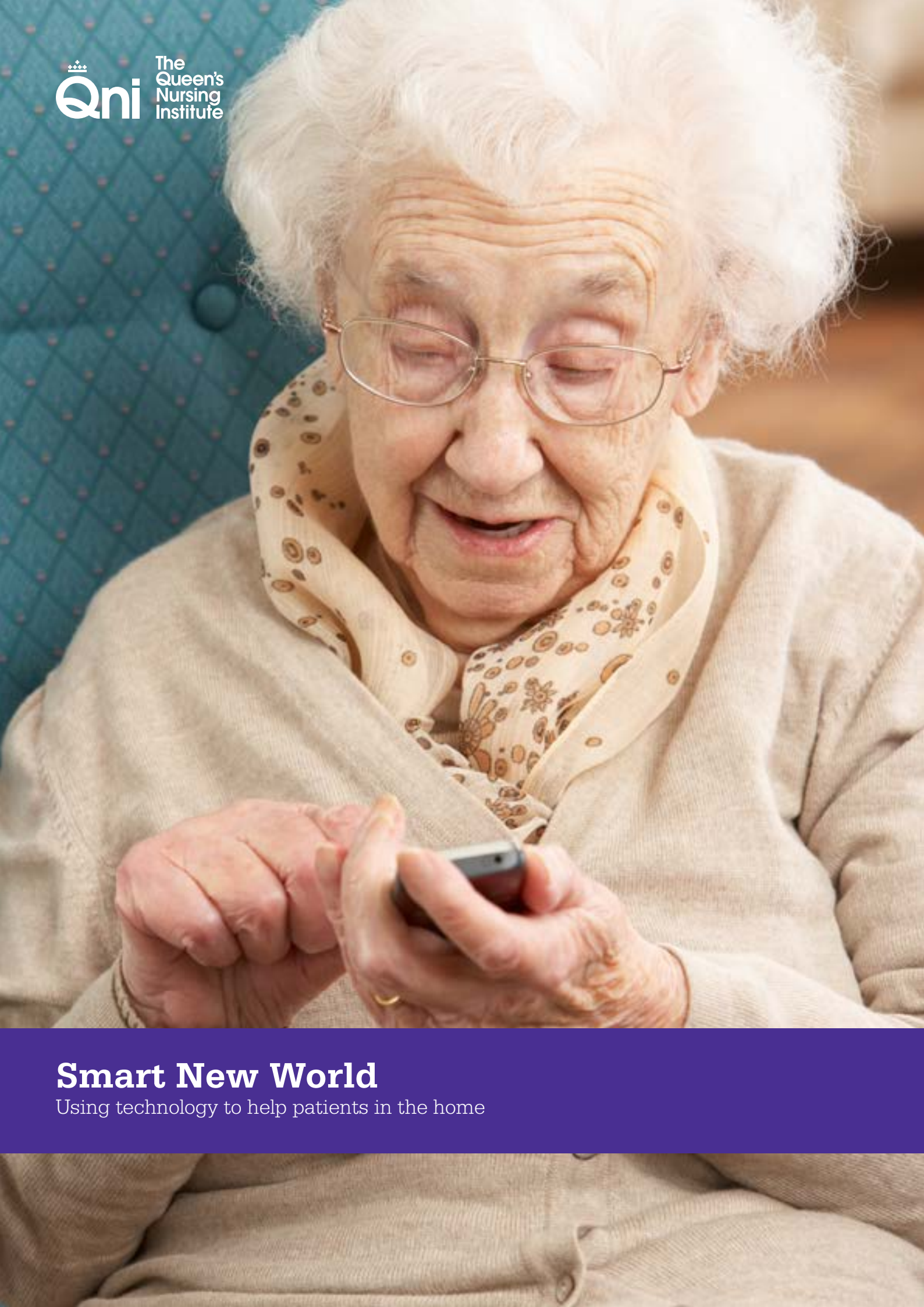


Smart New World

Using technology to help patients in the home

The Queen's Nursing Institute

The Queen's Nursing Institute is a registered charity dedicated to improving the nursing care of people in their own homes.

We trained district nurses until the 1960s, in a model that was copied across the world. This model of care was instrumental in developing a comprehensive, highly-skilled service in the UK that meets the needs of millions of people every year.

Today we improve nursing in the home by:

- Developing Queen's Nurses who are committed to high standards of care in the community, helping them to make improvements in practice and to act as leaders and role models to others
- Influencing policies in England, Wales and Northern Ireland that affect healthcare in the home and the quality of community nursing services
- Funding projects led by community nurses that improve care for their patients

Contents

Foreword 2

Introduction 5

Understanding the Possibilities 8

New Ways to Help People 12
- Telehealth 13
- Websites and web forums 14
- Virtual ward or hospital at home 15

New Issues to Tackle 16

Nurses and Technology 20

A District Nurse's Story 23

Individual Nurses' Experience 24

Supporting the Change to 'Smarter' Working 28

Summary and Challenges 32

References 36

Glossary 38

Additional Reading 40

Foreword

There can be no doubt that technology has changed all our lives. The speed with which we are now able to communicate with friends and family has transformed our sense of distance and changed the nature of relationships. Networks can be formed in seconds and spread within minutes. The world really has become smaller and the ability to share ideas and information has transformed our ambitions.

