care practitioner experience and integrate patient data with the telephony system and all media channels.
3. Web team manager – so that your website is up to date and links to the telephony system where possible – for example, for web chats, emails, click-to-call and other functions.
4. Management information analyst (including forecasting and scheduling) – to ensure resource levels are adequate to meet current patient volumes and monitor trends in order to make changes to meet future patient needs.
5. Infrastructure support manager – to make sure that technology is kept up to date and any systems issues are swiftly resolved to reduce the impact on patient satisfaction.

Promoting self-management, not reliance

The use of ICT and eHealth services should foster and support improved health care delivery and a philosophy of self-management for your patient group. The service should:

- provide clear frameworks that encourage patients’ confidence in the quality and standards of the service
- have clear aims and objectives so that practitioners and patients know what can and can’t be achieved
- have an infrastructure and resources to support it (for example, emergency access clinics to manage symptom control or rapid access to services)
- complement, not replace, primary care and medical support
- use technology as an integral part of patient education and a support to self-management strategies.

Other considerations

All health care professionals providing support to patients should be aware of the range of available eHealth services in their local area so they can advise patients and other practitioners on what is currently available. This will also help to determine what gaps there are in service provision.

They should also look at what technology is available that provides a single system that can integrate patient databases with phones and email – it may also offer media channels such as text messaging and web-chat.

Health care needs and ICT are constantly changing, there will be other considerations specific to your area of practice and local
Community needs. A useful exercise for determining some of these needs is to prepare a business case for your new service. This may help you to underpin the benefits of your new service to patients and decide how you will ensure continued and measured success. It may also be useful to think of how to evaluate your eHealth programme on an ongoing basis, including measures of patient satisfaction.

Some other key areas to investigate include:

- access issues
- local patient needs
- patient attitudes
- staff attitudes
- potential drawbacks.

**Potential drawbacks**

Practitioners involved in delivering eHealth services need to be aware of any leadership and management challenges that may influence service delivery. Other drawbacks to anticipate and deal with upfront might include:

- lack of capacity to respond to patients in languages other than English, or with hearing and sight difficulties
- problems returning calls and queries
- inadequate procedures for closing down calls and queries
- dealing with verbal abuse and misuse of the service
- overuse of a service, which can be a key clinical indicator that a patient’s care needs review
- dealing with complaints
- poor confidentiality
- governance issues.
To ensure safe practice and to support health care practitioners, it is imperative that there are clearly documented frameworks in use, consistent with law and guidance across the UK, and reflecting local, regional and national policies. All services should be established using the principles of nursing practice, governance and risk management. Services must follow best practice, be regularly monitored and maintained for quality of service and standards.

**Principles of nursing practice**

The RCN *Principles of nursing practice* outline the public and professional expectations of nursing practice and the core values and principles that should underpin all services. They also support the delivery of health care involving technology.

*RCN Principles of nursing practice:*
[www.rcn.org.uk/development/practice/principles](http://www.rcn.org.uk/development/practice/principles)

**Codes of practice**

Using eHealth as part of nursing practice is covered by the NMC *Code of practice*, in exactly the same way as any other aspect of nursing practice. This includes:

- being competent in managing the equipment involved and delivering the care associated with its use
- clarity on who has ongoing responsibility for the care of patients
- ensuring informed consent prior to use of any eHealth application
- determining and informing patients of their rights and responsibilities
- respecting privacy – for example, knowing who is in the room at a remote site and if they have a right to see any data or images being transmitted, or verifying the identity of all people involved
- maintaining confidentiality, including after the consultation
- ensuring data integrity and network security
- agreeing on ownership of eHealth records.

The code is available from the Nursing and Midwifery Council (NMC):
[www.nmc-uk.org/Nurses-and-midwives/The-code](http://www.nmc-uk.org/Nurses-and-midwives/The-code)

**Governance, ethics and other policies**

Health care and nursing practice have traditionally demanded face-to-face contact between patients and professionals. While the ethics of remote assessments and treatment have yet to be fully explored, patients should be able to expect equivalent standards of care – and the same ethical principles – whether care is provided in person or by use of ICT.

Any eHealth programme’s service plan must comply with professional governance procedures, legal principles and existing policies. These could include relevant and up-to-date clinical, operational and technical policies, procedures, guidelines and standards – covering (among other things) security, confidentiality, data storage, informed consent and legal...
liability and what might constitute poor or unacceptable practice.

Health care practitioners involved in eHealth programmes should be aware of local policies (including those that determine appropriate video and telephone behaviour), relevant legislation (including equipment safety), professional guidance (such as standards for record-keeping) and any technical standards that might apply. Examples include:

- professional codes of conduct, including the Nursing and Midwifery Council (NMC) Code of professional conduct: [www.nmc-uk.org/Nurses-and-midwives/ The-code/The-code-in-full](http://www.nmc-uk.org/Nurses-and-midwives/ The-code/The-code-in-full)
- data protection, confidentiality and freedom of information: [www.ico.gov.uk](http://www.ico.gov.uk)
- N3 connectivity: [www.n3.nhs.uk/ProductsandServices/N3Connectivity/default.cfm](http://www.n3.nhs.uk/ProductsandServices/N3Connectivity/default.cfm)
- risk management for identifying and managing difficult issues related to the service; access; prescribing practice; and record-keeping and documentation:
  - complaints procedures
  - monitoring and audit.

