Improving health and wealth through the use of information and communication technology.

eHealth and Care Strategy
FOR NORTHERN IRELAND

CONSULTATION DOCUMENT
We wish to acknowledge the support and contributions of the members of the Steering and Expert Advisory Groups who monitored the progress of the strategy and actively helped in all aspects of its development.

We particularly wish to acknowledge the major part played by the public, representatives from the community and voluntary sector, independent sector, universities and industry in developing the strategy.

We would also like to thank our colleagues in the Health and Social Care Trusts who gave their time, support, expertise and knowledge throughout the process and many other members of staff at each Trust who participated in our workshops and focus groups which led to the development of the strategy.

To our colleagues in the HSCB and PHA whose timely and useful proofing and comments were invaluable, we thank you for your support.

eHealth and Care Strategy Project Team
Northern Ireland’s health and social care system is facing major challenges that affect how it operates now and in the future. These challenges include caring for more people who are living longer, and coping with limited increases in funding. To ensure our services work effectively we must keep working to change them.

At the same time, the public are asking for electronic, accessible services similar to those they use in other parts of their lives. We are living in an age of digital technology, where data can be captured and sent from person to person at the touch of a button. The internet and mobile phones are everyday ways of communicating and the public expect to use them to access our services. This gives us an opportunity to make our health and care system more responsive and better focused on the people it serves.

To tackle these issues we have started a transformation programme. This will redesign our health and care services so that they better meet the needs of the individual. We have set out this new model of person-centred care in three strategic documents: ‘Transforming Your Care’ (2011); ‘Quality 2020’ (2011); and the new strategic framework for public health, ‘Making Life Better’ (2014).

Our new way of working will mean we put more emphasis on preventing ill-health, as well as supporting people to make healthier choices and live independently for as long as possible. It will also mean we move more services out of hospitals and closer to people’s homes, for example into GPs’ surgeries and local clinics when this is safe and suitable. Our priority is to ensure we give people the right care at the right time in the most suitable setting.

Many public services use technology creatively, and health and social care should be no exception. Technology can support care in many ways, including patient education; promoting healthy living; preventing disease; improving clinical information and management systems; and monitoring patients. It could help us provide a wide range of new services to improve access to health and social care, such as online appointment bookings and remote consultations with GPs or hospital specialists.

In Northern Ireland we have already taken bold steps to use technology in our health and care system. For instance, we have introduced the Northern Ireland Electronic Care Record. This has improved care professionals’ access to patient information, which helps them work more safely and effectively. A regional remote telemonitoring programme – which enables people with long-term conditions to monitor their health from home, with access to clinical and professional advice as necessary – is also widely used across Northern Ireland.

These are examples of eHealth, the use of technology-based systems to share information among the professionals who need it to prevent ill-health and look after patients and social-work clients.

This strategy document describes other examples of what we have already achieved with eHealth. There is much more we can do to use eHealth to provide more modern health and social care services. I want to ensure we build on our successes and embrace the potential for new technology to improve the quality of care for patients, social-work clients and other service users. Our reform agenda will also enable our local universities and companies to play a role in improving services, with potential benefits for the Northern Ireland economy.

Technology is a powerful tool to help us develop and modernise our services. It is important we take full advantage of it. I encourage you to consider this draft strategy and let us have your views on how we can use eHealth to build a better health and social care system for all the people of Northern Ireland.

Mr. Jim Wells MLA
Minister of Health, Social Services and Public Safety
About this document

Who should read this document
This document is for anyone who wants to contribute to the development of the strategy or wants to learn more about the potential for technology to:
• help people make decisions about their own health and wellbeing
• support new ways of arranging services around the patient, such as care pathways
• help change the way care professionals work to give them more time and the information they need to make better, faster care decisions for their patients or clients.

The document is divided into a number of sections which will provide an introduction to eHealth and the need for an eHealth and Care strategy for Northern Ireland. We outline our vision and principles before discussing each of the strategy’s objectives in turn. Within the objective sections we ask:
• where are we now?
• where do we want to go?
• how are we going to get there?

How we developed the strategy
We asked the following people to tell us what we needed to do for the future of health services:
• Citizens (including patients, carers and clients).
• Community and voluntary sector organisations.
• HSC staff and organisations including primary care.
• Internal, local and national ICT suppliers.
• DHSSPS(NI).

We also used the ‘National eHealth Strategy Toolkit’ published by the World Health Organisation. A regional steering group and an external panel of experts oversaw the strategy. For more details and our methods, please see Appendix 1.

Responding to the strategy
A feedback form in Appendix 2 provides a framework for your responses. You do not need to respond to all questions if any are not relevant to you. There are a number of ways that you can send us your responses:
• on-line: www.surveymonkey.com/S/75Y5VLB
• email: eHealthstrategy@hscni.net
• post: eHealth and Care Strategy Consultation, HSCB, 12-22 Linenhall St., Belfast BT2 8BS
• phone: 028 9536 3323
• taking part in public meetings (advertised in the press)
• taking part in specific stakeholder meetings
• social media posts and comments.

If you need this document and feedback form in an alternative format, please contact us by email, phone or post.

The HSCB will publish a summary of what we heard during this process in a response to the consultation document. Responses to the consultation may be made public if we receive a Freedom of Information request for this information.

We will finalise the eHealth and Care Strategy for Northern Ireland after we receive the feedback from this consultation process. This feedback will also contribute to the implementation plan which will outline how and when we will achieve the strategy.

The eHealth and Care strategy will be reviewed at least twice during its lifetime, to reflect changing technology and accommodate new requirements from the public and staff as they engage with the process. The strategy will be evaluated during and after the five-year period.

This document should be read with the accompanying Equality Impact Assessment, available on the website or in other versions by request.
Executive Summary

‘eHealth and Social Care’ is the use of information that is needed by people and care professionals to make better decisions about prevention, treatment and care. This includes:

- information provided by you and your caregivers.
- information held within our systems.
- information generated by self-monitoring devices and sensors.
- information needed for management and administration.

Northern Ireland has the unique advantage of having an integrated health and social care system. To make this document easier to read, we use the word eHealth to mean both health and social services’ use of technology and information.

This document sets out a draft eHealth and Care Strategy for Northern Ireland 2015-2020. The Strategy describes how the Department of Health, Social Services and Public Safety (DHSSPS) and the wider Health and Social Care organisations in Northern Ireland (HSC), want to make the best use of information and communications technology (ICT) in order to:

- improve the safety and quality of patient and client care.
- improve public health.
- promote opportunities that support the Northern Ireland economy.

The strategy outlines how eHealth will support people, current services and help information to flow around the system to improve decision making for better care. It describes how eHealth will support the changes that must be made to improve health and wellbeing in Northern Ireland, set out in health and social care legislation, ‘Transforming Your Care’, ‘Quality2020’ and ‘Making Life Better’.

We want to build on the good foundations that Northern Ireland already has. There are skilled and committed staff providing health and social care across Northern Ireland, who have a strong desire to use technology to support better care. Northern Ireland has strong universities and colleges that provide first-class research and education and a growing local technology sector that can support eHealth innovation. Citizens, patients, clients and carers have told us they want to use eHealth information and systems to support their health, wellbeing and independence.

Over the last ten years, the HSC has invested in improved eHealth, leading to a dramatic improvement in eHealth support for better care. Across Northern Ireland this includes:

- a Health and Care number for everyone, which is used by the HSC to maintain data quality.
- a world-class electronic care record, providing care staff with an up-to-date record covering a range of patient and client information.
- the regional X-ray system, NIPACS, allowing all X-rays to be viewed and reported electronically.
- computerisation, networking and the introduction of two-way electronic communication for all GP practices.
- major improvements to networks, data centres and other major eHealth infrastructure.

In this document’s “Maintaining and improving what we have” section, we provide more information on some of the other improvements we have made.

