Data Strategy for Health and Social Care 2024 Update: Our progress and priorities

Scottish Government and COSLA

Scottish Government
Riaghaltas na h-Alba

COSLA

Digital Health & Care Scotland

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Introduction

Scotland's first Data Strategy for Health and Social Care, 'Greater access, better insight, improved outcomes: a strategy for data-driven care in the digital age' published in February 2023, set out the vision and ambitions for improving the use of health and social care data to deliver the best care possible for the people of Scotland.

The vision of the Strategy is to make best use of data in the design and delivery of services and is underpinned by three core ambitions:

To empower the people of Scotland by giving individuals clear and easy access to, and the ability to manage and contribute to, their own health and social care data where it is safe and appropriate to do so.

To empower those delivering health and social care services to have the confidence and ability to gather, safely use, and share data, to sustainably improve services and ensure outcomes are being met.

To ensure fit for purpose data is readily accessible through secure and safe means for planning, research and innovation. Data will be used for the benefit of individual wellbeing and the public collectively, including the development of new and innovative ways of working, improving care, developing new treatments and technologies.

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The Strategy's commitments and deliverables set the strategic direction for how we want to work, and the steps we will take to implement the change required to improve the way in which data is stored, shared and used across the health and social care sector. Over the past 12 months work has been underway to move towards the vision and ambitions and deliver on the actions set out in the Strategy. The development and delivery of the Strategy is overseen and governed by the **Health and Social Care Data Board** To progress towards the vision and ambition of the Strategy, the Data Board agreed to the formation of two sub-boards:

- **The Data Delivery Sub-board** was formed to allow COSLA and the Scottish Government to effectively monitor progress of deliverables and programmes of work associated with the Strategy. The Sub-board will oversee delivery and provide a single point to triage data work that has been commissioned for the health and social care sector.

- **The Data Standards Sub-board** was established to allow COSLA and the Scottish Government to set out the preferred standards for use across the health and social care sector to drive a common approach to the way in which data is captured to facilitate interoperability.

- This Data Governance is also supported by programme specific boards such as the Social Care Data Intelligence Programme Board and the GP Editorial Board.

This update will provide an overview of our key achievements in 2023-24, how they have moved us towards our vision, and provide an indication of some of our priorities for the coming year. Further details of our priorities for improving our use of health and social care data are confirmed in our Delivery Plan for Digital Health and Care, updated annually at www.digihealthcare.scot.

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Success so far

A year on from publication we have taken some important foundational steps to advance us towards achieving the vision and ambitions of the Strategy.

Ethical approaches to data remain core to our Strategy. We have continued to champion the ethical use of data and have prioritised exploring ways in which we can improve the quality and completeness of data, starting with race and ethnicity data. This will lay the groundwork for capturing this data in a centralised manner, this could then be replicated and expanded to capture wider protected characteristics data in the long term which will help us to reduce inequalities across delivery of care within health and social care.
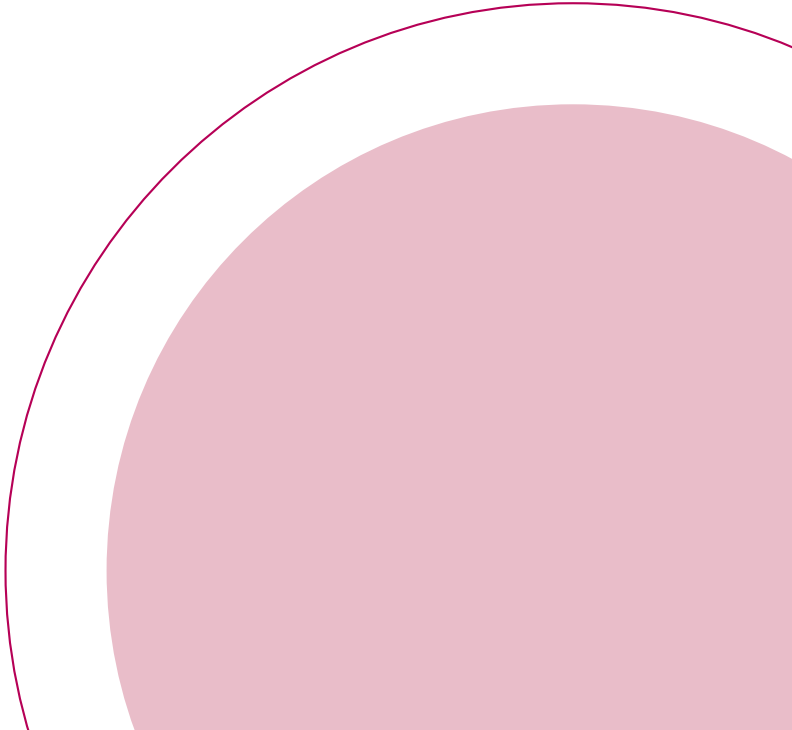
We continue to improve our technology and infrastructure to enable easier access and sharing of data for staff. Work is continuing on the development of an Integrated Social Care and Health Record which will prevent people having to retell their stories. Additionally, it will make it easier for staff and those providing social care support to access the right data at the right time, to deliver the best care possible. Engagement has taken place to allow us to understand what the public, professionals and those providing social care support need from Integrated Record. We will now move into an initial testing phase which will enable us to understand key components for capturing and sharing data via the Integrated Record so that we can later set out a roadmap for delivery.

As well as working towards improving access to data for professionals, we have progressed work to understand the technical requirements for developing a Digital Front Door to allow people to digitally interact with their health and social care data. This will allow us to develop a prototype to test the Digital Front Door in 2024-25 in preparation for making the service available to members of the public by the end of 2025. This service will underpin the delivery of many of our other digital and data ambitions.

We recognise that to truly make best use of data it is not enough to improve systems and that staff must also have the confidence and skills to use data effectively. We have continued to develop, expand, and share learning and development resources across health and care as part of our Digital Skills & Leadership aim. This will ensure we have the right level of digital and data skills for all staff and that appropriate leadership is in place to sustain and transform our services.

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Finally, we have improved the process for researchers and innovators to access data through our recently launched Researcher Access Service. This is the first step in enabling easier access to data, at pace, allowing research to be undertaken to support development of better treatments and new innovative ways of working. We can then build upon this work to further explore how we can improve the approvals process and expand on the data coverage available through the Safe Havens to support data-driven research that will improve delivery of health and social care across Scotland.

