iLINKS

informatics enabling connected care

NHS

iLINKS Informatics Transformation Strategy

2014 - 2017

Contents

Introduction

This document presents the informatics strategy for the iLINKS Informatics Transformation Programme, which is being implemented across North Mersey, as part of a shared vision to improve health and social care by providing professionals with the information they need to enable them to work and share collectively around the individual.

To achieve this united vision, this strategy aims to enable transformational change through the provision of a 'joined up', strategic approach to Information Management and Technology (IM&T) developments, which enable the strategic priorities of Clinical Commissioning Groups (CCGs) - including Liverpool's Healthy Liverpool Programme and the vision for South Sefton and Southport and Formby over the next three to five years [figure 2]. This vision will also support the priorities of other local commissioners including Local Authorities and NHS England.

Although each CCG has their own strategy, and associated informatics systems and requirements, a joined up approach across the entire local health and social care economy, incorporating all service providers and settings of care [figure 1], is essential in order to deliver 'shared information', which contains the right information, accessible in the right place, at the right time, to deliver safe and effective patient care.

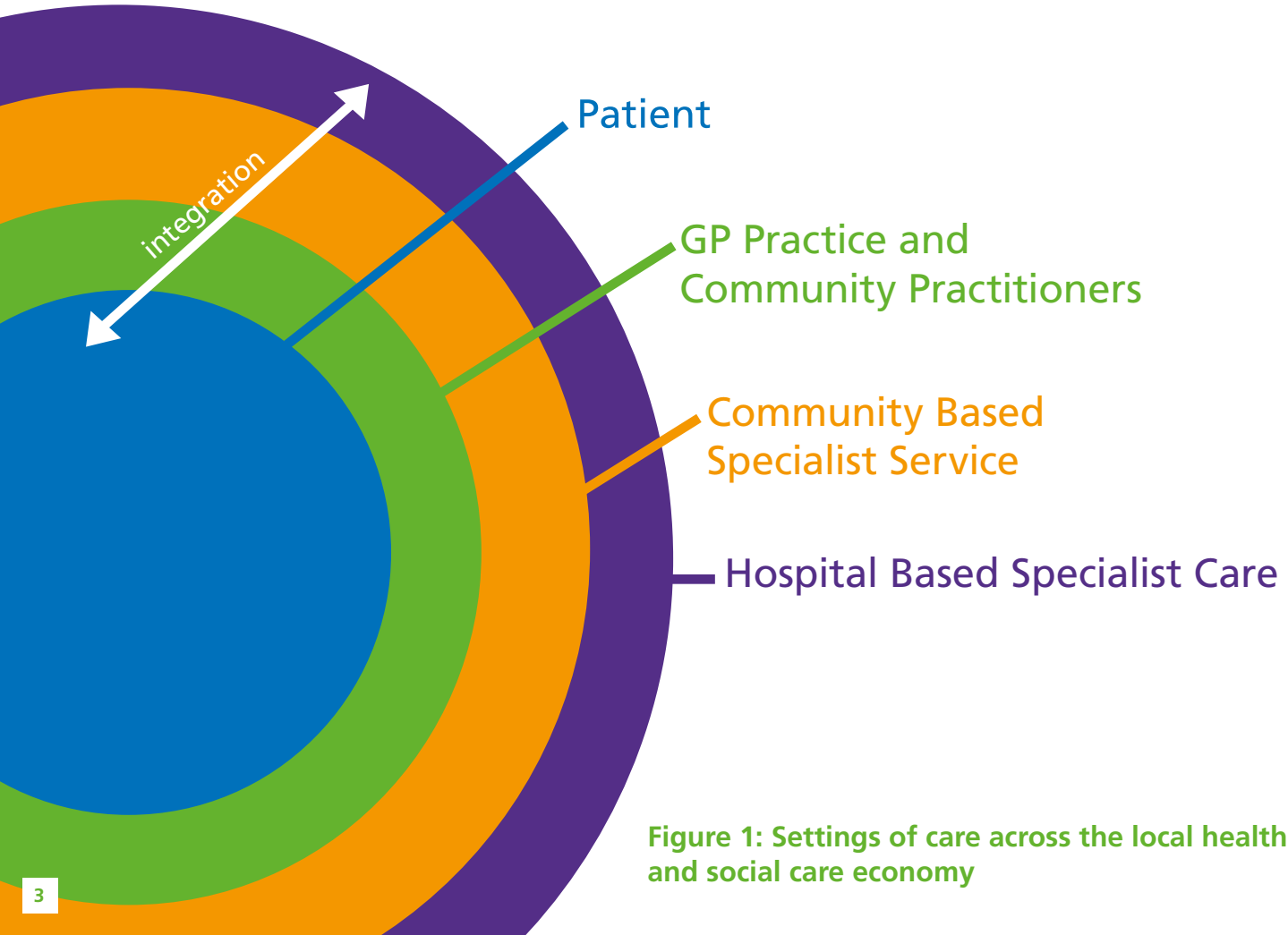


Figure 1: Settings of care across the local health and social care economy

Figure 2: Local CCG strategic priorities

Liverpool CCG

The vision for health in Liverpool:

By 2020, healthy outcomes for the people within Liverpool will have improved relative to the rest of England and health inequalities within Liverpool will have improved.

The quality of health care received by Liverpool patients will be consistent and of high quality. This will be measured by patient feedback, provider assessment and external review processes.

By 2018/19, The Healthy Liverpool Programme aims to:

- Reduce life years lost by 24.2%
- Improve quality of life for people with long term conditions from the second worst in the country at 65.3% to 71%
- Reduce avoidable emergency admissions by 15.3%
- Improve hospital patient experience to average top 10 CCGs
- Improve out of hospital patient experience to average top 5 CCGs

Through defined settings of care, there is an ambition to deliver a seamless and efficient health and social care experience.