For those who work closely with patients and carers in the community this is an exciting time. Nurses in the community have always had a close understanding of the nature of societal change and how it impacts on lives; indeed it was this close relationship that was the impetus for the development of community nursing in the first place. Community nursing services have consistently been characterised by innovation and the current possibilities associated with the increasing use of technologies will present us with some very real tools to support patients and to develop very different responses to their care needs. Already we have examples of community nurse successfully deploying a range of mobile solutions for both themselves and patients. What we know from these sites is that when new ways of working are well planned, the use of new technologies is both popular and realises real benefits, both anticipated and unanticipated.

The increased availability of information from a wide range of sources is already transforming the lives of patients and carers. The potential of this new way of sharing to change the practice of clinicians, to enable patients to share with others and to increase their own expertise, is only just beginning to transform traditionally delivered services. We really are at the beginning of a wave that has much further to go.

The challenge for all of us is to develop an active vision which sees technology as a key enabler to our goals. Yes, there will be disruption to our old ways of thinking and delivering services but change has always been our constant. There definitely will be new skills to acquire for ourselves and others but that too has always been the case. As leaders we need to make sure we are given the time to think and plan so that the patient benefits of new ways of working are clearly identified and the workforce skills needed to achieve this are appropriately resourced.

The cultural change required to move forward technology as a key aspect of our community services is our biggest challenge. The technology in many ways is the easy bit, but as many a writer would say, the key to culture change rests within our own behaviour.

Dr Susan Hamer
National Director for Nursing, Midwifery and the Allied Health Professions
Clinical Division, Informatics Directorate
Department of Health, England.

Introduction

Technology is part of everyday life. Most people have mobile phones, use the internet, and have gadgets around the house. Many people are used to booking travel or holidays online, communicating with friends and family by text, taking their child's temperature at home, or monitoring their household's energy usage.

Activities that once required an expert intermediary, or a piece of equipment only available to specially-skilled workers, are now possible for everyone. In healthcare, however, the picture is very mixed.

There are many instances where technological developments have transformed care. New diagnostic and treatment methods have reduced the need for invasive surgery; or where surgery is necessary, have made it less traumatic. The use of telephone, video and web technology has allowed expertise to be shared over great distances, and clinicians and patients to talk directly to one another, even when they cannot be together. The reduction in size, complexity and price of medical equipment has made it possible for individual patients to have their own equipment at home. Changes in Government policy, public expectations and health economics have supported the move towards home or community-based care, and away from the habit of admitting people to hospital routinely for investigations or treatment. As a result, entire services that would once have been ward-based are now delivered by community teams.

Yet there are still many instances of the health care system being remarkably resistant to the potential of technology to make care more effective, convenient or personalised for patients. There are times when important information still travels slowly and unreliably by letter or fax. There are places where multiple written records are used by a variety of different professionals about the same patient during the same episode of care. There are practitioners who refuse to use information technology; and decline to offer their patients home monitoring equipment on the assumption that they won't be able to manage it.

Healthcare provided in the community is the most exciting and essential place for new technologies to be exploited to the full[1]. People's homes are all different, individuals are each unique, and their circumstances can change from day to day. If ever there was a setting that demanded tailored care, flexible solutions to problems, and a partnership of knowledge and practical management between the individual and their health team, it is in the patient's home. This report highlights some of the many examples of how technology can give patients a new sense of control and involvement in their care, and give nurses new ways to deploy their expertise. It aims to:

- Review the status of technology and 'eHealth' in community nursing practice
- Identify some of the reasons why professionals find it difficult to embrace new ways of working in the community, and to signpost to some guidance that will help them
- Begin a debate on what is needed to transform attitudes to technology and embed it in modern practice
- Set out some challenges for individual community nurses to consider as part of their own professional development

Technology will never replace the expert nurse; both are needed to deliver high quality care to patients. Neither will the nurse, however expert, be able to substitute entirely for the use of technology in modern health care. That would be as unfair as denying a patient modern medicines. Now is the time for the intelligent, comprehensive and creative use of every possible technological aid to deliver nursing in the community. It is no longer a fictional long-term vision; we are already in the Smart New World.

Delivering Services in New Ways

- Telephone services
- Text/email services
- Virtual wards/services
- Remote monitoring/advice
- 'Hub and spoke' services via video teleconferencing and video-conferencing consultations

Understanding the possibilities

One of the exciting challenges in thinking about technology in health care is that it crosses many different areas. It covers both tangible 'kit' and intangible ways of working, communicating and relating to patients.

Technology in health care is not just about information technology: using laptops instead of hand-written notes, or email instead of letters. Nor is it just about gadgets such as personal care alarms, home monitoring machines or automatic injectors for drugs.

Really 'smart' healthcare uses a combination of all these things, making them a routine part of the service, rather than just pilot projects; to be used flexibly as the situation – and the patient – demands, rather than by rote in every case. The potential for stream-lining the delivery of health services, and giving service users much more control in their lives, is considerable. With 70% of NHS money spent on patients over the age of 65, and 60% of these people having one or more long term condition, it makes sense to use home-based technologies to improve these people's lives and reduce care costs[2]. For example:

- A pilot in Kent[2] with 250 patients suffering from chronic obstructive pulmonary disease who were given home monitoring equipment, led to a 50% decrease in hospital admissions, and a reduction in home visits by 80%, freeing up professional time for other patients
- A telehealth pilot in Kirklees[3] using laptops to save staff returning to base for information, was estimated to save more than £500,000 a year in travel costs alone
- A new 'hub and spoke' model for out of hours care for acute stroke victims in Cumbria and Lancashire[4], using telemedicine to link a network of physicians with each other and with CT scans in order to speed up the administration of thrombolytic medication, predicts that 60 extra people each year will survive their stroke
- Whole system demonstrator sites[5] in Cornwall, Kent and the London Borough of Newham have put telehealth equipment into thousands of homes where patients have heart disease, diabetes or chronic lung disease, with the aim of finding out how telehealth could work on a grand scale.