We acknowledge the complex landscape of health and social care and understand that there is still a long way to go to achieve the vision and ambition of the Strategy. However, taking a step-by-step approach we will continue to build upon our successes so far as we move into the second year of the Strategy. We must also recognise the financial and resource challenges faced in delivering the actions set out in the Strategy, in light of the current economic climate. Through our governance, we will prioritise key programmes of work that provide the best value, while delivering the greatest impact to support the sector to make better use of data. Going forward, we will also set out how we can best measure the impact that implementation of deliverables is having across the health and social care sector as a whole. This will help us to better understand the number of people that have benefited as a result and demonstrate the impact the strategy is having.

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Ethical Approaches to data

We want to embed an ethical, open, and human rights-based approach to the use of health and social care data in Scotland which maintains public trust and confidence.

What we have achieved so far

Ethical approaches to data are core to all the priority areas within the Strategy and our commitments to ethical working underpin all other commitments within the Strategy. In our first year we have:

- **Improving Protected Characteristics Data.** In recognition of the potential to use data to reduce inequalities in Scotland, the Strategy committed to improving the quality and consistency of protected characteristics data, including ethnicity data to ensure we provide equitable care for everyone. A Short Life Working Group was established to develop a consistent approach to improving the collection of ethnicity data. Additionally, an equalities data set was developed which is now available, with appropriate permissions for research within the national Safe Haven. This population wide dataset increases Scotland's analytical potential and will enable researchers to build evidence on the impact and outcomes on equalities. Our initial focus has been on improving race and ethnicity data; however, we are committed to improving data across all protected characteristics. We will continue to work with suppliers and stakeholders across the health and social care sector to outline the minimum expectation for collection of this data to ensure that systems have the capacity to collect this information.

- **Ethical Digital Nation.** The Scottish Government have concluded research to inform development of a prioritised action plan and roadmap which will set a clear direction for the ambitions of Ethical Digital Nation work for the next three years. Initial research has been undertaken with members of the public and stakeholders to open the dialogue of how ethics is discussed. This research has provided a foundation of values that should be considered in future communication and messaging campaigns going forward.

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- **Data Ethics.** The Scottish Government has undertaken a public engagement project on the use of data in the public sector in Scotland. This resulted in the formulation of a set of public led guidelines for the ethical use of data. A report from this public engagement will be published in Spring 2024. We will encourage the use of these guidelines and ethical frameworks to guide the collection and use of health and social care data in Scotland to build trust and transparency with the public and ensure that health and social care data is being used in an ethical manner.

- **Digital Inclusion.** We are aware that some individuals may not be able to or may chose not to access their health and social care data digitally, therefore for all our programmes of work we will ensure non-digital access to data will be facilitated to ensure equality of access to health and social care data.

How this helps to achieve our vision

- While the effective use of data offers huge potential, we understand that data also has the potential to exacerbate existing inequalities in our health and social care sector. By laying the groundwork in our approach to improving race and ethnicity data, we are beginning to address longstanding inability to take a data-driven approach to removing inequities from our health and social care system. We are also creating a template that can be used in the future as we look to improve the quality and consistency of other protected characteristics data, such as data on sex and gender. All this is being underpinned by engagement with those with lived experience and the findings of our work in being an ethical digital nation to ensure that Scotland can use data in a trustworthy manner that respects human rights and combats inequalities. Without combating these inequalities, we will never be able to achieve our vision of improving care and wellbeing of <u>everyone</u> in Scotland.

What's next for 2024-25?

Our priority for 2024-25 is to:

- Work towards building transparent approaches that will help to maintain, and build, trust of the public by starting work to improve the provision and signposting of information about how individuals' data is used by health and care services.

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Data Access

We want to empower individuals and professionals to make better informed decisions by providing access to the right data at the right time.

What we have achieved so far

In our first year we have:

● **Integrated Social Care and Health Record.** One of the ways that we are seeking to improve access to data for both the public and professionals is through development of an Integrated Social Care and Health Record. This Integrated Record will provide professionals with access to the right data at the right time. For members of the public, the Integrated Record will provide the ability to contribute to their Integrated Record, where it is appropriate to do so, to allow delivery of person-centred care. In the first year we have built on the work and engagement already carried out as part of the design of the National Care Service to explore the requirements of developing an Integrated Social Care and Health Record. Planning for an initial release of the Integrated Record for testing with a small audience is progressing. This component-based approach means there will not be a 'big bang' delivery day but rather a gradual building of services. An initial outline business case will be reviewed through governance processes. The mechanism for accessing the Integrated Record for the public will be via the Digital Front Door.

● **Digital Front Door (DFD).** Work continues on the Digital Front Door programme, with emphasis now shifting to the delivery of a beta release by November 2025. The programme is focussing on individual's access to data and communication (for example digital letters). In doing so, the programme is establishing important foundations on which several other deliverables of the Data Strategy are dependent.

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- **Primary Care Data.** Work is currently underway to move towards a single supplier for General Practice IT. As of January 2024, 158 General Practices have made the transition to the new supplier across four Health Boards (Lanarkshire, Lothian, Grampian, and Tayside). Work also continues on developing a Primary Care Data and Intelligence Platform that will provide a single, integrated analytical capability for General Practice data across Scotland. The Platform will provide controlled access to the data within the General Practice patient record necessary for staff working in General Practices, and those working within Public Health Scotland (PHS), Business Intelligence Teams, NHS Education for Scotland (NES), and Trusted Research Environments to do their jobs effectively. Additionally, work continues to develop a FHIR interface for storing and exchanging Emergency Care Summary and Key Information Summary Data via the National Digital Platform which will make it easier for other health and care systems to access and use primary care data across the wider health and social care sector.

- **Data Catalogue.** COSLA's Digital Office and Improvement Service have been working collaboratively to explore how to better manage the data returns that are submitted to statutory bodies. A data catalogue which publishes meta data is being developed which will make it easier for local councils to understand what data is required and identify opportunities to simplify data returns and enable better use of the existing data.

How this helps to achieve our vision

Information systems across health and social care do not currently make it easy to access and share data across organisations within the sector. By increasing our understanding of the existing data available and improving our technologies for storing and accessing data, this makes it easier for both professionals and individuals to access the right data at the right time. For example, developing an Integrated Social Care and Health Record provides a single view of the relevant data, prevents individuals from having to retell their story and enables professionals and those involved in providing social care support to make informed decisions about delivery of care. Whilst Digital Front Door supports individuals to understand their health and care needs allowing them to better self-manage their conditions and share relevant data with those involved in their care.

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What's next for 2024-25?

Our priority for 2024-25 is to:

⬠ **Development of a Central Data Catalogue.** To continue to open up access to data, NHS National Services Scotland (NSS) and Public Health Scotland (PHS) will undertake discovery work to explore the technology options to support development of a central data catalogue for health and social care that will set out data that is available on an open basis. This will increase awareness of existing data, reduce variance in the number of data collections and enable better data linkage and comparisons of data across health and social care.