There are six priority areas to develop the settings of care models covering:

- Healthy Ageing
- Long Term Conditions
- Mental Health
- Children
- Cancer
- Learning Disabilities

South Sefton & Southport and Formby CCGs

The vision for health in South Sefton and Southport and Formby:

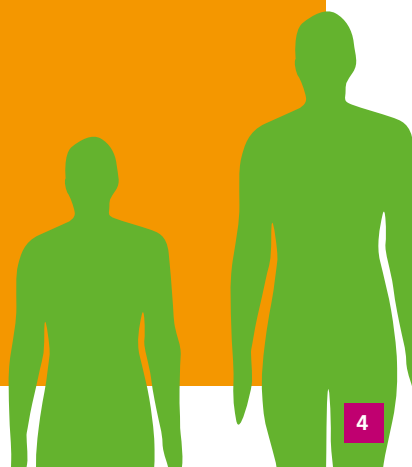
To create a sustainable healthy community based on health needs, with partners; focused on delivering high quality and integrated care services to all, to improve the health and well-being of our population.

The CGGs aim to:

- Improve the quality of commissioned services, whilst achieving financial balance
- Achieve a 15% reduction in non-elective admissions across 5 years
- Implement the 2014-15 phase of Care Closer to Home / Virtual Ward plan
- Review and re-specify community nursing services ready for re-commissioning from April 2015 in conjunction with membership and partners
- Implement the 2014-15 phase of Primary Care quality strategy / transformation
- Agree a three year integration plan with Sefton Metropolitan Borough Council, with the implementation of year one (14/15) to include an intermediate care strategy
- Review the population health needs for all mental health services to inform enhanced delivery

The clinical programmes that are being developed to support this vision are:

- Cancer
- Children
- CVD
- Diabetes
- End of Life
- Mental Health
- Respiratory
- Urgent Care



Background

Across the North Mersey local health and social care economy there is a driving ambition to deliver, at scale, shared information and to move to a culture where 'we share', questioning 'how do we?' rather than 'why can't we?' by default.

Over the past twelve months, an extensive communication and engagement exercise has taken place with key stakeholders and there is unanimous enthusiasm and support for the development of an information exchange through interoperable systems. This will enable a consistent approach to information sharing and improved patient care delivery across the North Mersey local health and social care economy and beyond.

Key stakeholders identified as part of this programme of work include:

- Aintree University Hospital NHS Foundation Trust
- Alder Hey Children's NHS Foundation Trust
- GTD Healthcare
- Informatics Merseyside
- Liverpool Community Health NHS Trust
- Liverpool City Council
- Liverpool Clinical Commissioning Group
- Liverpool Clinical Laboratories
- Liverpool Heart and Chest Hospital NHS Foundation Trust
- Liverpool Health Partners
- Liverpool Women's NHS Foundation Trust
- Local Medical Committees
- Mersey Care NHS Trust
- Merseyside Fire Service
- Merseyside Police
- North West Ambulance Service
- North West Coast Academic Health Science Network
- Public Health
- Sefton Council
- Southport and Ormskirk Hospital NHS Trust
- South Sefton Clinical Commissioning Group
- Southport and Formby Clinical Commissioning Group
- The Clatterbridge Cancer Centre NHS Foundation Trust
- The Royal Liverpool and Broadgreen University Hospitals NHS Trust
- The Walton Centre NHS Foundation Trust
- Urgent Care 24

It is recognised that across the local health and social care economy there will always be different IT systems and processes in place as a result of a complex environment, which spans multiple organisations and settings.

Whilst these may be rationalised over time, with joint working across some organisations, this strategy aims to deliver a set of guiding principles, 'the glue', to join systems and information up, where it makes sense to do so collectively, to deliver high quality care.

Whilst those stakeholders identified fall within the North Mersey health and social care geographical boundary, relationships from a programme perspective, with other neighbouring CCGs and organisations will also be important, in particular where cross boundary services are being delivered.

Vision

The vision of this strategy outlines the ultimate goal of the iLINKS Informatics Transformation Programme and is central to supporting our local organisations' ambitions for joined up information, enabling the delivery of pathways of care designed around the individual.

High quality information, at the right place, at the right time is essential to support and enable the delivery of high quality healthcare services. The vision is:

> To provide local health and social care professionals with the information they need to enable them to work and share collaboratively around the individual.

At the heart of this vision is the development of an 'information exchange', which will enable the delivery of the CCGs transformation programmes. Figure 3 outlines the key deliverables of this information exchange.

Figure 3: Key deliverables of the information exchange

The Information Exchange...

…is a health and social care record centred around the whole person

…includes the ability for individuals to access and contribute to their own record and person centred care plans

…to a clinician looks and feels as though it is one system

…gives a new layer of intelligence through analysis of data from across various organisations

…complements the various partner organisation systems and informatics strategies and can be seamlessly integrated into these giving a joined up experience

…delivers combined datasets which will give an enhanced level of intelligence for risk stratification and operational planning for services across the community

…is entirely customisable and role based (practitioner / individual / carer) providing different default views dependent on role

...gives a specific view across health and social care providing an early warning for child protection

Objectives

To achieve our vision, there are a number of clear strategic objectives:

To create and deliver an information exchange across health and social care

To ensure informatics system-wide coherence and strategic leadership across health and social care

To exploit the benefits and investment of existing and future technologies and processes

The successful delivery and progression of the above objectives will support the transformation of clinical programmes and services across the North Mersey local health and social care economy.

Outcomes & Benefits

There are a number of outcomes and benefits that are expected through the delivery of this strategy:

Outcomes

- Appropriate electronic information made available 24/7 to practitioners
- Information is relevant and available at the point of care in real-time where appropriate
- Individual/ client access and contribution to electronic care record
- A paper light health and social care economy

Benefits

- Improvement in quality and safety through access to real-time, accurate information
- Increased compliance with Information Governance (IG) standards
- Reduced time spent recording and sharing patient information across multi-disciplinary teams (MDT)/ pathways
- Reduction in the health and social care economy carbon footprint, through reduction in travel, paper and efficient ways of working
- Increased productivity to travel ratio for clinicians
- Reduced time responding to requests for patient information
- Reduction in patient confidentiality breaches
- Increased patient/ client satisfaction
- Maximising informatics investment across the local health and social care economy
- Recording information in a coded, structured format will provide a powerful tool for audit and enables recording of outcome measures

These outcomes and benefits need to be managed and quantified but are focused primarily on making sure the right information is available in the right place and at the right time 24/7.