The QNI has also been investing in small-scale projects that use technology to improve services, through our Fund for Innovation programme.

In recent years, these have included a team setting up a new website to enable disabled youngsters to access information about local services themselves as they make the transition to adulthood and adult services. Other projects have produced films to use as teaching tools where patients' language skills are poor, or used text messaging as part of their support to children with chronic conditions, so that they don't miss school to attend clinics. Some have used software to improve the scheduling of work, eliminating missed visits and giving patients more choice about the timing of their care.

Saving money to reinvest in health services, and improving experience and outcomes for patients, are not the only aims of these initiatives. The NHS Confederation says:

> 'The real opportunity lies in elevating shared decision-making to be as important a concern for health technology as cost-savings and efficiency. Where this is done, the digital future can offer patients far more opportunities to be involved in discussions about their care, while protecting face-to-face services for the people it has value for.' [6]

And it is not only a matter of whether we choose to pursue more technological solutions for the benefits they can bring. A 2020health report reminds us that:

> 'Our current approach to the delivery of care to people with long term conditions is unsustainable both in terms of cost and quality of care.'[7]

So how do these new kinds of services feel from the patient's perspective?

Finding & using health-related information

- Web-based general information
- Web forums and discussion boards
- Electronic patient records
- Online appointment booking
- Telephone advisory services
- Emails, texts to/from health professionals
- Advice to patients about evaluating information

New Ways to Help People

"Telehealth gives me a sense of reassurance to know somebody is keeping a check on me everyday. It feels like a godsend."

Telehealth

Pauline Waite lives in York. She suffers with emphysema and started using telehealth in December 2009. This is how she describes the impact of having telehealth equipment in her home.

"I was struggling to cope with my illness before telehealth was fitted, either waking up or going to sleep feeling uneasy or ill.

"Telehealth gives me a sense of reassurance to know somebody is keeping a check on me everyday. It feels like a godsend, I feel much more at ease with the different aspects of coping with my illness.

"If I don't feel quite right I can take measurements at any time in the day and the majority of the time everything is okay. Before the device was fitted I would worry my blood pressure was too high and whether my body could cope with the things I had to do that day. Now I feel I have the confidence to get on with my daily activities without the thought constantly being at the back of my mind.

"I would definitely encourage other patients to get telehealth. It's literally changed my life. After I was admitted to hospital last year I realised I had to re-evaluate my lifestyle completely and telehealth has made the whole thing seem much easier and given me the confidence to manage my illness."

Judith Norell, Community Respiratory specialist nurse, comments:

"I've seen the impact of telehealth first hand and it's incredible to see the peace of mind and reassurance it can give to patients. Pauline is now far more confident in going about her day-to-day activities knowing that her condition being monitored more closely. I am thrilled with the new technology and can see that it will benefit many more patients in the future."

Source: NHS North Yorkshire and York PCT http://www.nyytelehealth.co.uk/information_for_patientscarers/benefits_and_patient_stories/. Reproduced with kind permission of NHS North Yorkshire and York PCT

Websites and web forums

A parent writes about the Nottingham Support Group for Carers of Children with Eczema:

"Looking after 2 young children with eczema is very hard work. Their creams and needs have to be built in and around everyday activities. The cream routines, treatments and skin flares can change daily. The NSGCCE web site provides clear trusted medical facts in a straight forward, user-friendly format. If I need to remind myself or find out about a treatment, symptoms or test procedure then the fact sheets are amazing - concise and from a medically trustworthy source - not mumbo jumbo which many sites are, causing more confusion to this endless and tiring condition.

"The NSGCCE site makes me feel there is always support and on-hand information readily available from a credible medical team which I can trust and access whatever the time of day. It gives a great insight into the on-going research and trials which otherwise I would have little knowledge of, thus reminding me there is a true window of hope for positive steps to treatments in the future.

"Thank you NSGCCE for giving us hope and the strength to fight eczema, it is good to know on this battle we are not alone."

Sandra Lawton, Nurse Consultant Dermatology, comments:

"Having worked with parents and children with eczema for many years our focus has always been to provide services based on evidence and information. Parents have many questions relating to eczema and the treatments they are using. Despite eczema being very common, families experience conflicting advice from a variety of sources: family, friends, people in the street and health care professionals. This site was developed to reduce conflicting advice and provide a trusted source of information with the key being to:

- Ensure patients and carers have the skills and knowledge they need to understand how best to handle their condition, including how to deal with flare-ups, to adjust medicines, improve their lifestyles and access health care services
- Provide information that people are able to find easily and use meaningfully
- Enable and empower patients and their carers to manage their own condition more effectively
- Provide a trusted and consistent person to contact, and
- Ensure support is available from a knowledgeable patient as well as broader peer networks and medical/nursing expertise.

Our site has an average of 99 unique visits a day with an average of 2986 a month. On average there are 25 hits an hour with most hits being recorded during the 10.00 to 13.00 time slot. Over the years the site has been visited by people from 119 different nations."