Other policy considerations might be:

- whether job descriptions reflect the work involved in the service
- infrastructures safely support the service (clerical support, time frames to resolve issues, documentation)
- the remit of the service outline is clearly documented
- case management and prioritising care
- critical incident reporting is in place
- regular review and analysis of workload is undertaken
- clinical supervision for health care professionals is provided, particularly supporting practitioners following difficult calls and queries
- succession planning is in place to ensure competent staff support service
- procedures and timetables for monitoring and evaluation of services
- planning for service withdrawal
- the need for ongoing training – statutory and other special training – and clerical support
- procedures for feedback – complaints, comments, suggestions.
6. Competencies, training and support

The sustainability of your service depends on good business planning, including, in addition to the key clinical skills, any specific training needed.

The remit of health care practitioners and practitioners providing service support should be clearly defined. In particular, health care practitioners should have clarity on their role in changing treatment or medication dosages and in completing documentation. The use of eHealth means that health care practitioners will have to learn new skills and ways of working. They need to understand the eHealth technology, and be confident and able to support patients and carers in its use. As well as working within their recognised professional codes of conduct (see NMC Code above) and competency frameworks, all health care practitioners should also be supported by adequate clinical supervision, training and ongoing support.

When establishing a new eHealth service, some of the following aspects of core competencies should be covered in training:

- clinical decision-making skills, including sound knowledge of the disease area and treatment options
- identifying important indications that may require urgent medical referral
- sound knowledge of potential risks related to the disease and treatments
- communication skills – interview techniques (listening and questioning skills) and coping with difficult calls
- interview skills to acquire relevant clinical and general information without visual clues
- providing telephone advice, including the use of non-visual communication skills
- limitations of telephone and other remote consultations
- considerations of patient recall
- education and training for patients and carers
- legal implications of advice provided by telephone and other technology.

A significant challenge in eHealth provision is in making and sustaining relationships with patients without their physical presence. This represents a very different way of working for most health care practitioners. Informatics courses can be helpful, but they tend to focus on general principles rather than on specific eHealth skills. You can address this gap by investigating bespoke training for your service providers, patients, their carers and health professionals. Three broad areas should be included:

- prepare patients and/or carer to use equipment
- develop a knowledge and understanding of equipment
- support competency/professional development of the staff group.
Complementary to traditional health care practice, eHealth services can help you to meet the key aims for supporting patients with LTCs: prevention and staying healthy; self-management; assisted management; supported management; and palliative care.

Demand for services is predicted to rise across the UK. Our changing demographics, combined with the continual need to offer value for money, means technology is set to play a critical role in delivering quality and affordable patient care and advice. And, while technology is changing rapidly, improved access means there will be new and innovative ways for patients to benefit from its use.

The checklists and principles outlined in this guidance are designed to help you establish a solid foundation for sustainable eHealth services that complement your existing practice. By including regular reviews and evaluation, and assessing patient attitudes as well as outcomes, you can help to ensure that your eHealth services are flexible enough to meet changing budgets as well as evolving community health care needs.

For more detailed information on specific eHealth services, please refer to the separate guides for:

- **Using telephone advice for patients with long term conditions** (RCN publication code 004 229)
- **Using text messaging services** (RCN publication code 004 230)
- **Developing and using websites** (RCN publication code 004 231)
- **Using telehealth to monitor patients remotely** (RCN publication code 004 232)


IPPR (2011) *Older Londoners*, London: IPPR.


9. Glossary of terms

**eHealth**
eHealth means promoting, empowering and facilitating health and wellbeing with individuals, families and communities and enhancing professional practice through the use of information management and information and communication technology (ICT).

**ICT**
ICT (information and communications technology) is an umbrella term that includes any communication device or application. For example: radio; television; mobile phones; computer and network hardware and software; and services such as videoconferencing and distance learning.

**Telehealth**
Telehealth refers to the provision of care from a distance using a range of electronic technologies. Examples of telehealth include video consultations to support diagnosis and management, clinical networks and health professional education (JIT, 2011). Telehealth programmes are often established by health care organisations, such as the NHS or general practice.

**Telecare**
Telecare is the provision of technology to enable a patient or client to live more safely and with greater independence in their own home. For example, pendant alarms or smoke and heat sensors, and alarms to summon help in an emergency. Telecare programmes, on the other hand, are often led by social care organisations, such as local authorities.

**Telehealthcare**
Telehealthcare is the convergence of telecare and telehealth to provide a technology-enabled and integrated approached to the delivery of effective, high-quality health and care services. It can be used to describe a range of care options available remotely by telephone, mobile, broadband and video conferencing (JIT, 2011).

**Types of information**
Information management includes electronic and physical information that is delivered through multiple channels that may include mobile phones and the internet. For example: data; paper documents; electronic documents; audio; and video.
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**May 2012**

Published by the Royal College of Nursing
20 Cavendish Square
London W1G 0RN

Publication code: 004 228
ISBN 978-1-906633-98-1