For health and care providers, the ability for both patients and clients to access and contribute to this information has benefits with regards to the quality and accuracy of the information.

The growth and roll-out of mobile technology and devices also means that relevant information can be accessed and updated in real-time from the point of care, improving the speed, accuracy and quality of the service being delivered, reducing the carbon footprint by assisting in the development of a paper light health and social care economy.

In order to achieve the outcomes and benefits, the local health and social care economy will need to implement an IT infrastructure to be able to access systems, collaborate and achieve 'acting as one'.

Underpinning such transformation, needs to be a joint approach to investment in technology to ensure that IT systems and processes take into account the 'bigger picture' to enable interoperability and information sharing between organisations. Across the health and social care economy there has been a cultural shift to support this vision.

Guiding Principles

To enable the delivery of this strategy and support organisations with informatics decisions, a set of guiding principles have been developed to outline ideologies and standards for organisations to adopt, to provide Information Management and Technology (IM&T) alignment across the local health and social care economy.

It is expected that in the future, any informatics investment or decisions will utilise these guiding principles [figure 4] to ensure informed decisions are made. Moving forward, commissioners will agree with providers the level of contractual requirements in terms of these guiding principles and the maturity levels which are expected to be met.

Figure 4: Guiding principles

Informatics investments or strategic initiatives that span multiple organisations need to be incorporated or be part of the iLINKS Informatics Transformation Strategy

These standards and principles need to be incorporated into any informatics procurement process to ensure that assessment and consideration are given to requirements outside individual organisations

Use the economy-wide definition of interoperability levels, terms and use cases

- **Clinical interoperability:** Look and feel to practitioner and how the information is used to support care delivery
- **Semantic interoperability:** The logical level, which defines clinical content, terminology and the model for interoperability
- **Technical interoperability:** Technical definition of data format, storage and transfer

Adopt economy-wide messaging standards to enable the capability to communicate using common languages between organisations at scale

Develop the ability to use and align structured clinically coded data between organisations

Adopt economy-wide querying standards to enable the querying of data repositories to provide an economy-wide insight that information exists

Incorporate the ability to receive or view data from other organisations whilst retaining information proprietary

Develop the ability to make information available to the right person at the right time, utilising defined and tailored data sets and legitimate relationship principles

Ensure full audit capability is provided which supports clinical practices

Support the economy-wide agreement for record access, with options for patients to opt out

Ensure new technologies do not introduce new risk and do not increase paper processes and reliance on faxing internally and externally between organisations and services

Ensure compliance with strategic economy-wide systems

These guiding principles sit at a strategic level, with a further level of detail and definition, to support informatics delivery to be developed in line with organisational aspirations and assessment of digital maturity.

Digital Maturity Framework

Based on the Healthcare Information and Management Systems Society (HIMSS) Europe Continuity of Care Maturity Model, an informatics maturity model will be utilised to measure the maturity of organisational healthcare systems in the context of the level of information that can be viewed and exchanged.

The model [figure 5] will be used as a reference tool to measure organisational maturity whilst identifying opportunities to enhance technology and develop digital maturity. This interoperability and integration maturity approach will align technologies to ensure that the delivery of the information exchange is achievable in a staged approach by all organisations.

All organisations will undertake individual assessments which will feed into an economy-wide appraisal in terms of digital maturity. A robust approach, involving tracking and development, will be established.

Figure 5: Informatics maturity model

STAGE 7	Knowledge driven engagement for a dynamic, multi-vendor, multi-organisational interconnected healthcare delivery model
STAGE 6	Closed loop care coordination across care team members
STAGE 5	Community wide patient record using applied information with patient engagement focus
STAGE 4	Care coordination based on actionable data using a semantic interoperable patient record
STAGE 3	Normalised patient record with shared care plans using structural interoperability
STAGE 2	Patient centred clinical data using basic system-to-system exchange
STAGE 1	Basic peer-to-peer data exchange
STAGE 0	Limited to no e-communication

Delivering the strategy

Governance

From a governance perspective, the following groups have been established:

- iLINKS Transformation Programme Board
- Clinical Informatics Advisory Group

The role of the Programme Board is to oversee the delivery of the iLINKS Informatics Transformation Programme across North Mersey, with responsibility for all of its sub-groups, ensuring informatics related activities demonstrate measurable benefits relating to the strategic objectives of the CCGs.

For Liverpool CCG, the group will report into the Healthy Liverpool Programme governance structure and for South Sefton and Southport and Formby CCGs, the group will report into the CCG Finance and Resources Group. The Chair of the Programme Board will rotate between the three CCG IM&T Leads.

The Clinical Informatics Advisory Group (CIAG) will be clinically led and will act as a joint clinical and informatics advisory and steering group to the Programme Board, representing the interests of stakeholders throughout the local health and social care economy.