We are proud of what has been achieved, but we know there is much more that can be done to support health and wellbeing. We need to overcome several difficulties to make eHealth work in the HSC:

- Paper records are still widely used. Information on paper is difficult to share, and the use of paper is embedded in many HSC staff members’ working practices.
- The public and HSC staff are concerned about maintaining patient and client confidentiality. We must ensure we share and use information appropriately and responsibly with the understanding of the public and patients.
• eHealth can change relationships and working practices for the public, patients, clients, their carers and HSC staff. If we are asking staff and the public to do things differently, we need to make sure we are bringing real benefits to the people affected and demonstrate those benefits to justify the investment in eHealth.

• Some people may have difficulty accessing eHealth through disability, age or ethnicity or through lack of technology. We will examine these issues in the Equality Impact Assessment.

In the objectives and outcomes, we set out how we will deal with these difficulties across Northern Ireland, providing benefits for the public and improvements for the HSC.

This strategy covers the full range of eHealth needed for Northern Ireland, from public communications, through large-scale information technology systems and personalised assistive technology, to the contribution health and social care technologies could make to developing a vibrant eHealth commercial sector. Successfully implementing the strategy will mean that the right care will be given to the right person at the right time with the right resources. eHealth success will also allow local industry to grow, innovate and compete globally, contributing to Northern Ireland’s prosperity.

Strategy vision

Through eHealth, we will empower people to be more active in their own care and support health and social care staff to achieve real change that delivers the best possible health and wellbeing for everyone.
**Principles**

Five key principles underpin the strategy:

- Citizen centred: supporting your health and wellbeing.
- Connections: across Northern Ireland, making information available in the right place, at the right time to support the best care, with the right safeguards in place.
- Consistency: technologies and the way they are used should be designed and rolled out in one way for Northern Ireland; any variations from this will need to be justified.
- Creativity: driving innovation and promoting best practice.
- Cost effectiveness: investment must add value and support efficiency.

These principles have guided the development of objectives for the strategy and will underpin plans to implement the strategy.
Objectives

1. **Supporting people**
   Provide eHealth services, supporting electronic access for everyone where that is their choice. This will include electronic information services, electronic records access, on-line support and care services, appointment booking and remote care.

2. **Sharing information**
   Give care professionals appropriate access to information to improve the speed and quality of the care decisions they make, and the outcomes for the individual.

3. **Using information and analytics**
   Develop ways to transform data and information into knowledge (informatics) that supports care, from being able to suggest personalised preventative care through to supporting population-level health and care planning.

4. **Supporting change**
   Make thinking about eHealth central to planning any changes to health and care services to make sure we are making the most of technical opportunities and the potential for improved information flows to support improvements.

5. **Fostering innovation**
   HSC will work with businesses, colleges and universities, community and voluntary organisations, other government departments and international partners to develop uses of eHealth to help improve health and wellbeing, recognising there may be opportunities where such work contributes to developing sustainable economic growth in Northern Ireland.

6. **Maintaining and improving what we have**
   Maintain a modern, reliable eHealth infrastructure, including investment in supporting, modernising and replacing key systems and HSC networks and hardware as needed.

You will find detail on each of these objectives, including how we propose to achieve them, in the next sections of the strategy. Under each of the objectives we have a number of important outcomes which we plan to deliver in the strategy period. The level of available resources will determine the pace of implementation and transformation of services. A summary table sets out the objectives and outcomes on page 25.

In this strategy we balanced all these elements to show the future of eHealth in Northern Ireland. We want you to have your say on this strategy as part of an active consultation on its contents including how eHealth could be developed and delivered. The responses to the consultation will be used to improve the eHealth and Care strategy before we issue it. In the “About this document” section we show a range of ways to contribute to this consultation and we would encourage you to respond.
What is eHealth?

EHealth is the use of information needed by people and by care professionals so they can make better decisions about prevention, treatment and care. This includes information provided by you and your caregivers, information held in our systems, information generated by self-monitoring devices and sensors, and information needed for management and administration.

This use of information is made easier by information technology-based systems that allow the information to flow and be shared between people and organisations. Northern Ireland has the unique advantage of an integrated health and social care system; therefore we have called our plan for change an eHealth and Care Strategy. Throughout this document, we use the word eHealth to cover both health and social services.

eHealth is important for a number of reasons:

We live increasingly in an ‘information society’ with nearly every aspect of our daily lives touched by technology – whether this is in our homes, in our wider communities or in our working lives. How we book holidays, how we read the news, and how we keep in touch with our families and friends have all been revolutionised. eHealth is about bringing the benefits of that revolution to bear on our health and wellbeing.
Of course, not everybody has access to the internet or technology or is happy using them. The use of eHealth will supplement face-to-face services with a more diverse mix of e-enabled services.

**Why do we need an eHealth and Care strategy?**

Health and social care has seen many changes in recent years, but more needs to be done to make sure we continue to meet the needs of the people of Northern Ireland. Northern Ireland has strategies setting out what these changes should be, including ‘Transforming Your Care’; ‘Quality 2020’; and the new strategic framework for public health ‘Making Life Better’. The changes we know we will face with a growing and ageing population, and an increasing burden of disease mean we need to find smarter ways of doing things.

The eHealth technology will support the vital changes in how health and social care is delivered to meet the challenges of the future. It can help to provide services remotely and also improve communications between care professionals and with patients, clients and their carers. By improving access to information both citizens and care professionals will be able to make better health and wellbeing decisions.

A clear eHealth implementation plan to support care transformation will make it easier to develop partnerships with universities, colleges and industry that support better care. The Connected Health and Prosperity Board Task and Finish Group Report has outlined how this will develop opportunities for employment, business and export-led growth.

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In Northern Ireland:
- nearly half of us own a smartphone, and 1 in 3 households have a mobile tablet
- 80% of households use the internet
- Northern Ireland also has the highest availability of fibre broadband in the UK, with 95% of premises able to access fast broadband services in 2013.

Of those who use the internet:
- 60% shop online
- 53% use social media sites like Facebook, Twitter and LinkedIn
- 51% use online banking
- 48% have used a government service online, e.g. completing a tax return, applying for benefits, completing the Census, applying for a passport.

Source: Ofcom, The Communications Market Report, Northern Ireland (August 2013)
What are the challenges?
We need to overcome several difficulties to make eHealth work in the HSC:

- It often takes too long for the good ideas that support new models of health and care delivery to become mainstream practice. We need to encourage and support the adoption of successful innovations.
- eHealth can change relationships and working practices for the public, patients, clients, their carers and HSC staff. Most people are naturally resistant to change. We need to make sure we are bringing real benefits to the people affected.
- Paper records are still widely used. Information on paper is difficult to share, and the use of paper is embedded in many HSC staff members’ working practices.
- We need more standardisation and structured data if we are to make best use of the information being collected.
- Some of our older ICT systems in use in the HSC are not able to link to other systems.
- The public and HSC staff are concerned with maintaining patient and client confidentiality. Some people feel that sharing information digitally may be less secure and put them at greater risk of having their confidentiality breached.
- The current system of planning and paying for health and care services does not take account of the changes that eHealth will support.
- Not everybody has access to the internet or technology.
- There may be access difficulties for people with a disability, older people and people from a minority ethnic background, particularly those for whom English is not a first language or who have other communication needs.
- It is not always easy to prove the benefits of eHealth to the public and to HSC decision makers. We need to be able to justify using scarce HSC resources in this way if we are to allow eHealth systems to support innovative new ways of providing services.

In the objectives and outcomes, we set out how we will overcome these difficulties across Northern Ireland, providing benefits for the public and improvements for HSC.

Current eHealth developments
Northern Ireland has strong foundations for eHealth to develop in ways that will support health and well-being improvement. Since the HSC ICT Strategy was published in 2005, the use and availability of ICT systems have greatly improved, forming the foundation for this eHealth and Care strategy.