Virtual ward or Hospital at Home

The Darent Valley Hospital at Home team provides a range of technical and nursing care at home while patients remain under the care of hospital consultants and have 'inpatient status'. This is often referred to as being on a 'virtual ward'. Patient comments on their evaluation of the service include:

> "It means an awful lot to me to be able to return home and I couldn't have done it without you."
>
> "Wonderful, could not have hoped for anything else. Everyone was very kind and helpful. What a great team you have – you should be very proud."
>
> "It's a very good service. I don't think you can improve it."

Julia Walsh, Darent Valley Hospital, Dartford, Kent, comments:

> "We were facing the future, and very different ways of working. We identified the need for this kind of service, and visited Central Middlesex to look at their model. We have a 'can do' culture, and time from vision to implementation was just 3 months! Since July 2008 we have delivered care to 2582 patients in their own homes, and saved more than 10,000 bed days."

New Issues to Tackle

Alongside the opportunities of using technology in healthcare, there are some barriers, or perceived problems, which must be addressed if the smart new world is to be embraced by health professionals.

These barriers include:

- Confusion about the terminology used: phrases such as 'telemedicine' are used to cover a variety of different aspects of care, and terms such as 'virtual wards' or 'telecare' are becoming more common. The glossary at the end of this report explains some of the more common terminology

- The 'up front' costs of technology in a tight financial climate, which increases the risks of waste and blame if the technology is not used, or not seen as a success

- The fact that savings often occur in the medium-term rather than the short-term; and they may not be 'realisable' savings, just theoretical reduced costs which are immediately taken up elsewhere in the system

- Diversity around the country, with even neighbouring areas being at very different stages of using technology in practice

- Different approaches to implementation, ranging from 'big bang' approaches with the whole system introduced everywhere at once, to incremental approaches that aim to build staff confidence and interest step-by-step

- Remote care can also increase social isolation for those who most rely on encounters with health professionals.

Some solutions to these issues have been proposed, recognising that changes to traditional ways of working require changes to the support structures and service management that lies behind each clinical encounter. For example, Sir John Oldham[11] suggests that:

- Clinicians must be involved in re-designing the systems, not just be told to use data differently
- The patients to be included in each kind of telehealth initiative must be formally risk-assessed to ensure that the new way of working is suitable for them
- Care pathways and protocols need to be changed before the new initiative begins, so that all parts of the system agree the purpose and use of the data, and agree to treat it as valid
- Remote working should be written in to the pathway as the default way of working; and linked to the concept of neighbourhood care teams with a single individual co-ordinating care for each patient.

These are all valid external issues which need to be taken into account when new services based on technology – or new ways of working in existing services – are planned. The next sections look at the more internal, professionals concerns that can be barriers to implementation and how these can be addressed.

The Kit - hardware and software

- Physiological monitoring equipment
- Remote monitoring equipment for home environment
- Personal care alarms
- Laptops/handhelds for care records
- Near patient testing equipment
- Electronic prescribing software
- Staff scheduling programmes
- Mobile phone apps
- Food/drug delivery systems

Nurses & Technology

The introduction of new technology into health care is more than a matter of finding funding, purchasing 'kit' and training staff. There are additional practical issues, new professional considerations, and a new set of hopes and fears to tackle, for both nurse and patient.

The first, and possibly the biggest, issue is the attitudes of professionals to the adoption of new technologies, and their readiness to embrace such changes to practice. The Royal College of Nursing's 2010 e-Health survey of its members[8] found that more half of the 1300+ nurses who responded felt that they would need more training to use the basic Electronic Patient Record; and that 20% of respondents still regarded the EPR as a threat to the nurse-patient relationship. More than half had not heard of 'telehealth', and 85% said they had no experience of it in practice (though many of these were educators or managers). Given this lack of experience, it is understandable that more than half of respondents did not know whether telehealth would improve patient safety or threaten patient confidentiality, and 82% did not think it would change nursing practice.

By contrast, work undertaken in Northern Ireland by the Public Health Agency, European Centre for Connected Health and the RCN Northern Ireland[9] found more positive reactions to technology in healthcare. In workshops of 87 nurses, followed by discussion groups with managers and educators, more than 90% of the nurses believed that the use of technology would improve patient safety, and 95% believed that nurses had a role to play in developing technology for healthcare. Yet this report also identifies the core challenge to nursing posed by changing to new, technologically-enhanced ways of working:

> "Nursing practice is rooted in individualised care for the patient, based on establishing a nurse-patient relationship. Nursing literature, the popular press and patient advocacy groups support and value this element of nursing and therefore the challenge for nursing is the ability to balance the fundamental practice of 'hands-on, face-to-face' care with new methods of technology assisted nursing practice such as telephonic and remote nursing."

As nurses attempt to introduce this balance to their practice, they have to manage a new set of professional concerns about use of the technology in nursing, such as:

- Fear of professional expertise being replaced by technology
- Concerns about confidentiality and access to data
- Seeing the use of technology as nursing expertise not IT expertise
- Accepting that remote care is still nursing, even if it is not 'hands on' or face-to-face
- Overcoming a lack of faith in patients' desire or ability to adapt to new technologies as part of their care
- Overcoming a lack of trust in the readings of instruments resulting in double-checking or dual-running of systems.