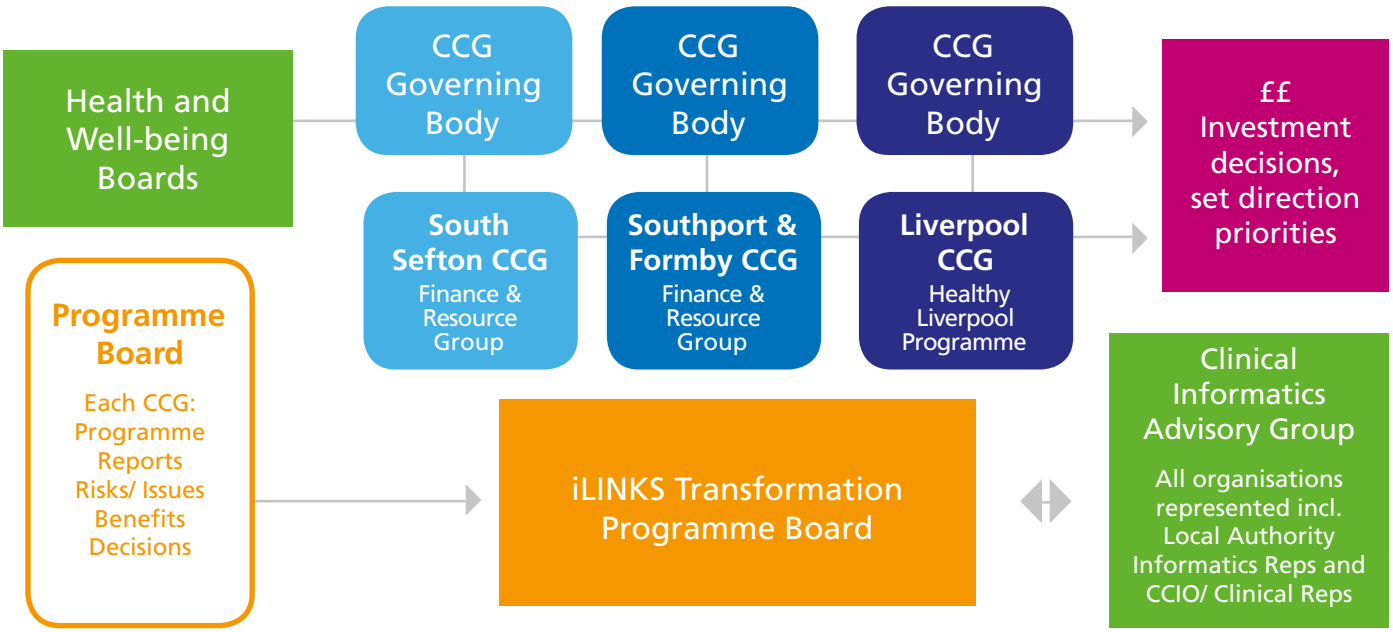
The Chair of the CIAG will sit on the Programme Board, to whom the group is ultimately accountable to, who will approve major developments, ensuring that any required funding is appropriately sanctioned.

The CIAG will make recommendations to the Programme Board, concentrating on cross-organisational developments that 'bridge the gaps' to enable us to 'act as one' and will help support the strategic priorities of NHS England, Local Authorities and neighbouring CCGs including the Healthy Liverpool Programme and South Sefton's and Southport and Formby's Transformation Programmes.

The Managing Successful Programmes (MSP) methodology will be utilised as a framework to deliver the iLINKS Transformation Programme, ensuring that the programme, and all of its sub groups, are delivered according to a set of guiding principles and processes, in line with industry best practice.

Key to the successful management of the iLINKS Informatics Transformation Programme is the identification, definition and management of benefits.

Within the benefits realisation process, relevant stakeholders will be consulted to formalise links and fully harness the expected outcomes and benefits, which must link in with each organisation's strategic objectives and programme deliverables.



Approach

It is recognised that there has been a significant level of development and investment in informatics locally over the past five to ten years. It is important that this is recognised and our plans aligned to ensure the maximum use of this investment, as well as looking to the future.

The delivery of this strategy is therefore focused on ensuring an 'improvement on today' whilst looking ahead to delivering the 'information exchange'.

To achieve this will require a real focus on Information Governance and alignment with the developments and priorities of the transformation programmes underway across the local health and social care economy.

Underpinning this will be an infrastructure which will enable us to 'act as one' and an intelligence strategy, providing direction on the utilisation of technologies and techniques to help inform and shape service provision for the future.

To deliver the iLINKS Informatics Transformation Programme a number of workstreams have been established:

Improvement on today

Evaluating the use of informatics to support the development, delivery and improvement of healthcare services today and for the next three to five years and beyond.

Clinical governance and informatics enabled service redesign

Reviewing service pathways and procedures across the local health and social care economy, identifying opportunities for improvement through informatics enabled collaboration and the safe sharing of clinical information.

Delivering the information exchange

Creating a unified view of health and social care information, sourced from a variety of clinical and social care information systems, that can be used to facilitate improved decision-making, joined-up care provision and better service user experiences and outcomes.

These workstreams will be supported by:

Infrastructure which enables us to 'act as one'

Ensuring that the technical infrastructure and information sharing processes across the local health and social care economy are joined up, resilient and fit for purpose for cross-organisational collaboration and information sharing.