Across Northern Ireland, care delivery is already supported by eHealth in the following ways:

- A world-class electronic care record (NIECR), providing care staff with an up-to-date medical record covering a range of clinical information.
- The regional X-ray system, NIPACS, allowing X-rays to be taken, reviewed and reported electronically.
• A system to support operating theatres in hospitals.
• Patient tracking and bed-management systems across all Trusts.
• New and redeveloped community information systems across all Trusts.
• Computerisation, networking and introduction of two-way electronic communication for all GP practices in Northern Ireland.
• Electronic Prescribing and Eligibility System (EPES) using systems and bar codes to simplify prescriptions and payments.
• A Health and Care number for everyone, and then making sure that HSC uses it to maintain data quality.
• Specialised ambulance systems designed to improve patient care.
• A data warehouse for data in Northern Ireland, allowing analysis for research, audit, service development and performance management.
• Major improvements to networks, data centres and other major eHealth infrastructure.
• A number of pilots, trialling eHealth technologies across Northern Ireland, some of which we will be rolling out as part of this strategy.

You can read more about our current eHealth technologies in the section “Maintaining and improving what we have”.

What do we want to achieve?

Strategy vision

Through eHealth, we will empower people to be more active in their own care and support health and social care staff to achieve real change that delivers the best possible health and wellbeing for everyone.

Principles

Five key principles underpin the strategy:

• Citizen centred: supporting your health and wellbeing.
• Connections: across Northern Ireland, making information available in the right place; at the right time to support the best care; and with the right safeguards in place.

• Consistency: technologies and the way they are used should be designed and rolled out in one way for Northern Ireland; any variations from this will need to be justified.
• Creativity: driving innovation and promoting best practice.
• Cost effective: investment must add value and support efficiency.

These principles have guided the development of objectives for the strategy and will underpin plans to implement the strategy.

To successfully achieve these objectives, a number of key factors will need to be addressed:

• There must be ongoing, meaningful engagement with the public to make sure we continue to do the right things in the right way.
• The strategy implementation plans at regional and at Trust level must uphold the five key principles and engage health and care professionals in order to promote a culture of ‘doing things differently’.
• The pace of implementation and the level of transformation of services will be determined by the timing and level of available resources.

The objectives and related outcomes are shown in a summary table on page 27.
Supporting people

Provide eHealth services, supporting electronic access for everyone where that is their choice. This will include electronic information services, electronic records access, on-line support and care services, appointment booking and remote care.

Where are we now?
eHealth services for the public in Northern Ireland are currently limited. At the moment, we do not make it easy for people to seek out information for themselves or make decisions about their own health and wellbeing. We tend to rely on three methods of communication with patients: paper, phone and in person. Contacting health and social care services about appointments or test results for example, is still mainly done by telephone or letter.

Where do we want to go?
Supporting healthy citizens
eHealth has a role in health promotion, protection and improvement. Using ICT well to provide quality information services is very important to this.

People have told us they would like to use eHealth technologies to add to traditional ways of contacting and using health and care services. Trusted online health portals can provide access to a variety of health information and signposting services. Online booking can be used to make appointments. Mobile apps can be developed to help monitor health conditions and to supplement patient-held records.

Alice is a new mum who is well supported by her health visitor but wants to get some more information about healthy eating and exercise after pregnancy. Alice logs on to the HSC web portal and follows the signposts to information and links for recipes and fitness guides. She also finds a list of groups in her area where she could go to meet other new mums.

A personal health portal could let people store information such as healthy-eating advice and self-recorded data that they might have gathered through the use of health and lifestyle apps on their mobile phones. When needed they may share some of this data with their care team to help take more informed decisions together.
Bronagh is a fit and healthy 30-year-old who enjoys looking after her health. She has recently bought a fitness tracker and now keeps an online record of all her fitness activity and her diet. At a recent visit to a physiotherapist for a minor sports injury, Bronagh was able to share her recorded data through a patient portal and jointly make a decision about a new fitness plan.

e-Learning programmes and podcasts can offer a new way for people to receive education regarding health and lifestyle issues and condition-specific information. For example someone diagnosed with diabetes will be able to supplement face-to-face patient education with online sessions.

Supporting communication
Many people are increasingly comfortable with self-service models as we use them every day to shop and book holidays, for example. Traditional ways of contacting the HSC will still be available for people who prefer these but there will be a range of digital services, for example:

- online appointment booking
- online self-referral
- text message reminders
- emails
- social media.

Brian was discharged from hospital four weeks ago following surgery. He has just received an email with a link for booking an outpatient’s appointment for two weeks’ time. Brian logs on to the new HSC portal via the emailed link and is able to ‘click and book’ a convenient appointment that suits him.

A Social Media and Alternative Communications Plan will be developed to look at how we can best use these technologies for the greatest benefit to all patients and service users.

Virtual health communities are developing in Northern Ireland. These social media groups or online discussion forums help people support each other in dealing with a shared health condition.

Hassan is a 40-year-old who was recently diagnosed with a respiratory condition called COPD. He is well supported by his GP, specialist respiratory nurse and hospital consultant, but Hassan gets a lot out of ‘meeting’ other people with his condition on a local online discussion forum. He enjoys the peer support and advice that others give him, especially if he is having a bad day.

During the development of the strategy, people we talked to said having some access to their own electronic care records would help them to keep track of their own hospital letters, appointments and test results. There is also the opportunity to let people add information to their records and to help make sure the information we hold is accurate.

Supporting independence
Helping people stay independent is important to older people, those with long-term conditions, mental health problems or a learning disability, to carers and for everyone wanting to look after their own health and wellbeing.

- **Telemonitoring technologies** can be effective support tools for people with long-term conditions, helping them live independently at home with an improved quality of life. As telemonitoring becomes more widely used and embedded into health care, patients who have monitoring needs such as high blood pressure, heart rate and blood sugar can benefit from being monitored remotely. Those with potential maternity complications such as gestational diabetes and people wanting to monitor their weight can also benefit from telemonitoring.

- **Telecare** is a tool that supports people – particularly the elderly or those with physical or mental health conditions or a learning disability – to live at home for as long as they want. Sensors in the home or worn by the individual inform the care team about certain key information, such as if a person may have had a fall, or another safety issue so that the person can be visited when needed.

Susan is a family carer who looks after her elderly parents. From time to time Susan can feel overwhelmed with the numerous physical, emotional, and financial challenges she faces. The social worker suggests that Susan considers telecare for her parents which would allow her to have a break during the day knowing that her parents are still safe even if she is away from them. Telecare devices for falls and exit alerts are installed in Susan’s parents’ home following a discussion with them to explain the benefit of the equipment for their safety. Susan can now leave them for periods during the day knowing that if alerts are raised, someone will call her immediately.
Telecare can also be used to send messages to the individual, such as prompts to take medications. Virtual coaching through video technology could also help keep older people fit and active both physically and mentally.

- **Electronic assistive technologies** (eAT) are increasingly available to help support or improve daily living for people with physical, sensory or cognitive impairment. eAT includes a broad range of technologies, from ‘low-tech’ to ‘high tech’. For older people and others with limited mobility who may be housebound and living away from their family and friends, it is easy to lose touch and become isolated and lonely. Using eHealth could enhance the quality of life and social wellbeing of these people in their own homes through the use of smart technology such as TVs, phones and computers including hand-held devices. Communication can be improved by creating online ‘clubs’ or social networks as well as allowing these people to stay in touch with family and friends. For care professionals, these technologies can also allow them to contact isolated patients and clients.

  eAT includes devices that help control the physical environment, such as opening doors and curtains, controlling heating, lighting and entertainment at the click of a button. Intelligent use of home technology can take care of the little tasks and make a big difference to day-to-day life.