⬠ **Integrated Social Care and Health Record.** Work will begin to develop a prototype of the Integrated Record. Co-design of the Integrated Record will continue throughout 2024-25 to ensure that the design of the Integrated Record meets the needs of both the individuals and professionals.

⬠ **Digital Front Door.** Work will continue to develop a prototype of Digital Front Door focusing on individuals' access to data. It is expected that an initial Beta release will be available to the public by the end of 2025.

⬠ **General Practice IT.** We will continue to roll out and embed General Practice IT as part of our wider ambition to unlock the value of primary care data, recognising that we must also improve our infrastructure, data quality and data literacy to truly unlock the value of data. More information on the steps we are taking can be found in the Technology and Infrastructure, Data Standards and Talent and Culture sections of this document.

Talent and Culture

What we have achieved so far

We are already beginning to see a clear recognition across health and social care organisations that services need to be data-driven, and an acknowledgement of the cultural shift required to prioritise digital and data skills of the workforce. In our first year we have:

We want to attract, develop, support, and retain a workforce that is confident and competent in the use of data. This includes all staff having essential data skills that help us all to better manage the information we all depend upon, and advanced data skills that help us to create more insight from data.

- **Development of training resources.** COSLA's Digital Office has developed an essential data skills training resource which is available to staff as an online learning course. Originally developed by Perth and Kinross Council, this course has been made available to staff within Local Government and the wider health and social care workforce. Additionally, PHS and NES have developed training to support analysts to make greater use of R.

- **Pilot of Digital Data and Technology (DDaT) Professional Capability Framework.** Discussions are underway to explore the suitability of the DDaT Framework for implementation in NHS Scotland Boards. This will help organisations review and identify the roles required within the DDaT Workforce to enable transformational change and identify skills gaps to allow consistent upskilling of staff across health. A pilot of the DDaT Framework is being discussed and NSS and Scottish Ambulance Service (SAS) have agreed to participate, the inclusion of a territorial Board is still being explored. Additionally, work is underway to co-design a DDaT competency framework for use within local councils that will provide a clear indication of the skills required for certain roles and help staff to assess their current skillset and provide a clear career pathway.

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- ⬟ **Digital Leadership.** The 'Leading Digital Transformation in Health & Care' MSc was launched in March 2023 in conjunction with the University of Edinburgh. It is recognised that in order to effectively make use of digital tools, people must also have an understanding of data. This course has been designed to provide digital leaders and those aspiring to be leaders across health and care with the opportunity to achieve Certificate, Diploma, or Masters level accreditation. In recognising the importance of data, the course has the following data module:

  » Data Led Health and Social Care

- ⬟ The 'Leading in the Digital Age Board' Development Workshops have now been launched to develop the digital leadership mindset of Board level leaders and provides learning resources and training events for health and care organisations across Scotland.

- ⬟ **Digital Health & Care Leadership Programme.** This long-established Programme that originated in Health Boards, now in its 22nd cohort, has wider coverage and is now open to applications from employees from all health and social care settings in Scotland including **health, social care, social work, housing, charities and the third sector**. This programme is aimed at those who are keen to explore how digital technology (and the data they interact with) can benefit people, would like to develop their leadership skills and are in a position to make a change in their organisation (e.g. leading a team, service, or digital transformation project).

How this helps to achieve our vision

The transformation of health and social care services is reliant upon the successful use of data. We are aware that there is more to be done to support staff to understand the importance of collecting and using data to improve delivery of care. The majority of job roles in health and care require a level of core digital and data skills. By ensuring essential data skills is an integral part of our Digital Skills & Leadership aim, we are supporting staff to develop the right skills and ensure a baseline understanding so that data is being recorded and used effectively. For roles that require specialist data knowledge, exploring the DDaT framework for implementation is key to investing in a consistent approach to the transformation of job roles. It will ensure staff have the necessary skills development and access to learning resources. This framework sets out

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a common language to describe roles and defines the skills needed. It facilitates transformation, as well as personal development for the DDaT workforce. By clearly defining the specialist skills required and providing a clear career pathway this will help with recruitment and retention ensuring that staff have the right data skills to create insight from data that can be used to improve delivery of care for the people of Scotland.

Understanding the purpose and role of Data in Decision Making, Change, and Service Transformation is an integral component of our Digital Health & Care Leadership programmes. By investing in and expanding our Digital Leadership Programmes and opportunities, we are ensuring that digital leadership and the importance of digital and data transformation is embedded at all levels of health & care organisations.

What's next for 2024-25?

Digital and Data Skills and Leadership Governance

To date the delivery of the Digital Skills & Leadership commitment has been overseen by the cross-sector Digital Skills & Leadership Programme Board. This Board has now been replaced by Digital Capabilities Board which will have linkage to the Data Board and other Boards as set out in the overarching Governance for Digital Health & Care. The purpose of this new Digital Capabilities Board will further build on our success and have a more collaborative and wider strategic aim across health and care to inform and deliver our transformational aims.

The Digital Capabilities Board will support the shift to embedding data and digital ways of working as a pre-requisite to improving outcomes in health and social care and:

⬟ aim to further develop our leaders to embrace a digital-by-default mindset to empower and support their teams to adopt new digital solutions and allocate time to improving their own digital literacy,

⬟ articulate how embracing digital ways of working and learning new skills can support recruitment and critically the retention of the workforce across health and social care/social work,

⬠ develop learning pathways to support growth of a digitally capable workforce and specific career pathways for our digital specialist workforce,

⬠ embed an understanding of and commitment to progressing digital maturity as a catalyst for continuous improvement in service delivery and design.

The Board will support and be informed by a newly created Digital Capabilities Network. This network will host thematic meetings, open to all colleagues for all relevant organisations.