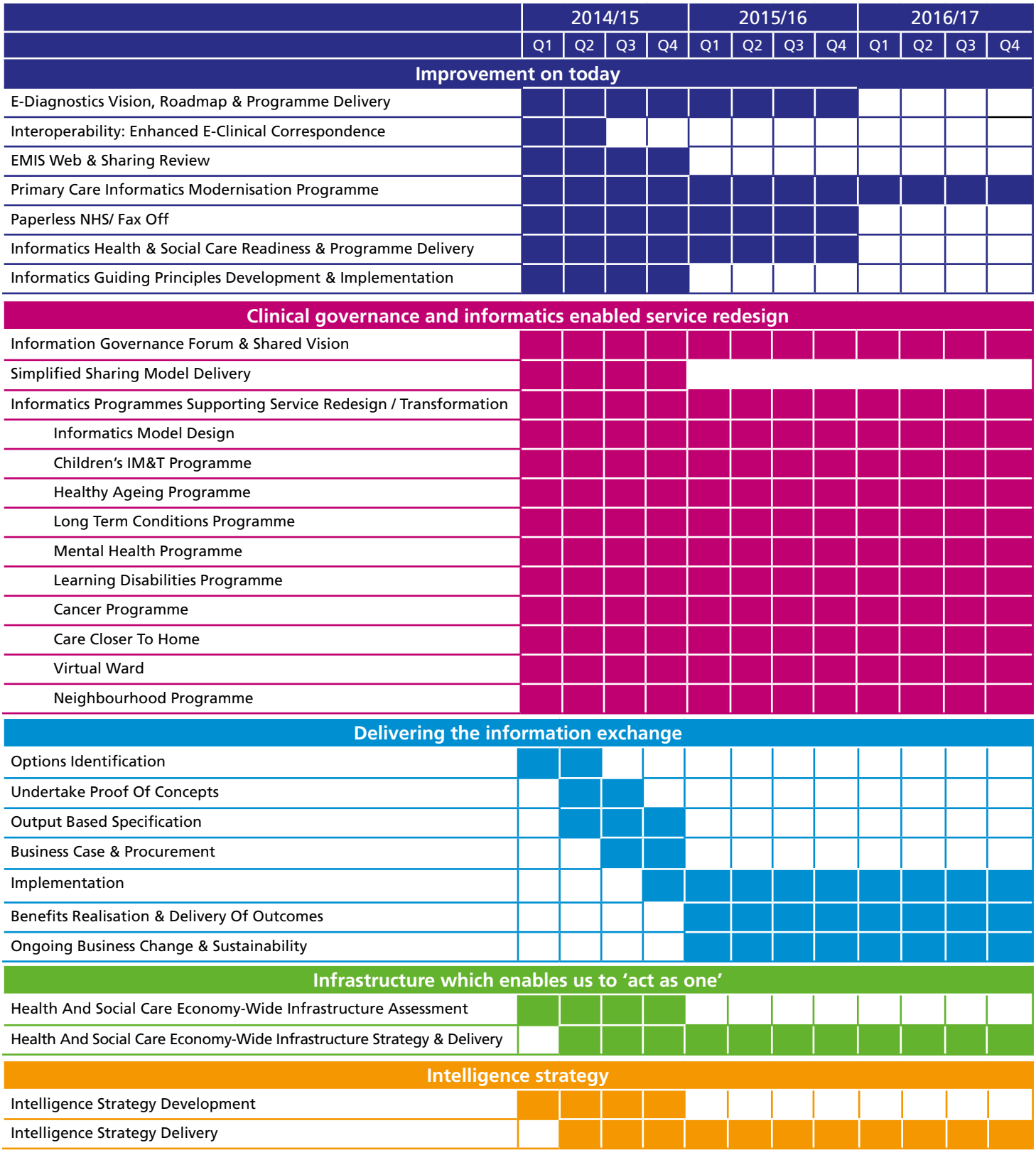
Intelligence strategy

Utilising information to create intelligence to help shape how services are planned and delivered, whilst creating the potential to revolutionise the management of chronic health conditions such as cancer, diabetes, pulmonary conditions and cardiovascular disease through predictive analysis of trends, behaviours and demands.

Delivering the strategy

Plans

Detailed project plans have been developed for each workstream. The plans below provide a high-level summary of where work has already commenced or is planned.



Top Priorities

A number of priority areas of focus have been identified for the iLINKS Informatics Transformation Programme. These will change and be developed over time, but in order to initiate the programme, the initial priorities include:

Tackling Information Governance

A significant priority to enable the delivery of this strategy is for us to tackle Information Governance issues at scale. This will support the culture move to a situation where, subject to appropriate consent and legalities, 'we share' by default.

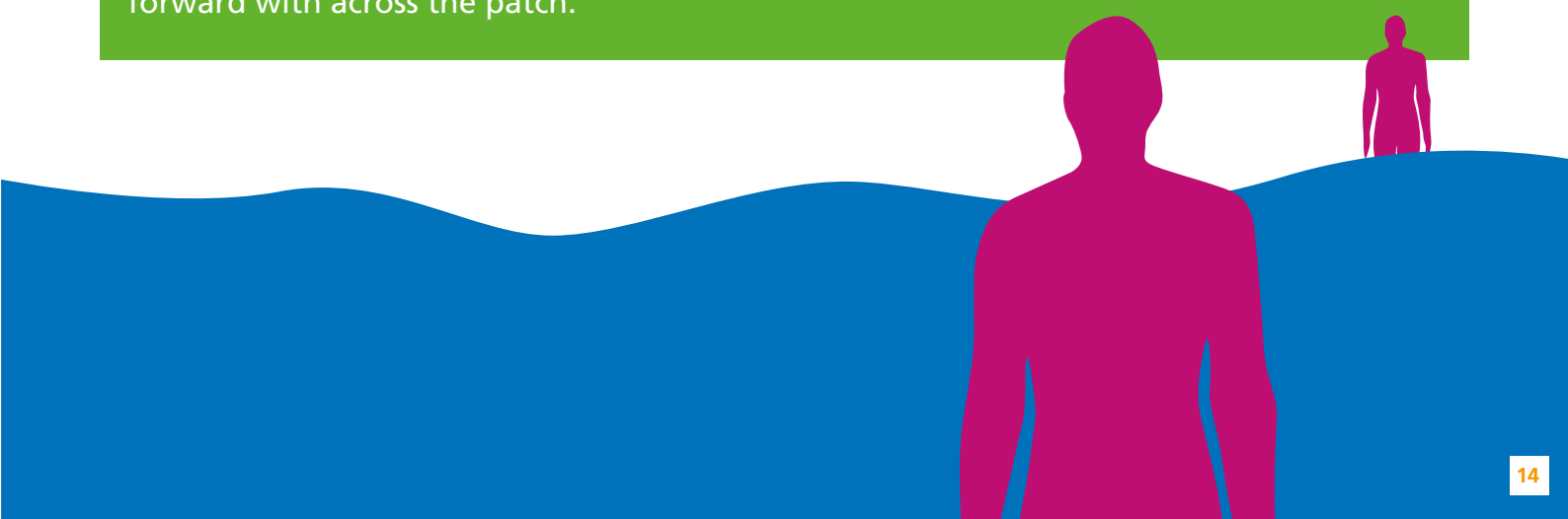
A joined up approach to this is required across the local health and social care economy in order to enable all organisations to 'act as one' and share information appropriately to support the delivery of care. An Information Governance Forum will be established to drive this forward. A robust approach to monitoring access and safety of the system going forward will be implemented.

Identifying what information needs to be shared

Whilst there is recognition that there is existing sharing and interoperability in place locally, the current sharing model is not a scalable model. A priority is to establish what information needs to be recorded across health and social care organisations, what information is relevant to be shared and at what level.

Delivering the technical requirements of the information exchange

There are a range of technical approaches to deliver the 'information exchange'. A full assessment is required to understand the available options and a decision is to be made by the health and social care economy in terms of a strategic solution to move forward with across the patch.



Delivering the strategy

Investment categories

There are a range of categories from an investment perspective in terms of supporting the delivery of this strategy.

Health and social care economy 'Information Exchange'

Funding to support 'the glue' - the technology and resources to deliver the 'information exchange'.