It is not just nurses' professional roles that are challenged by the introduction of new ways of working involving technology. Such innovations also challenge nurses' personal preferences about their role and how they carry it out. A 'Smart Healthcare Live' event heard how community nursing staff who had been given remote access to patient files continued to go into the office 'because they like doing it' and for 'professional and social reasons'. Their employing organisations had not been able to save on travel costs as a result, and the regional IM&T consortium manager concluded that up to 30% of nurses might refuse to implement new ways of working[10].

Of course, nurses do not deliver healthcare alone, and the whole clinical team has similar challenges to face in order to change working practices. The NHS Confederation[6] reports evidence for three key issues that challenge all health professionals faced with a more 'digital' NHS:

- Power and identity – the availability of information direct to the patient about their condition and their treatment choices can increase their control and autonomy; this can generate higher quality discussions between patient and professional, but also change the traditional relationship in which the patient is a 'passive player'. Conversely, home monitoring technologies can make the patient feel less in control by being constantly monitored.

- Trust – both patient and professional must trust the new technology to be safe and effective. In some cases, decisions made by an unseen professional via telemedicine were seen as less trustworthy as those made in a face-to-face encounter.

- Equity – variations in people's access to digital technologies can translate into inequity in service provision. Older people, those with physical disabilities and those on lower incomes use the internet less than other groups.

A district nurse's story

"I became a nurse because I care. This is the reason I get up every morning, this is my motivating factor. I've seen many changes to nursing and to the NHS over the past 25 years. Nursing has become more professional, more complex and more results driven. Despite this I still care.

Several years ago I joined the community after working in theatres and recovery for the past 8 years. Having come from an orderly controlled environment such as theatres I found the pace and unexpected nature of DN work to be very exciting. Over the past few years of economic change the impact upon the NHS and our service has meant that my initial excitement has wavered. Our team has undergone skill mix and reduction in staffing levels, this has directly impacted on the amount of work we all have to achieve in a shift. At the end of a busy day there is a general sigh of relief when all the work is done, sometimes this means us working late or having to put off work until the next day. I will be honest in saying my morale was pretty low, and I felt I was personally letting the patients and the team down when we couldn't complete our work or missed visits occurred.

The bottom line was we needed to become better organised as our team had changed, our patients were becoming more complex but our methods of allocation had not kept up.

Several weeks later at another team meeting, a 'demo' [of a new computer-based work scheduling system] was given. It lasted about half an hour. It was an IT solution to our woes. I didn't get it. I didn't understand it. I didn't really like it. I tried in vain to avoid it for several weeks. Then came the dreaded announcement that our team would give it a go and pilot it for 6 to 8 weeks. When I started my training on how to use the system I felt like a student nurse on my first day of placement once again. As with medicine, IT has its own language. The nurse in me kept saying to myself 'I'm a nurse not an IT expert' then I realised nursing had become reliant on IT, it was time to embrace it not fear it. Gradually I got used to the new system and even made a few suggestions on how to make it easier to use and prettier to look at.

One of the best bits of the new system is that we can record when a patient wants to be visited. We used to have regulars and remembered their wishes. In this new age as a senior staff nurse my caseload is no longer full of regulars, I assess, I triage, I team lead. With so many in the team and so many part timers these wishes often got forgotten and sadly patients ended up putting their lives on hold whilst waiting for us to arrive.

That was about 6 months ago. I now feel less like that student nurse and more like my old self. In fact, I actually feel as if a dark cloud has been lifted. I no longer fear IT (as much) and have freed up about 2 or 3 hours of my time by not having to put all my patient contacts onto Lorenzo (previous database). Our team hasn't missed any visits, our patients are happier as they don't get forgotten and they see us at a time that suits their needs not ours. All in all this gives me more time to do the thing I love to do and am paid to do: to care."

Individual Nurses' Experience

"I actually feel as if a dark cloud has been lifted. I no longer fear IT (as much) and have freed up about 2 or 3 hours of my time."

In order to explore the experience of nurses who have already begun to develop the balancing act of exploiting technology while continuing to give personalised care, the QNI held a series of teleconferences with nurses who have broad experience of technology in community care. They gave their own views of the practical and professional issues arising from their new ways of working, which are already being positively addressed where they work. These included:

- The management of different kinds of risk using guidelines and protocols, 'safety-netting' and safe-guarding – for example, when callers to a telephone helpline or visitors to a website disclose information about a person at risk
- Changes to the delineation of different professionals' roles and changing the boundaries of practice
- Establishing and managing a different relationship with the patient and family
- Balancing confidentiality and disclosure and appropriate sharing of information
- Clarifying new interfaces between services and who is responsible for the patient at each stage
- The need for new governance structures covering new topics such as conflicts of interest, advertising/endorsement on websites, public liability insurance, and data collection and storage
- Concerns about the practical infrastructure to support new ways of working e.g. where mobile signals are unreliable or different IT systems cannot integrate information
- The need for specific training for the different skills involved in working remotely from patients.

These experienced nurses had their own clear views on the difference that various forms of e-health made to their work, their patients, and their professional and patient relationships. Some of their comments included:

"Telehealth offers patients a sense of ownership when recording their observations and understanding of their interpretations. Therefore personally it feels like the partnership with patients is strengthened."

"When telehealth is installed and it is understood by all relevant parties that it does not replace the professional but informs the patient and professional on the wellbeing of the patient, then the concerns are removed."