A review of the learning offers and resources will be undertaken to identify and improve the learning available to support professionals to increase their data skills.
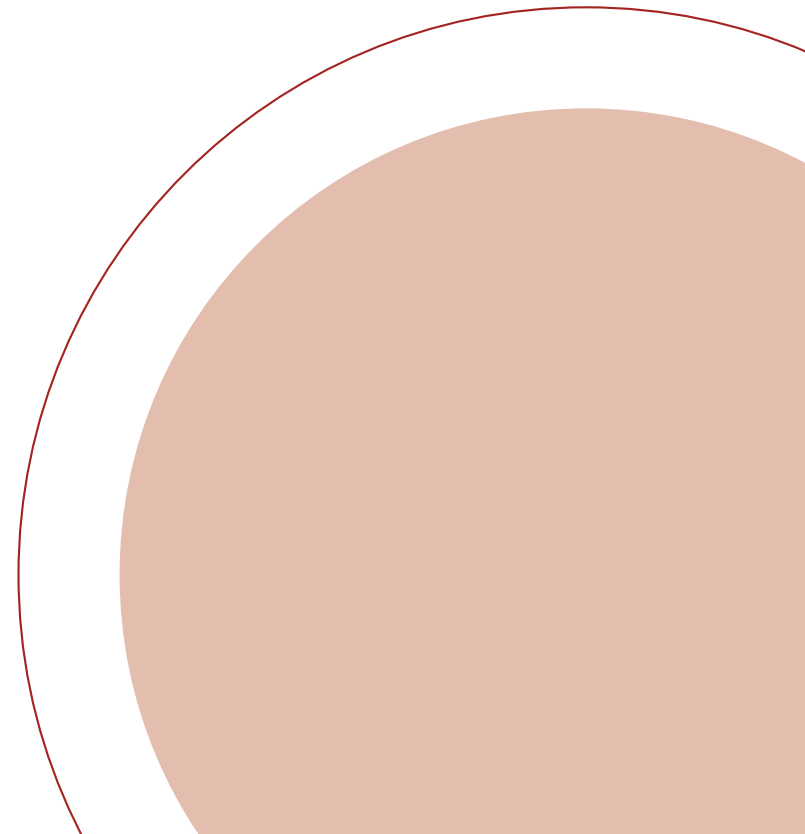
We want a trusted, secure health & care ecosystem where data is shared, managed, and stored securely, consistently, efficiently, and transparently.

Protecting and Sharing Information

Background

The protection and sharing of health and social care information is managed by Information Governance and Cyber Security processes. This is crucial to ensure that data is handled safely, securely and that privacy is upheld. The Data Strategy acknowledges that Information Governance processes need to be streamlined at a national and local level (whilst respecting the agency of organisations) to make it easier to manage, share and safeguard the data that health and social care organisations hold.

What we have achieved so far

In our first year we have:

- **Engagement.** Extensive engagement was undertaken with stakeholders across the health and social care sector to help provide national support in further raising awareness and common understanding of Information Governance and its challenges and opportunities. This engagement has enabled the Scottish Government to identify and consult with key stakeholders to provide the opportunity to collaborate, support and co-produce on key deliverables. As a result, objectives have been clarified and a clear plan for progressing the various workstreams under the National Information Governance Plan has been developed.

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● **Streamlined Information Governance.** Collaborative working is underway between the Scottish Government and COSLA to establish the Information Governance processes that are in use across Local Government to support the further development of consistent approaches to Information Governance. The Society of Local Authority Lawyers and Administrators in Scotland have set up a Sub-Group to feed into this work to help the development, implementation and management of streamlined Information Governance processes and tools that can be used across the health and social care sector. It is intended that this streamlined approach to Information Governance will be achieved through delivery of a Code of Practice.

● **Information Governance Competency Framework.** The first phase of the Information Governance Competency Framework has been developed. The core Information Governance roles are in the process of being made available online for staff within the health and social care sector to access. This framework sets out the roles, responsibilities and skills required from those involved in the governance, assurance or management of data and digital technologies to be effective in their roles and gain a clear understanding of career pathways, training, continued professional development and accreditation.

● **Tools and Resources.** We are continuing to invest in national tools for Information Governance tasks and processes and continue to develop sector-specific national Information Governance related policy and guidelines to help with compliance and continual improvement. We are scaling up what works well in Information Governance, sharing best practice/guidance across the ecosystem to reduce duplication of effort and improve efficiencies. The following resources have been published:

» [NHS Scotland Code of Practice: Protecting Patients Confidentiality](#)

» Artificial Intelligence Validation Framework

» Refresh of Scottish Information Sharing Toolkit

» [Refresh of Intra-NHS ISA](#)

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- ⬠ **Governance Forums.** We championed the re-establishment of the SIRO and Caldicot Guardian forums and will continue to do so into 2024-25. This activity has brought together key resources post pandemic, increasing their individual and collective ability to tackle key issues, recognise and respond to challenges and collaborate on opportunities for improvements.

- ⬠ **Cyber Security.** The Data Strategy committed to developing a cyber security strategy for health and social care. Rather than develop a strategy for cyber security, the decision was taken to align with existing national strategies and frameworks on cyber security and work is underway in collaboration with the Cyber Centre of Excellence to develop an action plan and roadmap for cyber security. Developing a Digital Health and Care Cyber Security Action plan that aligns with the Strategic Framework for a Cyber Resilient Scotland, the Digital Health and Care Strategy and the Health and Social Care: Data Strategy will improve organisational efficiency and effectiveness by clarifying roles, setting priorities, and aligning resources with objectives. Additionally, stakeholders will have confidence that efforts are coordinated and purposeful, which builds credibility and transparency.

- ⬠ **Cyber Centre of Excellence (CCoE)** - We continue to drive service maturity and capabilities of the Cyber Centre of Excellence through delivery and growth of key enablement pillars and underpinning services. The CCoE currently supports health organisations in meeting the rapidly growing cyber challenge and is the focal point for cyber defence and incident response on a national scale. The CCoE works closely with strategic partners, such as Police Scotland, the Scottish Cyber Crime Co-Ordination Centre (SC3) and Cyber and Fraud Centre Scotland to minimise recovery time for critical services and to promote regulatory compliance and privacy and security by design in all new national medical systems.

How this helps to achieve our vision

There are many examples of good approaches being taken to safely manage and share data across health and social care, however we know there are still examples where data could have been beneficially shared but was not. That is why we are continuing our National Information Governance Plan to streamline the Information Governance processes that are in place. By engaging with stakeholders and working collaboratively across the health and social care sector, we have been able to begin to identify priorities with the aim of developing a more streamlined model of Information Governance that meets the needs of all users across the sector. It is critical that staff understand their roles and responsibilities in relation to Information Governance if we want to store and share data securely and consistently. That is why,

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alongside discovery work on our long-term ambitions, we prioritised setting out roles and responsibilities in the Information Governance Competency Framework and publishing tools and resources that will support staff to better understand Information Governance. We believe these actions are crucial to empower individuals to share the right data with the right person when it is appropriate to do so, ensuring data is used to deliver the best care possible.

What's next for 2024-25?

Our priority for 2024-25 is to:

● **Engagement.** We will continue to engage with stakeholders to co-produce a more balanced Information Governance model across health and social care, at the national, regional, and local levels, resulting in more joined up processes, improving compliance and increasing operational efficiencies. In addition, work will continue to prioritise and progress on key deliverables under the National Information Governance Plan.