Diagnostics investment

A fundamental part of sharing information to support clinical care, and a significant workstream within this programme to enable this to happen, is the delivery of joined up diagnostic IT systems.

Multi-Trust initiatives

The digital maturity of Trusts and their compliance with the guiding principles is key to the development and delivery of this strategy. Multi-Trust initiatives should support the delivery of this and enable clinical programmes across settings of care.

Mini technology funds

In order to stimulate innovation in the delivery of care, a 'mini technology fund' will be established with set criteria, linked to the guiding principles and digital maturity levels, for providers and SMEs to access funding.

Health and social care economy infrastructure

The investment to deliver a joined up health and social care infrastructure is an essential component to enable practitioners to access systems, collaborate and 'act as one'.

Process

The process for investment will be undertaken within the governance of the programme, utilising the Clinical Informatics Advisory Group and Programme Board, making recommendations to Clinical Commissioning Groups where investment decisions will ultimately sit.

So what?

Let's **fast forward** to the future and see what difference this strategy will make...

2014

2017

The eyes of the individual...

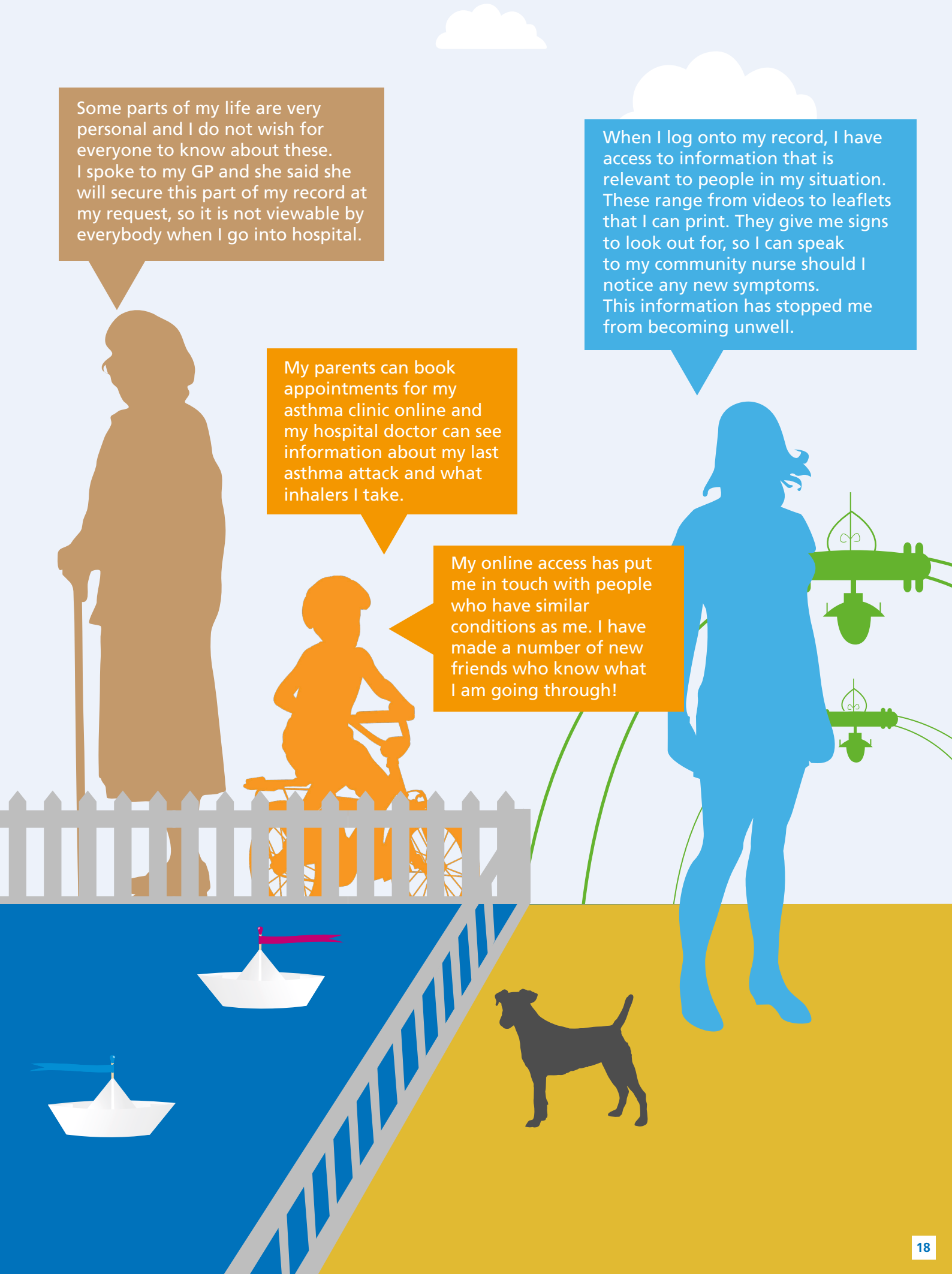
I get text and e-mail reminders about appointments or tasks I need to complete at home (such as monitoring my blood pressure). This has really helped me keep on top of things, my daughter gets them too which is good as she helps me with my day-to-day care.

I have the ability to input into my own record, which is a defined area for my contribution which all my health and social care professionals can see should they wish and I allow access.

I have a person centred plan. It contains my relevant personal details, my preferences, such as what I like to be called, how I wish to be treated in an emergency, and how I prefer female doctors. I also have goals that are set with me by my health trainer or named coordinator. All my health and social care professionals can view these plans should they wish and I allow access.

I have fewer blood tests and investigations done these days, as all my previous tests and results are shared across each of the hospitals and the teams that look after me in the community.

My information is shared across all the appropriate organisations, irrespective of where I live, even when I have to travel to other hospitals within Merseyside. My social care team are updated on my health issues, and my doctors and nurses understand my social care issues too and can manage my discharges and after care appropriately.