The development of eAT provides a wealth of opportunity to support independence and help people to maintain their health and wellbeing. For these opportunities to be fully exploited, new arrangements for funding will need to be set up across a range of agencies and account taken of self-funding opportunities.

**How are we going to get there?**

- HSC will develop a web portal providing trusted advice, self-care information, information on HSC services and secure access to online services.
- HSC will provide online access to your own health records.
- HSC will build on existing pilot schemes to reduce paper and develop ways of allowing citizens to interact with the HSC electronically.
- HSC will optimise the use of current GP systems to facilitate access to GP records and other ways of communicating and interacting with GPs, e.g. prescription ordering and online booking.
- HSC will encourage the development and use of mobile health apps to support, facilitate and extend the relationship between care professionals and users for self-care and management.
- HSC will promote the use of eAT, telemonitoring and telecare to enable people to live independently.
- Along with other appropriate agencies such as housing and councils, HSC will develop new ideas to enhance the quality of life and wellbeing of older people and those who care for them. This will include more integrated community-oriented services, more sustainable home and neighbourhood design, and more age-friendly smart Living technologies.
- HSC will develop a Social Media and Alternative Communications Plan, evaluating the use of social media, smart phone technology and self-service technologies for communication with citizens.
Sharing information

Give care professionals appropriate access to information to improve the speed and quality of the care decisions they make, and the outcomes for the individual.

Where are we now?
Information about you is needed to make sure you get the best care possible. Sharing your information between members of the care team or between different care professionals is often essential in the delivery of health and social care. Your information is already recorded on paper and increasingly on secure computer systems in HSC organisations such as GP surgeries and hospitals.

The HSC still generates large amounts of paper records, which often duplicates the information we have in our computer systems. Paper records are difficult to share quickly and securely. Whenever a person attends a new hospital or clinic, it is likely that a new paper record is created and these different records are difficult to join up.

When information is held electronically, it is often only available to staff using that computer system within that organisation or department. Lots of our computer systems do not talk to each other, even for sharing basic details such as your name and address, date of birth, and GP practice.

Paper records and the fact that many computer systems do not talk to each other make it hard for us to make sure your information follows you throughout the HSC. It can lead to members of your care team not having all the information they need to best treat or care for you. It can mean you having to needlessly repeat your details and care professionals having to needlessly spend time collecting your information.

We put in place the Northern Ireland Electronic Care Record (NIECR) in 2013 and this been successfully adopted across HSC. NIECR links core information systems from hospitals and clinics throughout Northern Ireland and includes lab tests, x-rays, appointments, discharge and clinic letters and details of any drugs prescribed and allergies recorded from your GP’s system.

With NIECR in place, Northern Ireland is in a strong position to further develop digital records. NIECR is bringing in additional information to benefit the shared record as it becomes electronically available, building links with old and new HSC systems and technologies. This is improving care coordination, reducing delays to treatment and decision making caused by information not being available and improving patient safety. NIECR is reducing unnecessary duplication across the HSC, meaning less patient and staff time wasted and less inconvenience.

The Electronic Northern Ireland Single Assessment Tool (eNISAT) is another example of information being collected electronically and consistently across the HSC. eNISAT allows care professionals to contribute to the one assessment for a patient or client in the community sector. This helps to avoid duplication and improve the co-ordination of a person’s care across different HSC services.

The benefits of NIECR and eNISAT are considerable, but are still limited by difficulties that some HSC staff have getting basic access to a secure HSC PC, laptop or mobile device and a reliable network connection that allows them to connect to these systems.

Jean is a 79-year-old woman who lives alone in her own house. She suffers from osteoarthritis, diabetes, bronchitis and heart disease. Jean has been assessed on several occasions by various professionals, including a social worker, physiotherapist, occupational therapist, and a specialist diabetes nurse and is seeing consultants in two different hospitals. Jean found it frustrating that she had to provide the same information each time she was assessed. Using the Northern Ireland Electronic Care Record (NIECR), all the care professionals involved in looking after Jean can now share information and coordinate her care. Jean doesn’t have to repeat ‘her story’ to everyone. She’s having to have fewer blood tests as recent results are available to all the care team and, if there’s a crisis, the Out of Hours or Emergency Department team have enough information to let them make the best possible decisions about Jean’s care.
Where do we want to go?
eHealth will enable electronic communication between care professionals. Expanding the use of mobile technologies and moving towards fully electronic records, building on the NIECR and other core HSC computer systems, will help make this happen across HSC.

In developing electronic records we will ensure that:

- information that is useful to the citizen and those caring for them will be recorded digitally.
- information ‘blockages’, such as when a patient moves from one care setting to another, will be identified and addressed. Information will flow electronically with the patient.
- electronic records will be easy to use, and will help HSC staff spend more time doing their jobs.
- appropriate security measures, the ability to check how the system is being used and confidentiality safeguards will all be put in place to make sure electronic records are used and viewed correctly.
- the public and patients will be kept informed about how their digital information is used and shared. Sharing a person's identifiable information for any reason other than for their direct care will require explicit, informed consent except in rare situations such as the cancer registry where information is used to improve the quality of care.
- there will be secure, reliable and well-maintained HSC data centres and networks to keep this information safe, make sure our systems run well and minimise the risk of technical failure.
- there will be investments in mobile technology pilot schemes to improve how staff access shared information and to increase the potential benefits from these systems.
- we will develop new ways for patients, clients and their carers to receive services from the HSC and access services, for example through video-conferencing, email and text messaging.

Annette is a member of the nursing team on a busy medical ward. Annette is concerned about the amount of time she and other members of the team are spending away from the patients’ bedsides to complete paperwork and worries that this could be harming the quality of patient care. The nursing team agrees to use handheld devices to record information at the bedside. The digital form is already filled in with key information pulled in from NIECR for Annette to check with the patient. She is able to add and update new or changed information using predictive lists, often only needing to type the first few letters. Annette captures valuable information on weight, mobility, cognitive function and risk scores. Instead of this information existing on paper forms, when patients are discharged home or to another ward it will travel electronically with them, allowing the wider care team to understand how the patients’ health has been recently.

Sean is a social worker working in West Belfast. He is currently involved with a family and needs to make an assessment of their needs for additional support with their children. Sean has always been frustrated that he has had to complete the paperwork when he is in his clients' home and then type out the information again when he gets back to the office and his computer. Since the introduction of mobile working, Sean can now use his laptop computer when sitting with the family and complete the documents immediately. As he also has internet connections he is able to help the family find online information and services that they can look at when he leaves them.

Electronic communication, such as video-conferencing, e-Learning and electronic requests for advice between primary and secondary care will support better patient care and reduce travel time for patients and staff. An example of the way this technology can be used is Project ECHO. This uses video-conferencing technology to link GPs with hospital care teams to help manage the care of patients who have complex needs, bringing specialist expertise into primary care.
Dr Jones, a GP in Fermanagh, wants to learn more about how to look after his patients with complex conditions so he joins Project ECHO. The project brings together a number of specialist doctors and nurses as well as the GPs and community teams via video meetings. Over a series of meetings the GP and community teams learn from the specialists. The specialist teams also learn from them about what is needed to allow patients’ care to improve outside hospital. Together the specialist and primary care teams work together to ensure that patients with complex conditions get the care they need, closer to home, and with less travelling to hospital for planned or emergency care.

How are we going to get there?