● **Code of Practice.** Work will be undertaken to develop the core elements of an Information Governance Framework that strengthens stakeholder and public trust and speeds up Information Governance and assurance processes by helping stakeholders to discharge their duties. We will develop and test out tools and best practice approaches to support implementation of the Code of Practice and conduct user testing with stakeholders to ensure that the Code of Practice can be adopted effectively. The Code will provide a consistent Information Governance framework and streamlined arrangements that will help the health and care sector comply with the UK GDPR, as well as other requirements (e.g. NIS regulations) in a practical, transparent, and cost-effective way. It is intended that the code will help to remove data sharing barriers through increased confidence of good practice, greater transparency, and elevated trust among stakeholders and with the public. The Code will support the operation and delivery of Information Governance practices at pace.

● **Tooling and Resources.** We will continue to develop, update, review and publish appropriate tooling and resources that help to support stakeholders across the sector, promoting collaboration and removing duplication of effort and unwarranted local variation in the application of guidance and tools where possible. We aspire to increase efficiencies whilst ensuring due diligence and compliance remains a priority.

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- **Information Governance Competency Framework.** We will further develop the Information Governance competency framework to expand on the roles already delivered through 2023-24, ensuring staff have access to fit for purpose development resources and pathways.

- **Information Governance Maturity Pilot.** Information Governance maturity pilots will take place to identify standardised approaches to continuously improve Information Governance practices and baseline maturity levels across the sector. The longer-term aspiration is that the maturity level will be monitored through a Code of Practice monitoring body, providing assurance across the sector, which will enhance trust and promote more efficient processes, including access to data, while remaining compliant with applicable laws and regulations.

- **Cyber Security.** We will continue to enhance our cyber security tools and responses and actively promote security controls and regulatory requirements through the Cyber Centre of Excellence and the work of the Scottish Health Competent Authority (SHCA). The SHCA will continue to assess annually the cyber resilience practices of all NHS Scotland Health Boards. We will use the findings from the yearly audits to set strategic direction, with a focus on mitigating practices for the areas of greatest risk.

We will focus on the implementation of the Cyber Security roadmap and action plan, working closely with the Cyber Centre of Excellence to expedite growth and resulting resilience.

Technology and Infrastructure
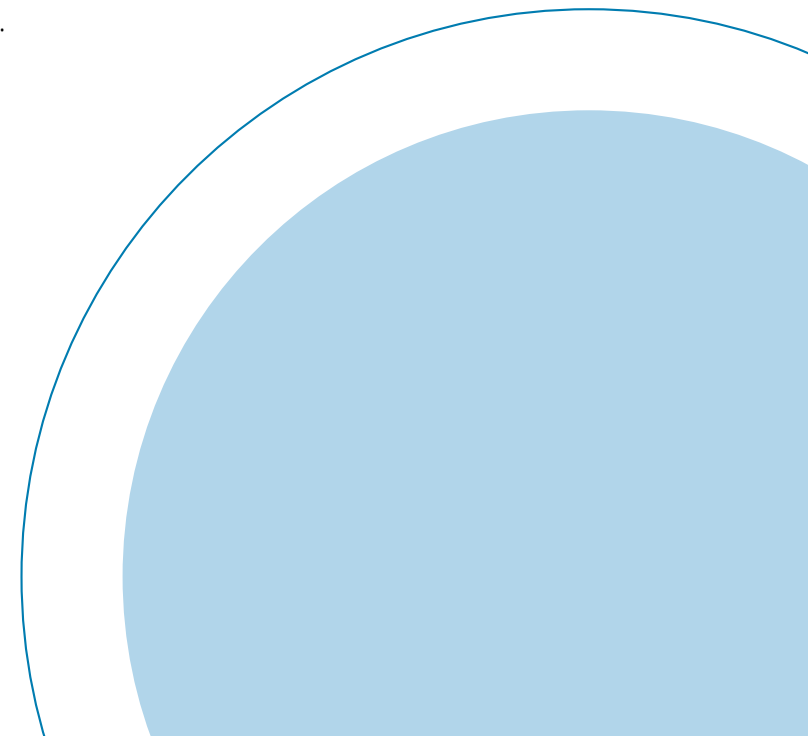
We want to make sure that we have the technology and infrastructure in place to equip us to better collect, store and use data. This includes: structured data held within databases, unstructured data and information held in paper records, near real-time data from sensors and the Internet of Things.

What we have achieved so far

In our first year we have:

- **New Community Health Index (CHI) System.** We have concluded a long-standing programme to establish the new CHI system, which went live in October 2023 and is now fully embedded within NHS systems. The new system is a significant improvement in NHS infrastructure as it consolidates legacy systems under one cloud-based technology, enabling consistent identification of patients throughout Scotland. There are many potential benefits associated with new CHI including:

  » the potential to move away from the current numbering format so that personal information is no longer contained within CHI number which would provide better patient confidentiality,

  » better infrastructure, the new system is capable of holding multiple addresses so patient data can be updated from multiple sources, improving the accuracy of patient data,

  » 24/7 functionality.

- Discovery work is underway to consider how, and if, the new system should be leveraged to take advantage of these benefits.

- COSLA and COSLA's Digital Office are currently rapidly exploring the benefits of using CHI in Local Government to support Social Work and social care. This will enable better data linkage across health and social care.

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Case Study – Expanding the Use of CHI in Social Work and Social Care

COSLA and COSLA's Digital Office have been exploring the benefits and risk of using CHI in Local Government to support more effective data matching and data sharing.

Engagement is underway with a wide range of stakeholders including Local Government professional groups, NHS colleagues, Third and Independent sectors and people with lived experience to inform our thinking and ensure alignment with broader Local Government and national work.

There are many potential benefits to adopting CHI in Local Government such as:

- supporting Councils to link data and improve data quality,

- act as a verification tool for accessing the Digital Front Door and the Integrated Social Care and Health Record,

- support sustainable person-centred public services and reduce inequalities within Scotland's current fiscal challenges, ageing demography and recruitment and retention challenges,

- support integrated health and social care and delivery of better outcomes to people accessing services,

- reduce duplication in the system,

- reduce the need for people to repeat information multiple times,

- increase capacity in an already stretched system.