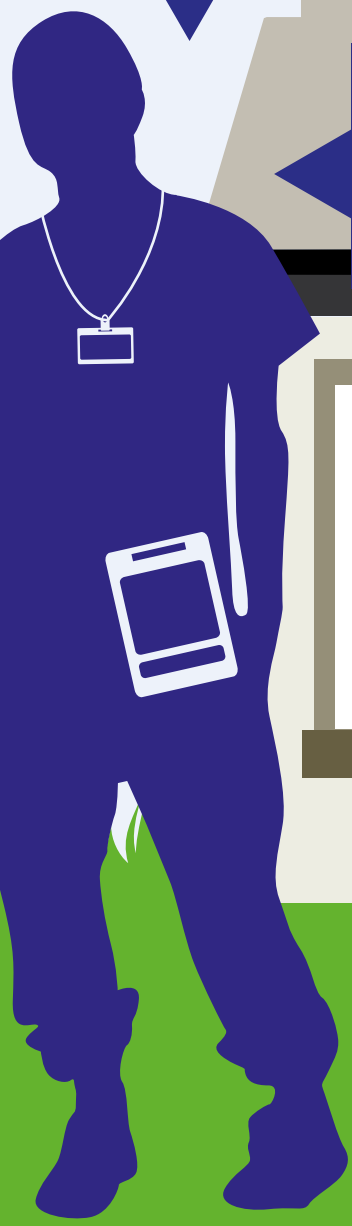

Some parts of my life are very personal and I do not wish for everyone to know about these. I spoke to my GP and she said she will secure this part of my record at my request, so it is not viewable by everybody when I go into hospital.
My parents can book appointments for my asthma clinic online and my hospital doctor can see information about my last asthma attack and what inhalers I take.
My online access has put me in touch with people who have similar conditions as me. I have made a number of new friends who know what I am going through!
When I log onto my record, I have access to information that is relevant to people in my situation. These range from videos to leaflets that I can print. They give me signs to look out for, so I can speak to my community nurse should I notice any new symptoms. This information has stopped me from becoming unwell.

The eyes of the health & social care professional...

Being able to view recent letters sent between care settings regarding my client has allowed me to process benefits and care package applications much more efficiently. I am no longer waiting for forms and assessments to be returned by fax or post.

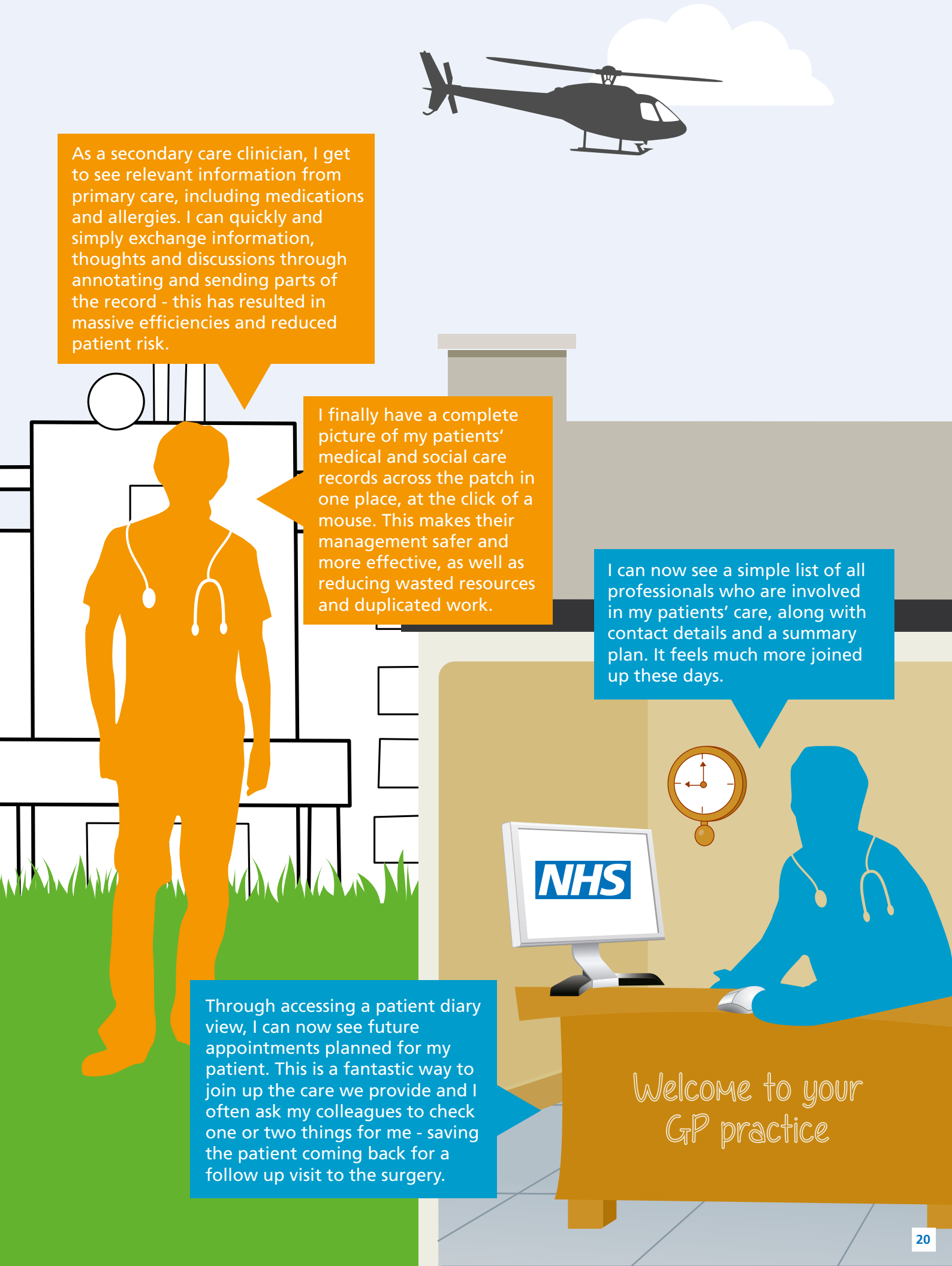
This is a great tool for picking up early signs of clinical abuse or neglect, with different agencies all documenting evidence of contacts. We can then intervene and help before it's too late.