- Continue enriching NIECR to link in more HSC clinical and care information systems and develop NIECR functionality, including providing care professionals with appropriate role-based access to clinical and care information systems including NIECR.
- Provide staff with mobile access to the HSC network and systems in 2015/16, as part of a three-year investment plan.
- Provide secure and appropriate access to NIECR information for community pharmacists, dentists, opticians and independent health and social care providers, such as nursing homes.
- Build links with independent health and social care providers to allow them to contribute to the NIECR to help make sure all relevant patient information is captured and able to be shared.
- Digitalise manual processes and paper records to allow information to be shared and re-used appropriately.
- Develop plans for linking citizen-captured information into shared care records, including data from telemonitoring and information directly input by the patient or carer.
Use of information and analytics

Develop ways to transform data and information into knowledge (informatics) that supports care, from being able to suggest personalised preventative care through to supporting population-level health and care planning.

Where are we now?
Information about you and your care is gathered electronically in many parts of the HSC but some is still collected on paper. Some electronic information such as attendances at hospital, drugs prescribed by your GP and visits from community nurses is collected to help the HSC to support research, audit, service development and performance management. This information goes to a central database (the HSC Data Warehouse), where it is held securely and is pseudonymised or anonymised before use. Work is going on using limited, summary-level information from GP systems to let GPs find out who in their practice is at risk of starting to have problems with their health. This lets the GP offer additional support to these patients to help them stay healthy for longer.

Where do we want to go?
In future we will collect more information electronically. Health analytics is about making best use of this information to benefit the wider population by:

- supporting better decisions about the services we provide to get the most benefits for patients and clients.
- informing technical and medical evaluations of new therapies and treatment plans.
- making sure the services we provide are equitable and high quality.
• identifying those at risk of health problems and taking early steps with the patient to keep them in good health (risk stratification).
• letting us model the future, forecasting needs and planning care delivery to meet the identified need.

Pavel has managed his diabetes successfully over the last few years and he feels fine keeping busy at work and at home. As he feels so well, Pavel does not attend the diabetic clinic as often as he should. Information on the care of people with diabetes in his GP practice area is analysed. It picks up a group of people at risk of diabetic complications, including Pavel. The data links information about his blood-sugar levels and his non-attendance at clinics. Next time Pavel asks for his repeat prescription he’s asked to make an appointment with his GP who notices a small red mark on the sole of his foot, which could be the start of an ulcer. The GP refers Pavel electronically to the podiatrist for foot care and Pavel books electronically at a time he can attend. Seeing the podiatrist means the ulcer does not develop.

For this to work, HSC needs information standards so that the right information is collected in the right way and is correctly entered into information systems. This means information can be linked across HSC. We need information systems that work well with each other so there are no blockages in the flow of information. All of the work we do and will do involving the use of information about you will comply with data protection policy, obligations and relevant codes of practice.

How are we going to get there?
• Develop links between HSC information systems that improve how we can analyse information. An Information and Analytics strategy will examine the legal and ethical frameworks needed, the standardisation and coding of HSC information needed, and the training and education needs of staff. This strategy will take account of the outcome of the DHSSPS consultation on secondary use of information - ‘Caring for Your Information’.
• Use risk-stratification techniques to provide early-intervention support to help citizens keep healthy.

We want to make eHealth central to planning any changes to health and care services, to make sure we are making the most of technical opportunities and the potential for improved information flows to support improvements.

Where are we now?
HSC Trusts and staff are already using technology to help them transform their services for patients and clients. However, some areas are not aware of or have limited access to eHealth systems that could better support their daily work, even though they may use technology extensively outside work.

Too often, the technology needed to support changes has not been included in the plan for improvement. In the past, ICT has been seen as something for technical specialists. This view is changing; our staff who deliver and manage frontline patient and client care are increasingly taking an active role in using technology to help them.

An HSC ICT Programme Board has been governing the last 10 years’ progress. However, this was largely technically focused and had limited contact with care professionals.

Where do we want to go?
We need effective leadership and a shared governance structure across the HSC organisations. This needs to:
• place care professionals at the heart of decision making, focusing on the impact of eHealth on health and wellbeing.
• involve the public in setting the direction of the eHealth and Care programme.
• use the excellent technical knowledge and experience within the HSC.
• involve business, academic, and community and voluntary sectors.
• deliver projects supporting transformational change, service improvements and benefits to patients and clients.
• ensure consistency and equity in access to eHealth services across HSC.
• minimise waste, duplication and divergence from best practice.
• create space for innovation and support the roll-out of successes across HSC.
• identify policy changes that may be needed to help bring in the strategy.

A Design Authority will oversee proposals for projects and investments to ensure we stay on the strategic and technical track across HSC and make the best use of the resources we are given.

Using eHealth may mean changes in traditional roles and the ways of working of some HSC staff. Some may need training and support to make best use of the technology and information. Adaptations may be needed to support staff whose lack of computer skills may hinder their use of eHealth technology. As well as working within their recognised professional codes of conduct and competency frameworks, all care staff should be supported by adequate clinical supervision, training and ongoing support. To help identify and meet the training and skills needs of staff, this strategy recommends the setting up of and coordination of activities with relevant professional bodies and education providers.

How are we going to get there?
• Demonstrate that eHealth can improve patient-centred care.
• Develop eHealth Clinical Lead roles to drive and direct the use of eHealth to support care delivery.
• Put in place a new leadership and governance structure, with care professionals at the heart, and design it to ensure consistency and equity in service delivery.
• Support the development of staff to allow them to best use eHealth technologies, through training and support, working with professional bodies and existing training providers. This will integrate with current DHSSPS and professional workforce planning and education strategies.
• Develop new ways for patients, clients and their carers to receive services from the HSC and access services for example through videoconferencing, email and text messaging.
Fostering innovation

HSC will work with businesses, colleges and universities, community and voluntary organisations, other government departments and international partners to develop uses of eHealth and help improve health, wellbeing, prosperity and job creation.

Where are we now?
In Northern Ireland we have dynamic businesses, internationally recognised universities and strong community and voluntary organisations. HSC has worked with these partners for many years, bringing innovation into health and social care which benefits patients, clients and public health.

In 2011 a Memorandum of Understanding (MOU) on Connected Health and Prosperity was agreed between Northern Ireland’s Health and Enterprise Ministers. The agreement sets out how the DHSSPS and DETI will continue to work together in developing connected health solutions that will improve the wellbeing of patients and help support the Northern Ireland economy. As a result of the agreement, the Northern Ireland Connected Health Ecosystem (NICH ECO) was established in 2012 to bring together the health, academic and industry sectors, along with patients and the voluntary and community sector. Its aim is to identify the challenges in bringing about transformative change to our health and social care services and to consider potential solutions.

The Economy and Jobs Initiative was agreed by the NI Executive in 2013. This included a focus on the contribution health could make to the economy. A Task and Finish Group was established to provide an assessment of the potential opportunities for employment and business development from Health and Social Care through greater innovation and export-led growth. In May 2013 the T&F Group published it's Report along with a number of proposals that Health and Social Care could make to being a major driver for innovation and economic growth. The report's recommendations include developing an International Health Analytics Centre (IHAC) to make the most of the data generated by the health and social care sector to support global advances in health and social care research. The report also recommends setting up a Connected Health Integration Platform (CHIP) which could link digital care records to applications running on smart devices such as phones, tablets and computers.

We are also working with the health community in other European regions and the US:

- Northern Ireland has been given 3* Reference Site status through the European Commission’s European Innovation Partnership on Active and Healthy Ageing (EIP-AHA) initiative. We are working on a number of EIP-AHA projects to develop new technologies and innovative approaches to improve patient care.
- DHSSPS has established an EIP-AHA Reference Site Collaborative Network, bringing together all European Reference Sites to exchange and share best practice in the development of health and care strategies, policies and service delivery models.
DHSSPS has eHealth Memorandum of Understanding agreements with a number of European Regions and the New York State Health Department, with others in development.

These partnerships mean we can benefit from sharing ideas and best practice. They also mean Northern Ireland is best placed to maximise support from Europe that will help us take forward further research and projects.