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⬢ **National Digital Platform (NDP).** Building on the capabilities of the National Clinical Data Store which was developed to store national vaccination data and supports the aim of capturing health data once and using it many times, the following NDP developments have been progressed in either discovery or development:

> » a FHIR interface to the New CHI system aligning to the International Patient Profile standard which will provide a modern, consistent way for other systems to perform searches to uniquely identify patients,

> » further development of the NDP Access Management capability to determine what resources a user can access based on known data attributes about their employment and professional roles,

> » development of the NDP Care Summary service that will broker foundational data sets for programmes such as DFD and the Integrated Social Care & Health Record and can expand to include other source systems and data sets over time,

> » expansion of the NDP structured and unstructured data storage capabilities to support specific data workloads like medical device data and dermatology images along with the design of an end-to-end service that supports the data storage needs of individual programmes.

⬢ Additionally, the APIs used within the NDP have been published via an API Catalogue, which allows developers to use APIs to integrate applications to provide information that is held within NDP and will expand overtime as common APIs used across health and care become available. This will reduce interface and interoperability costs for systems and will support professionals to have easier access to health and social care data.

⬢ **Seer Platform.** The Seer 2 platform went live in November 2023 which enables greater scalability and flexibility for data and analytics. This includes going live with the Near Time Data Service for Winter 2023-24 and beyond, which tests out how Seer 2 works across health and social care. The new platform enhances innovation by providing access to new technologies and opportunities for collaboration across health and social care.

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Case Study – Seer 2

The Seer 2 Platform provides national technology and infrastructure capabilities for data management and analytics for health and social care in Scotland. It enables over 20,000 users across government, health boards and other public sector bodies to access high-quality, well described data sets. This allows users to access the data they need to undertake analysis supporting the development of insights to improve services.

The investment in Seer 2 has allowed for continuous improvement and new ways of working such as:

- Moving from on premise infrastructure to the cloud. This provides an environment that can scale to meet the needs of customers and provides greater reliability than the previous platform.

- It allows us to access capacity and tooling and to deploy this rapidly, to enable new datasets to be brought together and to provide a better experience for developers, customers and users.

- Provides well described data which supports users to understand what data exists. This data can be used for a variety of purposes such as analysis, research, and innovation.

- Enables data from many sources and across sectors to be integrated, enabling the creation of insight to improve outcomes.

- Provides a technology platform which is secure, trusted, and responsive to user needs and new technologies.

- Creates new opportunities to collaborate, innovate and scale.

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⬢ **Shared Telecare Alarm Receiving Centre (ARC).** COSLA's Digital Office and Scotland Excel completed the procurement of a Telecare Shared Alarm Receiving Centre in October 2023. The Shared ARC is cloud based allowing for greater systems interoperability with social work and social care providers and NHS systems. This expedites the transition from analogue to digital and provides the opportunity to improve innovation and resilience across services. Overall, the introduction of the Shared ARC allows, for increased data sharing between service providers, Local Authorities and Health Boards. The Shared ARC now hosts its first Health and Social Care Partnership, with a further eleven planned in the coming months. Additionally, in July 2023 the Telecare Information Framework (TIF) was launched. This will support services to maximise efficiency, improve data accuracy and generate the insight required for ongoing improvement and innovation. This data set will provide a consistent and standardised view of the social care provided across all 32 Local Authority areas. The TIF supports the shift to early intervention and prevention by providing the necessary details for professionals to plan and develop services effectively.

⬢ **Ethical use of Artificial Intelligence (AI).** COSLA's Digital Office has delivered workshops for Local Government to highlight the opportunities, risks, and ethical considerations on the ethical use of AI. One workshop was delivered in partnership with the Equalities and Human Rights Commission, others have been delivered with the Alan Turing Institute which has provided Local Government with the opportunity to provide input into draft AI Ethics and Governance in Practice Handbooks that have been developed by the Institute.

⬢ **Artificial Intelligence.** Scotland's AI Strategy published in 2021 remains the key cornerstone influencing the policy approach to AI in Health and Social Care. The principles for the use of AI in Scotland are closely linked with the principles of our Data Strategy. The Scottish Government has been engaging with key stakeholders across health and care, the wider public sector, and the devolved nations to monitor the developing AI landscape. AI continues to be used successfully within the health and social care sector. This is predominantly supporting research as well as advanced diagnostic imaging, reducing the time required for analysis significantly and this will only continue to grow. The ICO have published guidance, an Innovation Advice Service and Toolkit for organisations in relation to the use of AI and we are supportive of their approach.

Additionally, Scotland's AI Alliance launched an AI Algorithm Register in March 2023. The register aims to provide the people of Scotland with a single source of information of how AI is used to inform decision-making in the public sector by cataloguing where AI is used, and how it is used to be transparent and to build trust.

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Case Study – Shared ARC

Telecare Services are at the interface between health and social care. They contribute support that is person-centred, using various types of sensors in the home to alert and enable intelligent rapid responses where adverse events have occurred, or to allow prompt notification of a sudden risk to the person's health and well-being.

The Shared ARC is a cloud-based technology solution that assists Telecare Service Providers as they progress with their transition from analogue to digital Telecare. It provides a unique platform for innovation which can support the wider Health and Social Care sectors ambitions around better use of data, and early intervention and prevention. The platform provides many benefits such as:

- providing a unified approach to data enabling joined up working across the sector,

- improved access to and use of data,

- greater interoperability with other datasets and systems across health and social care,

- reduced technical burden of adopting digital telecare for services,

- provides a resilient and flexible approach to telecare service delivery,

- delivers a platform to foster innovation and power pro-active services,

- the ability to leverage data from wearable devices, and other digital devices.

This work has been an important step in improving the data landscape in social care. The national programme is working with a group of 17 adopter organisations to onboard them to the new platform.

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How this helps to achieve our vision

Health and social care data is currently recorded and stored across multiple systems which often have limited interoperability which limits the number of people that can access the data. We are aware that we need to modernise our data infrastructure and have started to make improvements in our technology and infrastructure which will be key to enabling best use of data in the design and delivery of services. The development and launch of platforms such as NDP and Seer 2 ensures that we have the right infrastructure to allow storage and integration of data that enables data to be used for multiple purposes. By bringing data products, reports, dashboards, and tooling together in Seer 2 this allows health and social care data to be brought together in the one platform for the first time. This improves our analytical capabilities and supports collaborative working to create insight to inform decision making to improve delivery of services. Modernising our technology by moving multiple services to cloud based systems will ultimately be the first step in enabling easier, secure, access to data across the sector. The modern, standards based, interfaces of these systems are also already supporting better data linkage and enabling staff within the health and social care sector to have access to up to date, accurate data.

What's next for 2024-25?