"There is a misunderstanding that telehealth is about older patients only – actually it involved children and young people much more easily."

"Giving information [via websites] helps stop crisis management, and allows better planning."

"[One challenge for the nurse is] letting go of the reins."

"Some patients feel in control and empowered. Some worry that they don't see you as much – they need to be weaned off. They need more support initially, to understand what they are doing."

"As a telemedicine nurse specialist, it can be difficult to be seen as a clinical specialist rather than an IT specialist."

"A challenge for the nurse in telephone triage can be] making the leap from obeying instructions to making decisions."

Two nurses who are experts in the use of technology in healthcare give their views of the current state of play in the field, and of their roles. Sharon Levy, Telemedicine Nurse Specialist, Scottish Centre for Telehealth and Telecare, Scotland:

"Despite the fact that I have been involved in e-Health for nearly 15 years now, my focus on striving to offer excellent patient care has not changed. Like many other nurses I became a professional care provider to be with people, to support them in regaining their health and enhance their wellbeing as well as to offer advice on coping with ill health and disability. The technology 'bits' – for me - are the tools with which to provide effective care and efficient service, whilst reaching out to people regardless of where they live.

"I am, personally, very comfortable with using technology as an enabling mechanism for my practice. Yet sometimes the medium itself is so disempowering that we, nurses, are frightened of it. I often see colleagues who are worried that by pressing the wrong key they will 'break' the system or delete patients' details, forever. I also see those who are seduced by the fancy 'packaging', thinking that if something is presented on a screen it must be correct or indeed appropriate.

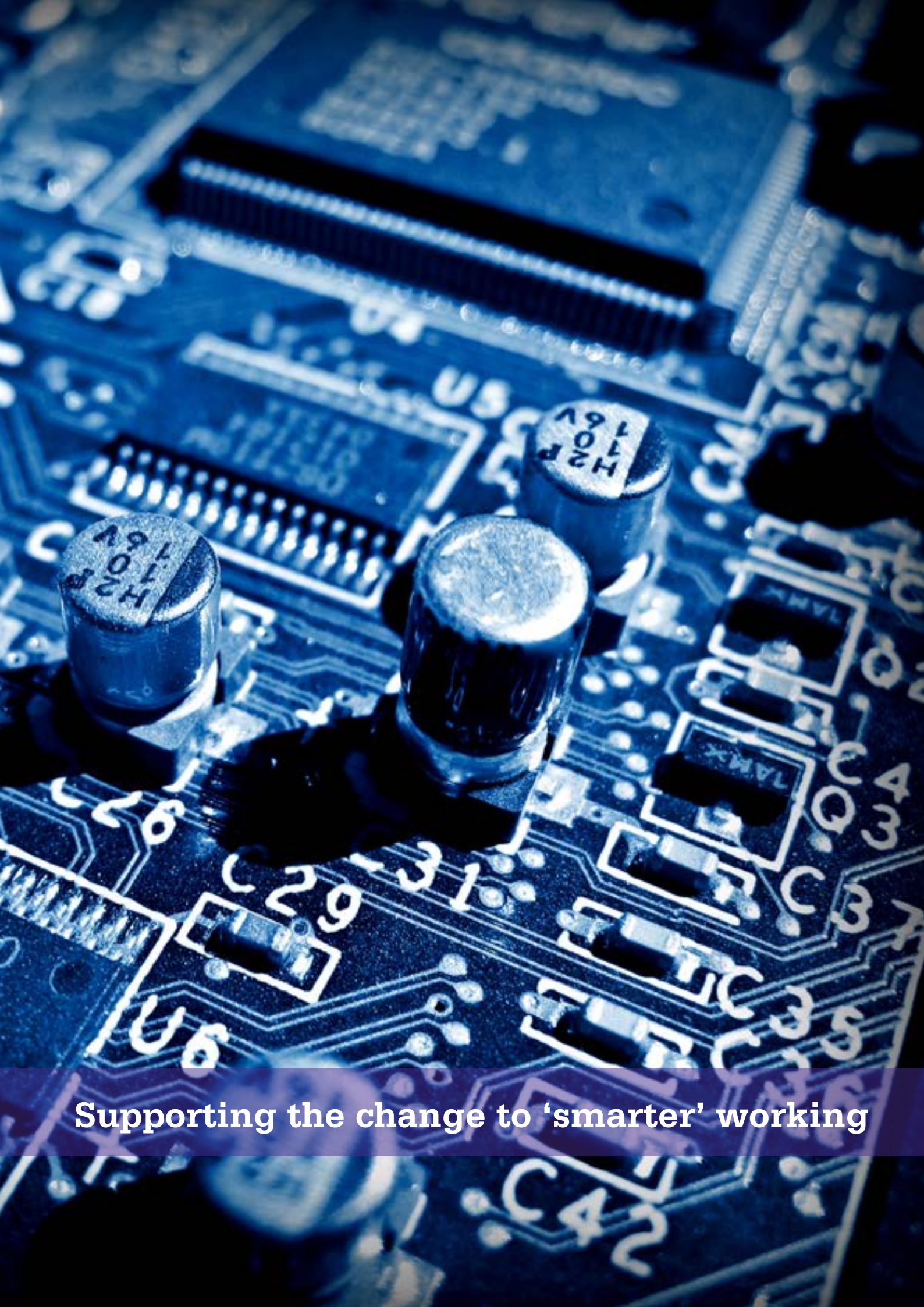
"As professionals we must access the right tools and possess up to date knowledge, regarding healthcare technology, to ensure our patients come to no harm and that our practice fits with the 21st century."