Where do we want to go?
We want Northern Ireland to be a global centre of excellence in the field of eHealth, with:

- improved access to information for the public and HSC staff.
- models of health and care designed and delivered around patients.
- patients and clinicians better able to monitor and manage health conditions.
- improved outcomes for the public.

- more support for innovative businesses and social entrepreneurs wanting to work with us in developing innovative eHealth solutions.
- better opportunities for businesses, universities and community and voluntary organisations bringing new jobs to Northern Ireland.

How are we going to get there?
- We will continue to develop both the Northern Ireland Connected Health Ecosystem and our partnerships outside Northern Ireland. We will develop our own capacity to innovate, using local and international partnerships to access the expertise needed to develop solutions to problems affecting our patients.

- We will work with other partners to take forward the recommendations in the Economy and Jobs Initiative Task and Finish Group’s report. This can be found at www.dhsspsni.gov.uk/t_f_final_report.pdf

- We will work with local eHealth industry to develop and use innovative products and systems we can sell worldwide, supporting the local economy and increasing local employment.

- We will build on our success in developing and delivering EU programmes, drawing funding, ideas and expertise into Northern Ireland.

- We will support the annual eHealth and Care Awards and Conference to celebrate and promote best practice in the use of eHealth.
Maintaining and improving what we have

Maintain a modern, reliable eHealth infrastructure, including investment in supporting, modernising and replacing key systems and HSC networks and hardware as needed.

Where are we now?
We have developed a strong ICT foundation for eHealth over the last 10 years as a result of the 2005 HSC ICT Strategy and investment in many regional and Trust-level projects:

- The Northern Ireland Electronic Care Record (NIECR) and the expansion of systems across the community sector, including the delivery of Community Information Systems and the development of the electronic Northern Ireland Single Assessment Tool (eNISAT) are bringing real benefits to patient and client care. They are a strong starting point for developing more tools to support high-quality integrated care.
- Health and Care Number (HCN), the unique identifier for everyone in Northern Ireland. This unique identifier is important as it allows your health and social care information to be safely linked together and helps the HSC work together to keep your basic demographic details (name, address, date of birth) accurate and up to date.
- Northern Ireland Picture Archiving and Communications System (NIPACS), our regional system for x-rays.
- Theatre Management System (TMS), managing operating theatres in hospitals.
- Cancer Patient Pathways System (CaPPS), improving cancer diagnosis and treatment.
- Electronic Prescribing and Eligibility System (EPES), supporting primary-care medicines management.
- ICT infrastructure improvements including secure HSC and GP networks, desktop and mobile devices and consolidated regional HSC data centres.
Several Trusts have developed electronic clinical noting systems, aimed at replacing paper-based inpatient care records. Other excellent local innovations continue to be developed across Northern Ireland including:

- electronic discharge correspondence, where information needed by GPs, nurses and other care professionals in the community can be sent electronically rather than in a letter that has to be hand delivered by the patient when they go home.
- bed-management systems – an interactive whiteboard on hospital wards that allows staff to deal with admissions, transfers to others wards and discharges.
- electronic patient check-in in outpatient departments, where patients can use a touch-screen to let staff know they have arrived.
- for care professionals in some hospitals, bedside computing, which allows them to collect and connect to information needed when they are with patients, while the use of mobile technology allows staff who move about hospitals or work in the community to do the same.
- patient websites, providing information on hospital services, which are now available for all Trusts.
- the Northern Ireland Ambulance Service (NIAS), which has invested resources in implementing systems required by a modern ambulance service, including Call Line Identification (CLI) integrated with hospitals and a pilot of an Electronic Patient Report Form system (EPRF) using digital-pen technology.
- electronic patient monitoring, also used by NIAS to send clinical information to the Emergency Department before the ambulance and patient arrives.

All general practices in Northern Ireland are computerised and connected to the secure HSC network. The results of tests that the GP has asked for are sent electronically. GPs are able to send electronic referrals to consultant services in Trusts. Information on patients’ drugs and allergies is sent from GP systems to NIECR.

The current Telemonitoring NI service supports patients with long-term conditions. This regional service lets patients self-monitor and better manage their condition with care-professional support when needed. The regional Telecare service supports people to live independently at home for longer, for example by using sensors to alert care workers to possible problems, like a fall.

- Pharmacists, dentists and opticians have also invested in ICT to support their services.
- The community and voluntary sector are making good use of the internet for providing information. They lead the way in developing apps to help support people to stay healthy and happy.

Where do we want to go?
Maintaining our underlying infrastructure and systems is one of the main challenges for Northern Ireland as an advanced eHealth economy. We will need to renew or upgrade parts of this eHealth foundation during 2015-2020. Our principles will guide investment in the maintenance and renewals process, delivering consistently efficient services across Northern Ireland. This will include, where appropriate, the use of single systems, data structures and technologies to reduce complexity and cost. We plan to complete two technical strategies to inform the implementation - an Application Strategy and an Infrastructure Strategy. These will examine the existing infrastructure and systems, creating a clear picture of the current position and linking it to the implementation plan.

How are we going to get there?
- Develop and extend HSC ICT access to all parts of the health economy that need it, either through mobile, wireless or fixed networks including improvements in access and bandwidth.
- Develop an Infrastructure Strategy. This strategy will set out the future direction for HSC infrastructure including networks, datacentres and storage, including the appropriate adoption of cloud computing and cloud storage.
- Develop an Application Strategy. This strategy will set out the future development and replacement pathway for HSC applications, including the adoption when appropriate of open-source applications.
- Deliver the eHealth technologies needed to support service change; areas identified include medicines management and pathology services.
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<tr>
<th>STRATEGIC OBJECTIVE</th>
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| **Supporting people**<br>Provide eHealth services, supporting electronic access for everyone where that is their choice. This will include electronic information services, electronic records access, on-line support and care services, appointment booking and remote care. | • HSC will develop a web portal providing trusted advice, self-care information, information on HSC services and secure access to online services.  
• HSC will provide online access to your own health records.  
• HSC will build on existing pilot schemes to reduce paper and develop ways of allowing citizens to interact with the HSC electronically for example booking clinic appointments on-line.  
• HSC will optimise the use of current GP systems to facilitate access to GP records and other ways of communicating and interacting with GPs, e.g. prescription ordering and online booking.  
• HSC will encourage the development and use of mobile health apps to support, facilitate and extend the relationship between care professionals and users for self-care and management.  
• HSC will promote the use of eAT, telemonitoring and telecare to enable people to live independently.  
• Along with other appropriate agencies such as housing and councils, HSC will develop new ideas and funding opportunities to enhance the quality of life and wellbeing of older people and those who care for them. This will include more integrated community-oriented services, more sustainable home and neighbourhood design, and more age-friendly smart Living technologies.  
• HSC will develop a Social Media and Alternative Communications Plan by evaluating the use of social media, smart phone technology and self-service technologies for communication with citizens. |
| **Sharing information**<br>Give care professionals appropriate access to information to improve the speed and quality of the care decisions they make, and the outcomes for the individual. | • Continue enriching NIECR to link in more HSC clinical and care information systems and develop NIECR functionality, including providing care professionals with appropriate role-based access to clinical and care information systems including NIECR.  
• Provide staff with mobile access to the HSC network and systems in 2015/16, as part of a three-year investment plan.  
• Provide secure and appropriate access to NIECR information for community pharmacists, dentists, opticians and independent health and social care providers, such as nursing homes.  
• Build links with independent health and social care providers to allow them to contribute to the NIECR to help make sure all relevant patient information is captured and able to be shared.  
• Digitalise manual processes and paper records to allow information to be shared and re-used appropriately.  
• Develop plans for linking citizen-captured information into shared care records, including data from telemonitoring and information directly input by the patient or carer. |
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| **Using information and analytics** | - Develop links between HSC information systems that improve how we can analyse information. An Information and Analytics strategy will examine the legal and ethical frameworks needed, the standardisation and coding of HSC information needed, and the training and education needs of staff. This strategy will take account of the outcome of the DHSSPS consultation on secondary use of information - ‘Caring for Your Information’.
- Use risk-stratification techniques to provide early-intervention support to help citizens keep healthy. |
| **Supporting change** | - Demonstrate that eHealth can improve patient-centred care for example collecting patient experiences of the HSC to help improve services.
- Develop eHealth Clinical Lead roles to drive and direct the use of eHealth to support care delivery.
- Put in place a new leadership and governance structure, with care professionals at the heart, and design it to ensure consistency and equity in service delivery.
- Support the development of staff to allow them to best use eHealth technologies, through training and support, working with professional bodies and existing training providers. This will integrate with current DHSSPS and professional workforce planning and education strategies.
- Develop new ways for patients, clients and their carers to receive services from the HSC and access services for example through videoconferencing, email and text messaging. |
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| **Fostering innovation**                                | • We will continue to develop both the Northern Ireland Connected Health Ecosystem and our partnerships outside Northern Ireland. We will develop our own capacity to innovate, using local and international partnerships to access the expertise needed to develop solutions to problems affecting our patients.  
• We will work with other partners to take forward the recommendations in the Economy and Jobs Initiative Task and Finish Group’s report. This can be found at [www.dhsspsni.gov.uk/t_f_final_report.pdf](http://www.dhsspsni.gov.uk/t_f_final_report.pdf)  
• We will work with local eHealth industry to develop and use innovative products and systems we can sell worldwide, supporting the local economy and increasing local employment.  
• We will build on our success in developing and delivering EU programmes, drawing funding, ideas and expertise into Northern Ireland.  
• We will support the annual eHealth and Care Awards and Conference to celebrate and promote best practice in the use of eHealth. |
| **Maintaining and improving what we have**              | • Develop and extend HSC ICT access to all parts of the health economy that need it, either through mobile, wireless or fixed networks including improvements in access and bandwidth.  
• Develop an Infrastructure Strategy. This strategy will set out the future direction for HSC infrastructure including networks, datacentres and storage, including the appropriate adoption of cloud computing and cloud storage.  
• Develop an Application Strategy. This strategy will set out the future development and replacement pathway for HSC applications, including the adoption when appropriate of open-source applications.  
• Deliver the eHealth technologies needed to support service change; areas identified include medicines management and pathology services. |
## Glossary