Our priority for 2024-25 is to:

◆ **Develop an Architectural Blueprint.** The Technical Design Authority was established in February 2024 to provide assurance on the development of the blueprint for Scotland's digital and data systems. A blueprint will be published to set out the architecture required to support services such as the Integrated Social Care and Health Record, Digital Front Door and Digital Prescribing and Dispensing. This will reduce the variety of architecture in use and bring consistency to improve and align data infrastructure across health and social care. In addition, it will provide suppliers with clarity and understanding of the system and help us to better manage contracts.

◆ **National Digital Platform.** We will continue to grow the capability of the National Digital Platform and expand the services available by ensuring the underlying data requirements and systems integration is in place to enable easier access to data.

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⬠ **Automation.** We will explore the use of innovative technology to automate the collection of data to understand and set out our intention for the use of automation within the health and social care sector.

⬠ **Seer 2.** We will build on work in Seer 2 to enable collaboration across health and social care.

⬠ **AI.** Develop guidance and provide support and advice as required for the use of AI within health and social care.

⬠ **Shared ARC.** Continue to develop the capabilities of the Shared ARC including:

» incorporating open protocols and APIs to improve interoperability of data exchanges across systems,

» deploying Artificial Intelligence to support predictive analytics for early intervention,

» enhancing data utilisation to support informed decision making.

We will improve the quality of our health and social care data and increase interoperability through adoption and use of common standards, making it easier to re-use and link data.

Information Standards and Interoperability

What we have achieved so far

In our first year we have:

- **Data Standards Sub-board.** The Scottish Government and COSLA stood up a data standards sub-board to identify, assure and set out the preferred standards for use across the health and social care sector. The sub-board have undertaken an initial scoping exercise to understand the current standards landscape and are in the early stages of developing an assurance process. We are engaging with four nations partners who are further ahead in their journey to understand best practice for implementing our assurance process. The Sub-board will provide relevant governance for setting out standards, in doing so this will bring consistency to standards which are implemented and used across health and social care in Scotland which will drive up interoperability and make it easier for organisations to exchange data. A similar data standards board has been set up in Local Government to set out the definition and promote adoption of standards across the whole of Local Government. There are suitable links across both standards boards to ensure a complementary and consistent approach is taken where appropriate.

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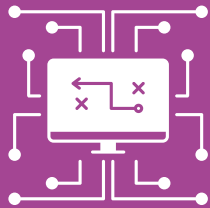
- **SNOMED CT.** Implementing SNOMED CT will ensure that data recording practices are aligned to international practice, which will facilitate better interoperability as data will be recorded using common terminologies. The SNOMED CT Programme team have undertaken extensive engagement throughout 2023 to raise awareness and identify opportunities for implementation of SNOMED CT across healthcare settings. The annual delivery plan has been developed which sets out the agreed actions and outcomes for the programme of work. The terminology server is now set up and work is underway with the Laboratory and Information Management Systems programme and within child health to map codes to SNOMED CT. Recruitment is underway to enable development of a Virtual Centre of Excellence that will support and guidance to organisations that are ready to implement SNOMED CT.

- **Telecare Information Framework.** The Telecare Information Framework (TIF) was launched in July 2023 to facilitate person-centred, personalised, and integrated health and social care. The data can be used by staff in Telecare and other health and social care agencies to inform responses, through an up-to-date account of the person's characteristics and circumstances. The data within the TIF draws upon information gathered through assessments and referrals and makes use of common identifiers such as the CHI or social work number. The use of common identifiers supports appropriate sharing and links the data across systems enabling the data to be used as an active source of intelligence at service and Partnership level, and at National level for policy and reporting purposes.

How this helps to achieve our vision

In Scotland, we lacked a governance and assurance process that allows for the setting out of nationally agreed data standards. Establishing the Data Standards Sub-board is an important first step in moving towards our vision and achieving a more interoperable environment across health and social care. However, the size of the task for Scotland to catch up is significant, and we know that this is only the first step. Through the delivery and agreement of standards such as the Telecare Information Framework, we will test cases for implementing our assurance process, alongside our long-term ambitions on both SNOMED CT and ICD 11, which we have continued to progress in our first year.

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What's next for 2024-25?

Our priority for 2024-25 is to:

- **Data Standards Sub-board.** Work will continue to develop an assurance process for identifying and recommending the preferred standards for use across health and social care. This will include, publishing standards and strengthening our relations with four nations partners to adopt best practice.

- **Scan for Safety Programme.** GS1 standards – Work will continue to implement Point of Care (PoC) scanning within four Health Boards and to develop a medical device data hub to store and use Scan for Safety data that will be captured through the PoC scanning process. A national data reporting framework will be developed for medical devices and equipment which captures and presents agreed data sets at local and national level.

- **SNOMED CT and ICD 11 implementation.** Work will continue throughout 2024 and beyond to implement SNOMED CT in Primary Care. PHS will continue to engage with UK partners to understand the implications of the transition from ICD 10 to ICD11. There is no official implementation date for ICD 11 in the UK; however it is estimated to take around 5 years.

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Creating Insights from Data

What we have achieved so far

We want to work in partnership with health and social care to adopt a whole-system approach to creating insight from data that allow us to improve services. This includes the creation of insight to: inform communities, inform policy, identify, measure, and monitor differential outcomes, experiences and access to services for different population groups, target interventions and support, improve services and improve partnership working.

In our first year we have:

- **Near Time Data Service/Data for Insights.** Work was undertaken to scope out the technical opportunities for making use of near real-time data for insight. It was established that a new approach to delivering key management information was needed via a Near Time Data Service that would be hosted via the Seer 2 platform. This has included testing out of technologies to provide dashboarding across health and social care to support understanding of the strategic indicators across the health and social care system. A programme of user engagement has also been undertaken to support this work with findings due to be made available in April 2024. Work was also undertaken to review the technology, data flows and capabilities required to create a scalable automated service. By utilising platforms such as Seer 2 this enables collaborative working and facilitates analysis of data to ensure that near real-time data can be used to inform decision making to deliver the best care possible.

- **Engagement.** Additionally, PHS have undertaken a user consultation regarding publication of data to understand which format users prefer and what topics are most used/missing. This feedback will be used to inform decisions about priority data collections to ensure that best use is being made of existing resources and deliver increased public value.

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⬠ **Care Home Data Review.** Scottish Government, PHS and Care Inspectorate have undertaken a review of the care home data landscape, with the aim of ensuring a coherent suite of data collections, reducing the burden on data providers, and providing quality and insightful data to meet the existing and emerging needs of data users. A report will be published in Spring, which contains a number of recommendations to improve how data are collected, shared, communicated, and used across the sector. Work is underway to establish a Working Group to set out a phased programme of work to implement these recommendations. Further information on the review and outputs from stakeholder engagement events can be found on the Care Home Data Review webpage.