Annie Barr, Managing Director, Annie Barr Associates Ltd:

"I worked as a Nurse Practitioner in the NHS and the independent health sector for over 30 years but always harboured a strong ambition to start my own business. I kept shrugging off going into business for myself because it never felt like the right time and I didn't have the confidence to step out on my own.

"However this changed in 2007 when I was diagnosed with a tumour, which really helped me re-focus on what I wanted to do with my life. I finally decided to step away from the security of a nine-to-five job and do something that really made me happy. In August 2009, I started my medical training consultancy drawing from the many years of experience that I have working in healthcare, under my belt.

"I have always combined a dual role and I have worked independently as an ANP in Out of Hours care for 9 years, using telephone triage. I enjoy the combination of roles as it helps me stay in touch with reality in the NHS. I truly believe that we must use the talents and years of experience we have as clinicians and mentor and support our colleagues who have taken the leap into the business world."



Supporting the change to ‘smarter’ working

Nurses becoming involved in e-health need not be unsupported. There are many helpful resources to draw upon.

The Royal College of Nursing (RCN) has produced two documents about 'eHealth', emphasising the potential for improvement to practice, and proposing how nurses should approach the implementation of technology in the workplace.[12,13] They suggest that all nurses are responsible for:

- Checking the appropriateness of the innovation using the acronym SAFER (see below)
- 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 staff.

The SAFER acronym is suggested as a useful way to assess new developments. The questions it asks are:

S – does it conform to Standards?

A – is it Acceptable to patient, clients, carers and staff?

F – is it Fit for purpose and practice?

E – is it supported by Evidence?

R – Is it Risk-managed?

There is also a learning resource about telehealth for RCN members at www.rcn.org.uk/ehealth. The Department of Health's Informatics Department has published a 'skills assessment' document, for nurses to use to test themselves for their readiness to exploit information and technology to improve care[14].

It asks questions such as:

- Do you know how your care measures up? (Using benchmarking, peer review, formal evaluation and patient feedback)

- Are you up to scratch with your record-keeping? (Complying with legislation, professional standards and organisational policies; recording information whilst giving care; enabling patient access to and understanding of records)

- Can you unlock resources for your patients/clients? (Enabling self-care, helping them with access to information)

- Can you work on the move and use technology to communicate in different ways with your patients/clients? (Making the most of existing technology, thinking about different ways of working and how technology might help)

- Can you use evidence-based information to ensure you are delivering the best care possible? (Know how to access and evaluate evidence, look at outcomes of care, and use frameworks e.g. for assessment, correctly?)

- Do you think about safety and information governance when using technology? (Understand responsibilities, report concerns, protect electronic systems e.g. by correct use of Smartcards)

This document contains checklists and space for actions and notes, so that it can be used actively by an individual nurse as part of their professional development activities.

The Nursing and Midwifery Council has recently identified a new area in which nurses and midwives may need support, which is in managing their personal use of information technology, such as social networking, without compromising their professional practice. In new guidance issued on this[15], the NMC advises nurses to keep their personal and professional online profiles separate as far as possible.

It starts from the premise that 'conduct online and conduct in the real world should be judged in the same way, and should be at a similar high standard.' Nurses and midwives will put their registration at risk, if they:

- share confidential information online
- post inappropriate comments about colleagues or patients
- use social networking sites to bully or intimidate colleagues
- pursue personal relationships with patients or service users
- distribute sexually explicit material
- use social networking sites in any way which is unlawful.

Detailed information on how to manage social networking to protect the nurse's registration, the nurse's patients or clients, and the nurse's own privacy, is contained in the guidance.

Summary and challenges

Demography, demand and practicality have brought us to a point where e-health is no longer just a series of interesting pilot projects; it is becoming part of the mainstream of provision.

We have seen that there are great benefits for patients to be gained from the better use of technology in health care, though there are some external issues to resolve about the introduction of these initiatives. There are also new professional questions raised, for which there are a range of learning and support tools to help practitioners; though there are not always simple answers. Some issues, such as connectivity and integration of equipment, can only be addressed in the locality in which they occur.

The QNI helps community nurses to exploit this 'smart new world' for their patients by:

- Including sessions on the use of technology in community healthcare at conferences and other events
- Posting resources and helpful publications on our website
- Continuing a dialogue with nurses leading in this field, spreading their knowledge and skill and enabling them to network with others
- Pursuing the professional questions with relevant expert bodies and posting answers and guidance on our website
- Funding technology-based, nurse-led projects that aim to improve care through our Fund for Innovation and Leadership.

In the meantime, there are some challenges for all community nurses, and for the organisations that employ them, regardless of their current involvement in e-health:

Personal challenges for community nurses:

- Could e-health improve your practice, giving better experience and outcomes for patients - do you know enough about it to tell?
- Do you have the confidence to help your patients/clients exploit information and technology?
- Are you prepared to learn and sustain new ways of working?
- What could you do as part of your personal development to improve your knowledge, confidence or skills in this area?

Challenges for organisations providing community services:

- Are your services making best use of technology and new ways of working?
- Are your systems integrated and robust enough to support technology in practice?
- How will you ensure that staff are confident, knowledgeable and skilled enough to use technology in practice to improve outcomes and give patients a better experience?
- Have you looked at successful examples elsewhere to judge how your services could adopt them?