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
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<tr>
<td>AHA</td>
<td>Active and Healthy Aging. A stream of work funded by the European Union to allow countries to work together to transform services.</td>
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<td>CaPPS</td>
<td>Cancer Access and Patient Protocol System</td>
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<td>CHIP</td>
<td>Connected Health Integration Platform which can link digital records to other applications.</td>
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<td>CLI</td>
<td>Call Line Identification for emergency calls.</td>
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<td>DETI</td>
<td>Department of Enterprise Trade and Investment</td>
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<td>DHSSPS</td>
<td>Department of Health, Social Services and Public Safety</td>
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<tr>
<td>eAT</td>
<td>Electronic Assistive Technology</td>
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<td>eNISAT</td>
<td>(Electronic) Northern Ireland Single Assessment Tool</td>
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<td>EPES</td>
<td>Electronic Prescribing and Eligibility System</td>
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<td>EPRF</td>
<td>Electronic Patient Report Form used for the handover from ambulance staff to other care staff.</td>
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<tr>
<td>EIP</td>
<td>European Innovation Partnership. EIPs are a new approach to EU research and innovation to help bring together countries working in particular areas to transform services.</td>
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<td>HCN</td>
<td>Health &amp; Care Number</td>
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<td>HSCB</td>
<td>Health and Social Care Board</td>
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<td>HSC</td>
<td>Health and Social Care in Northern Ireland</td>
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<td>ICT</td>
<td>Information and Communication Technology</td>
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<td>IHAC</td>
<td>International Health Analytics Centre</td>
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<td>MoU</td>
<td>Memorandum of Understanding is an agreement between countries to work together and benefit from the collaboration.</td>
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<td>NIAS</td>
<td>Northern Ireland Ambulance Service</td>
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<td>NICH</td>
<td>Northern Ireland Connected Health</td>
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<td>NIECR</td>
<td>Northern Ireland Electronic Care Record</td>
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<td>NIPACS</td>
<td>Northern Ireland Picture Archiving and Communications System</td>
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<td>PHA</td>
<td>Public Health Agency</td>
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<td>TMS</td>
<td>Theatre Management System</td>
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<td>TYC</td>
<td>Transforming Your Care is the strategy that outlines the plans for making changes in health and social services from 2012-2017.</td>
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<td>care pathway</td>
<td>Also known as clinical pathways, critical pathways, integrated care pathways, or care maps, are one of the main tools used to manage the quality in health and social care because their use reduces the variability in clinical practice and improves outcomes. Pathways promote organised and efficient patient care based on evidence based practice in the hospital or community care setting.</td>
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<td>care professional</td>
<td>An individual health and/or social care provider within any professional group e.g. medicine, nursing, allied health professional, social work, dentistry, pharmacy, etc. The practice of care professionals is regulated by appropriate regulatory bodies.</td>
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<tr>
<td>citizen</td>
<td>An individual living in Northern Ireland.</td>
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design authority
This is a care professional led group within the governance structure of the strategy
which will provide momentum and guidance to the various projects involved in
implementing the strategy.

equality impact assessment
An assessment of the impact of a strategy or policy across specific groups that may be
affected.

informatics
The use of information science, computer science, and health care. It deals with the
resources, devices, and ways to improve the gathering, storage, retrieval, and use of
information in health and biomedicine. Health informatics tools include computers,
clinical guidelines, formal medical terminologies, and information and communication
systems.

IT infrastructure
Information technology infrastructure is the framework needed to support the flow and
processing of information.

mobile working
Mobile working with the use of smart devices such as phones, iPads and tablets.

network coverage
Is the term used to describe how good or bad the mobile ‘signal’ is in a particular
geographical area.

paper-light
An organisation that will have less reliance on paper would be called paper light.

web portal
A specially designed website that brings together information from different sources so
that it can be easily accessed e.g. a website giving information about health and social
care services in Northern Ireland.

telecare/ telemonitoring/ telehealth
Telehealth is the delivery of health-related services and information via technology.
Telemonitoring allows patients to monitor their own condition by using health devices
at home and then results are sent electronically to their care professional. Telecare
ensures people can be safe at home by using environmental sensors to meet a risk; for
example, a falls monitor.

References

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- DHSSPS (2011) Quality 2020 – A 10 year strategy to proect and improve quality in health and social care in
Northern Ireland available at http://www.dhsspsni.gov/quality 2020 - a 10 year strategy for health and social
care in northern ireland.pdf
dhsspsni.gov.uk/t_f_final_report.pdf
publications/overview.pdf
Appendix 1

Strategy Development details

The development of the eHealth and Care Strategy for Northern Ireland includes the following:

1. Stakeholder engagement.
5. Lessons learned from previous strategies, both IT and within health care.
7. Consultation process on strategy content.

This method is based on previous strategic development in the HSC and the use of the National eHealth Strategy Toolkit published by the World Health Organisation.

1. Stakeholder engagement

The main aspect of the development process was a large-scale engagement with stakeholders across Northern Ireland. The groups consulted included:

- citizens (including patients, carers and clients – all ages and sections of the community)
- community and voluntary sector organisations
- HSC staff and organisations
- internal local and national ICT suppliers
- DHSSPS(NI).

Each of these groups provided a different context for eHealth and Care services in Northern Ireland and enabled us to incorporate local and regional innovations into the consultation document.