The shared patient record allows us to ensure we are aware of any patient preferences, this is particularly important to us in urgent care. This includes information about resuscitation, mental capacity and end of life wishes.



These new systems allow us all to act as one service – it's what the public often thought we were doing anyway!

It just works – we have mobile access, and can truly capture and review information on the move. I am not tied to my desk and my work life balance is much improved!


As a secondary care clinician, I get to see relevant information from primary care, including medications and allergies. I can quickly and simply exchange information, thoughts and discussions through annotating and sending parts of the record - this has resulted in massive efficiencies and reduced patient risk.
I finally have a complete picture of my patients' medical and social care records across the patch in one place, at the click of a mouse. This makes their management safer and more effective, as well as reducing wasted resources and duplicated work.
I can now see a simple list of all professionals who are involved in my patients' care, along with contact details and a summary plan. It feels much more joined up these days.
Through accessing a patient diary view, I can now see future appointments planned for my patient. This is a fantastic way to join up the care we provide and I often ask my colleagues to check one or two things for me - saving the patient coming back for a follow up visit to the surgery.
NHS
Welcome to your GP practice

Summary

This strategy is the first of its kind in North Mersey, aiming to improve health and social care by providing practitioners with the information they need to enable them to work in an integrated way and share information around the individual.

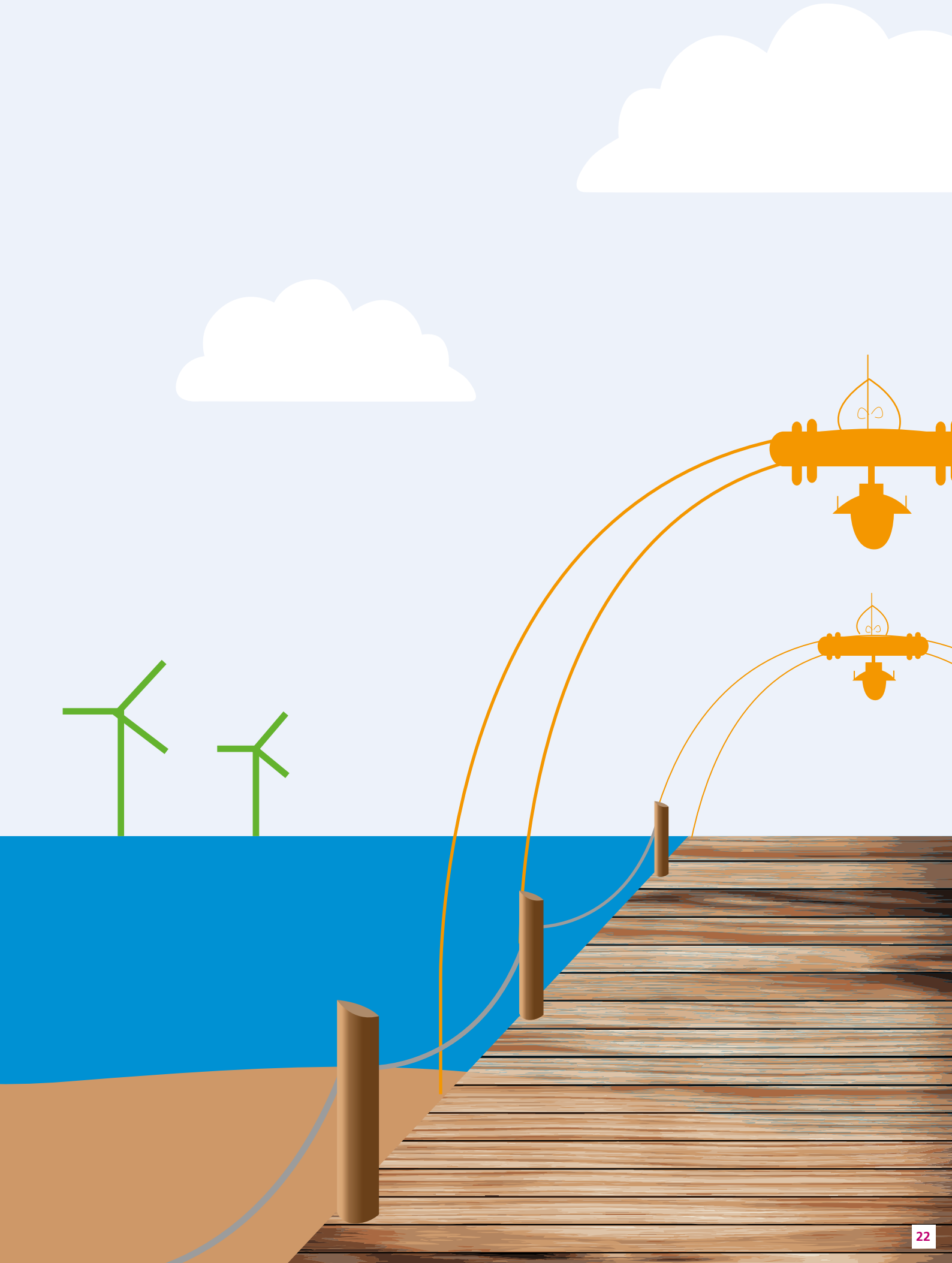
Across the local health and social care economy there is unanimous ambition and enthusiasm to ensure that this information exchange happens, to support improved, personalised, care pathways and a move to a culture where 'we share', questioning 'how do we?' rather than 'why can't we?' by default.

Achieving this vision will have a significant impact on both individuals and health and social care practitioners, enabling transformational change programmes through the provision of a 'joined-up' strategic approach to Information Management and Technology (IM&T) developments.

For individuals, delivery of this strategy will support the aim for care centred on the individual, providing immediate access to relevant information, whilst enabling individuals to view and contribute to their own record and care plan, confident in the knowledge that this information will be made available only to those practitioners involved in their care, with appropriate safety, monitoring and governance in place.

For practitioners, who are involved in providing care, access to shared information, which incorporates all settings of care, will enable the delivery of safe and effective care, providing the right information, accessible in the right place, at the right time.

The scale of ambition is big, the potential benefits extremely exciting and the result - delivering a vision, which will make a real difference for our population and our practitioners.



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