Technology, and the new ways of working that exploit it in healthcare, has enormous potential to meet the growing need for expert, efficient and personalised care in the community. The QNI hopes to inspire, encourage and assist community nurses to play their essential part in realising this vision.

How professionals work

- Teaching patient/sharing skills
- Enabling self-care
- Building confidence in new ways of care
- Sharing responsibility with patients
- Interpreting information for patients
- Managing risk differently
- Working across traditional boundaries
- Letting go of professional territory
- Maintaining professional standards
- Personal use of IT/social networking

References

1. Queen's Nursing Institute (2009) 2020 Vision – focusing on the future of district nursing. London: QNI

2. Hall, Kathleen (2011) Telemedicine in the NHS: The benefits and costs of implementing telecare services. ComputerWeekly.com [accessed 17 January 2013]

3. Kirklees replaces offices with laptops. www.smarthealthcare.com/kirklees-community-health-services-toughbook-laptops-11aug10 (accessed 17 January 2013)

4. Emsley H (2010) When location, location, location doesn't matter. Health Service Journal, 7 October

5. Moore A (2011) Home comfort. Health Service Journal, 28 April.

6. NHS Confederation (2010) Remote control. London: NHS Confederation

7. Cruikshank, J (2010) Healthcare without walls – a framework for delivering telehealth at scale. London: 2020health.org

8. Royal College of Nursing (2011) eHealth survey 2010 report. London: RCN

9. Royal College of Nursing Northern Ireland (2010) E-Health in Northern Ireland. Belfast: RCN

10. Mobile technology fails to keep staff away from offices. www.guardian.co.uk/healthcare-network/2011/jun/24/mobile-technology-fails-staff-away-office (accessed 17 January 2013)

11. Oldham J (2011) A high definition telehealth vision. Health Service Journal, 2 June.

12. Royal College of Nursing (2011) Making it SAFER. London: RCN

13. Royal College of Nursing (2007) Putting information at the heart of nursing care. How IT is revolutionising health care. London: RCN

14. Department of Health (2011) Skills assessment: using information in your practice. London: Department of Health

15. Nursing and Midwifery Council (2011) Social networking sites. www.nmc-uk.org/Nurses-and-midwives/Advice-by-topic/A/Advice/Social-networking-sites (accessed 17 January 2013).

Glossary

eHealth - the use of information and communication technologies (ICT) for health to, for example, treat patients, pursue research, educate students, track diseases and monitor public health. (World Health Organisation)

eHealth – is not just about computers. It is about finding, using, recording, managing, and transmitting information to support health care, in particular to make decisions about patient care. Computers (and other ICT devices) are merely the technology that enables this to happen (RCN)

mHealth – the use of mobile telephones for healthcare (2020health)

Telehealth – telehealth is not a single, uniform type of technology; rather it is a targeted approach appropriate to the individual's needs, combining process, organisational and responsibility changes supported by monitoring and collaboration technologies (2020health), including:

- **Telecare** – a range of alarms and sensors in the home to enable independent living, l linked to a call centre (2020health)

- **Teleconsultations** – video consultations and routine surveillance appointments between clinicians and patients (2020health)

- **Telehealth** – remote capture/relay of physiological measurements from the home for clinical review and early inventions (2020health)

Telephone triage – Telephone Triage is an encounter with a patient/caller in which a specially trained, experienced nurse, utilizing clinical judgment and the nursing process, is guided by medically approved decision support tools (protocols), to determine the urgency of the patient's problem, and to direct the patient to the appropriate level of care. This plan of care is ideally developed in collaboration with the caller and includes patient education/advice as appropriate and necessary. (www.telephone-triage.com)

Virtual ward – these apply the function of a traditional hospital ward over a community-based setting, meaning they have (variously configured) lead nurse, a ward clerk and ward rounds involving a multi-disciplinary team configured and meeting in such a way that meets the needs of each 'patient 'admitted to the virtual ward … at any one time there will be a number of patients with complex disease management needs who will need intensive and active monitoring, treatment and support. The virtual ward aims to systematically admit and discharge patients with these needs while they are at home.' (NHS Tayside)

Additional Reading

Department of Health, 2013. *National Mobile Health Worker Project: Final Report*. London: Department of Health

Steventon, A., et al, 2012. *Effect of telehealth on use of secondary care and mortality: findings from the Whole System Demonstrator cluster randomised trial* London: BMJ

Ham, C., Dixon, A., Brooke, B., 2012. *Transforming the Delivery of Health and Social Care*. London: The King's Fund

Davies, A and Newman, S., 2011. *Evaluating Telecare and Telehealth Interventions*. London: The King's Fund

Clark, M and Goodwin, N., 2010. *Sustaining Innovation in Telehealth and Telecare*. London: The King's Fund

Websites

www.connectingforhealth.nhs.uk

www.networks.nhs.uk/nhs-networks/leadership-for-informed-practice

With thanks to Firas Sarhan, Director of Centre of Excellence for Telehealth and Assisted Living, for additional source material. http://bucks.ac.uk/research/research_institutes/cetal

020 7549 1400
mail@qni.org.uk

Registered charity number: 213128
Patron HM The Queen
Founded 1887

©The Queen's Nursing Institute
First published January 2012
Revised January 2013

The Queen's Nursing Institute

Learn more at www.qni.org.uk