2. Review of strategic context

Northern Ireland has a well-developed strategic framework for the future of HSC services. Transforming Your Care (DHSSPS, 2011), Quality 2020 (DHSSPS, 2011) and the new strategic framework for public health, Making Life Better (DHSSPS, 2014). Each of these, along with other professional strategies, was reviewed to ensure the content of the consultation document was relevant and in line with regional health and social care directions.

3. Best practice and the future of technology

We gathered best practice from four sources:

- The local innovations accessed through the stakeholder workshops.
- The national and international best practice through review of existing information.
- Previous visits nationally and internationally.
- Engagement with major IT suppliers.

4. Current situation

From the stakeholder engagement and direct engagement with Trust ICT staff, the current eHealth situation was outlined. This included both strengths and weaknesses and what staff felt was the way forward to improve service delivery.

5. Lessons learned from previous strategies

We reviewed the lessons learnt from the previous ICT strategy period. We also reviewed other countries’ eHealth strategies, including Scotland, England, Ireland, Australia and South Africa. We used the external reference group to provide their personal experience of managing and delivering eHealth in their countries to improve what we had learned.

6. Leadership and governance

The steering group acted as a project board and provided leadership and governance for the development process. An external reference group of experts in the area of eHealth and service change gave additional quality assurance. The project delivery team was made up of clinical, technical and management staff.
Steering group
The steering group provided the overall direction for the strategy development and demonstrated the HSC’s commitment to the eHealth and Care strategy.

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<tr>
<th>Name</th>
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<tr>
<td>Mr John Compton</td>
<td>Chief Executive HSCB (retired 31/03/14) (Chair)</td>
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<tr>
<td>Mr Eddie Rooney</td>
<td>Chief Executive PHA</td>
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<tr>
<td>Mrs Julie Thompson</td>
<td>Deputy Secretary DHSSPS(NI)</td>
</tr>
<tr>
<td>Mrs Catherine Daly</td>
<td>Deputy Secretary DHSSPS(NI)</td>
</tr>
<tr>
<td>Mr Hugh McCaughey</td>
<td>Chief Executive South East HSCT</td>
</tr>
<tr>
<td>Mrs Mairead McAlinden</td>
<td>Chief Executive Southern HSCT</td>
</tr>
<tr>
<td>Mr Liam McIvor</td>
<td>Chief Executive Northern Ireland Ambulance Service</td>
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<tr>
<td>Mr Sean Donaghy</td>
<td>Director of eHealth and External Collaboration – HSCB</td>
</tr>
<tr>
<td>Mr Eddie Ritson</td>
<td>Programme Director – CCHSC PHA</td>
</tr>
<tr>
<td>Mr David Bingham</td>
<td>Chief Executive Business Services Organisation</td>
</tr>
</tbody>
</table>

Expert advisory group
The external reference group provided advice and challenge to the project team and the steering group.

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
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</thead>
<tbody>
<tr>
<td>Mr Paul Wickens</td>
<td>Chief Executive NICS Enterprise Shared Services Centre</td>
</tr>
<tr>
<td>Mr Gwyn Thomas</td>
<td>Ex CIO Wales and UKCHIP Chair</td>
</tr>
<tr>
<td>Dr Charles Gutteridge</td>
<td>CCIO Barts Health NHS Trust</td>
</tr>
<tr>
<td>Mr Bill McCluggage</td>
<td>Ex CIO Ireland</td>
</tr>
</tbody>
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7. Consultation process
The strategy will be subject to a full public consultation process. At the end of the consultation the results will be published.
Appendix 2

Feedback form

This consultation document seeks your views about how we respond to the proposals arising from the eHealth and Care Strategy for Northern Ireland. During the consultation process there will be a series of engagement events. We aim to ensure that everyone is informed and involved in this process and has the opportunity to make their views known. We therefore encourage you to engage with this important consultation, let us know your views, and so contribute to improvements to our eHealth and Care services.

We are seeking your views on the proposals and questions in the strategy. This questionnaire is available to help you record your comments and this can be filled in online at www.surveymonkey.com/S/7SY5VLB or downloaded and sent to us. You can send us your answers or comments, by post or email to:

eHealth and care strategy consultation
Health and Social Care Board
12-22 Linenhall Street
Belfast
BT2 8BS

However you choose to give us your views, we want to hear from you. Please send us your comments by web survey, email, phone or in writing.

I am responding:

☐ as an individual
☐ on behalf of an organisation

It would be helpful if you provided more information:
Name: .................................................................
Address: .............................................................
.............................................................................
.............................................................................
.............................................................................
Job title: ..............................................................
Organisation: ......................................................

Please note we will list the responses received through this consultation in the response to the consultation.
All responses to this consultation can be requested through a Freedom of Information request and may be made public, with very limited exceptions. If you are concerned about this issue, please contact us for further information.
Consultation on the eHealth and Care Strategy for Northern Ireland

In the strategy we have described our vision, principles and objectives. To what extent do you agree with these? Please select one option.

- [ ] Completely or mostly disagree
- [ ] Slightly disagree
- [ ] Slightly agree
- [ ] Completely or mostly agree

HAVE YOU ANY OTHER COMMENTS?

To what extent do you think we should be using eHealth technologies to help people look after their own health and wellbeing? Examples include: websites, mobile apps, online support tools, social media and personal text/email messaging. Please select one option.

- [ ] Not at all
- [ ] Sometimes
- [ ] Frequently
- [ ] All the time

HAVE YOU ANY OTHER COMMENTS?

To what extent do you agree that the implementation of eHealth technologies such as online booking of appointments and requests for prescriptions, email, video consultations or texting care professionals for advice will be useful? Please select one option.

- [ ] Completely or mostly disagree
- [ ] Slightly disagree
- [ ] Slightly agree
- [ ] Completely or Mostly agree

HAVE YOU ANY OTHER COMMENTS?
Are there any other areas you would propose?

Will the proposals in the strategy support independent living? Please select one option

- Not at all
- Very little
- Somewhat
- To a great extent

COMMENTS?

While communicating with patients and clients, care professionals may use a computer to support their decision making. Do you think that the computer: Please select one option

- Would get in the way of the discussion
- Would make no difference at all
- Could improve the quality of care provided

COMMENTS? (how might the computer be used? How do you feel it may help?)

Do you feel that eHealth will change the way professionals work? Please select one option

- Yes
- No
- Don't know / no views

COMMENTS? (will eHealth make professionals work more efficiently? Will eHealth allow professionals to have access to better information?)
How useful would it be to have access to your eHealth records? Please select one option

- Very useful
- Slightly useful
- Useful
- Not useful at all

COMMENTS? (if you had access to your eHealth records what might you want to do or look at and why?)

Do you expect that information about the health and care of patients and clients would be shared among professionals to improve decisions they make about the care they provide? Please select one option

- Yes
- No
- Don't know / no views

COMMENTS?

How confident are you that we will keep information about you safe and secure, so that only those who need to access it can do so. Please select one option

- Completely confident
- Slightly confident
- Confident
- Not confident at all

COMMENTS?
To what extent do you feel that the adoption of eHealth will encourage innovation and economic development in Northern Ireland?  Please select one option

- Not at all
- Very little
- Somewhat
- To a great extent

Do you have any comments about the adoption of eHealth?

COMMENTS
Equality Impact Assessment

Equality and human rights implications
Do you agree with the conclusions reached by the HSCB in the draft Equality Impact Assessment, which is on the consultation web page?

(If no, please give further information, along with any supporting evidence)

Is there any other evidence that you think we should have taken into account?

ADDITIONAL COMMENTS
eHealth and care strategy consultation,
Health and Social Care Board,
12-22 Linenhall Street,
Belfast BT2 8BS.

Tel: 028 9536 3323
eMail: eHealthstrategy@hscni.net
Web: http://www.hscboard.hscni.net/consult/index.html