⬠ **Analytical Tools Landscape.** NSS, PHS and Scottish Government have undertaken a review of the analytical tools in use across the health and social care sector. Initial principles for the selection and application of analytical tools were identified as part of this review:

» Cloud first,

» Use the right tool for the right job,

» Separate out ingestion, transformation, and insight,

» Hold and manage data in a separate layer,

» Follow good software development practice,

» Share good practice, insight, and skills,

» Adopt strategies which mitigate market risks,

» Reproducible methodology (e.g. Reproducible Analytical Pipeline) where required and open insights,

» Transparent processes and management.

Engagement with stakeholders will be undertaken to refine the initial principles.

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How this helps to achieve our vision

It is widely acknowledged across Health and Social Care that there are difficulties in sharing 'near real-time' data for effective planning and decision making. Our progress in developing these dashboards and delivering improved technologies such as Seer 2 have allowed us to begin to deliver greater insight into the data we hold in Scotland's health and social care sector. Work in delivering greater insight into the Winter pressures experienced by our services in Scotland will set the baseline for new approaches to delivering management information and insight that will allow us to improve services.

Case Study – NHS Tayside Athena Command Centre

NHS Tayside implemented a live patient flow management system known as The Athena Command Centre which enables real-time data to be utilised to inform decision making, enabling NHS Tayside to respond to challenges in the patient flow/demand/capacity. The Command Centre uses analytic predictions for the week ahead to enable planning of patient pathways, staffing and capacity and potential pressure points in the system.   The platform provides one source of information for the current hospital status, using data in this way has resulted in cost savings, reduced emergency department waiting times, and delayed discharge. The provision of a live view of their current bed availability has also reduced administration time and enabled enhanced understanding of patient movement across the health system, ultimately enhancing outcomes for patients. NHS Tayside have shared best practice with other NHS Boards and as a result NHS Lanarkshire have now started work to adopt a similar approach.

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Case Study – Transforming Data to Deliver Insights to Clinical Practice Teams

The Scottish Cardiac Audit Programme (SCAP) was established to support delivery of priority 4 of the heart disease action plan. to ensure the effective use of data for clinical decision making, understanding patient outcomes and enabling better service planning.

The programme has brought together clinicians, policy teams, analysts, third sector and those with lived experience to develop the measures included within the audit and establish the best way to publish the data. SCAP has strengthened links with analyst and service teams to improve the data quality and consistency, developing new linkages between datasets and providing data collection tools for the clinical teams across hospitals in Scotland.

Data dashboards have also been developed to allow clinical teams to review data in a more dynamic and meaningful way, allowing clinical teams to quickly highlight areas in patient pathways across sectors where improvements could be made to improve outcomes for patients. Strong links with the policy team mean that the audit data can have a direct impact on policy development and in particular on delivery of the heart disease action plan.

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What's next for 2024-25?

Our Priorities for 2024-25 is to:

⬡ **Develop a Road Map for Data for Insights.** Continue to progress this work to determine what capabilities are deployed longer term in Seer 2 and how we work on improving data flows across health and social care to allow for sharing in this environment. This will form a Road Map for Data for Insights for how we continue to work with health and social care organisations in the next two to three years. This roadmap will set out our plans for:

>   » switching off aggregate data collections,

>   » providing data pipelines via national boards such as PHS and NES,

>   » how to provide deep dive insights alongside dashboarding in a collaborative way,

>   » working with Boards and Local Authorities regarding how they might use near real-time data for local purposes.

⬡ **Analytical Tooling.** NSS, PHS, the Scottish Government and COSLA will continue to work together to further refine and develop the principles for the selection and adoption of analytical tools across health and social care. Through the Data Delivery Sub-board, we will look to rationalise and reduce the number of different tools and products that are used to create insights from data. In doing so we will aim to empower our workforce by building capability around a core set of tools, and creating shared skills across specialists so they are able to deliver the greatest possible insight.

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We will support research and innovation by facilitating safe access to health and social care data for industry, innovators and researchers, so that we can work together to develop better ways of working, better treatments, new medicines and improved services for care in Scotland.

Supporting Research and Innovation

What's been achieved so far?

In our first year we have:

- **Researcher Access Service.** A new Researcher Access Service has been developed and will begin to roll out incrementally. The service provides guidance and support to researchers and informs them of the data that is available. Data sharing agreements were set up between Research Data Scotland (RDS) and PHS to provide access to subsets of key datasets under the new service. The initial service went live in early 2024 and will enable quicker and more efficient access to data for research in a secure environment, increasing throughput of high-quality research to benefit patients and the public.

- **Approvals Process for Access to Data for Research and Innovation Purposes.** RDS reviewed the approvals process for research projects to provide an assessment of current best practice and provided recommendations for an aligned efficient data access approvals system for Scotland. Work is underway to develop a delivery plan to implement the recommendations for improving the approvals process. A phased approach will be taken to deliver this work from now until Summer 2026. This should provide a quicker more streamlined approach to gaining access to data for research purposes.

- **Industry Representation in Strategic Governance.** Representatives from Precision Medicine Scotland and the Data Lab have been invited to become members of the Health and Social Care Data Board. This will ensure that the perspective of research and industry is consistently represented, through innovation centres, in strategic governance of health and social care data.

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How this helps to achieve our vision

Accessing data for research and innovation purposes has historically been a long complex process. By improving these processes, we have made it easier and quicker for researchers and innovators to obtain approval to access data. This will support researchers to access data at pace and drive-up high-quality research to support improved ways of working and develop better treatments across health and care services for people in Scotland.

What's next for 2024-25?

Our priority for 2024-25 is to:

● **Safe Haven Charter.** Work will continue to improve the approvals process for access to data for research purposes. This will include developing a new Safe Haven Charter to set a clear direction for all Safe Havens in Scotland. This new charter will provide more streamlined Information Governance processes, greater Data Controller, and public assurance, and enable research and innovation using NHS and other datasets at greater speed and scale.

● **Researcher Access Service.** We will support the launch of the new Researcher Access Service within RDS and look for further opportunities to expand this service. Continuous Improvements will be made to the service, as we develop an understanding of how people are using the service and as other areas of work such as Information Governance progress.

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How to follow our progress

With thanks to all our stakeholders who support the implementation of our deliverables as set out in this document, it is only by working collaboratively and through mutual support and insight that we can realise the ambitions of the Strategy. You can follow future progress of the Strategy on:

⬠ Our website – www.digihealthcare.scot.

⬠ Health and Social Care Data Board - gov.scot (www.gov.scot)

⬠ Health and Social Care Data Strategy Archives - Health and Social Care (blogs.gov.scot)

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