

Staffordshire and Stoke-on-Trent Integrated Care System

Data and Intelligence Strategy

Summary



Data helps us to plan health and care services

Staffordshire and Stoke-on-Trent Integrated Care System (ICS) brings together a range of partners who are responsible for planning and delivering health and care.

The decisions we make need to be informed by data and evidence. We need to understand our population's current health and predict future needs, and also compare this with other health and care systems.

Our Business Intelligence and Analyst teams support clinicians and decision makers to make informed choices that directly improve care.

What are ICSs, ICBs and ICPs?

The **Integrated Care System (ICS)** is a partnership of NHS, council, voluntary and community organisations with a shared vision to make "Staffordshire and Stoke-on-Trent the healthiest place to live and work".

We are led by the **NHS Integrated Care Board (ICB)** which is responsible for NHS functions and budgets.

The **Integrated Care Partnership (ICP)** is a statutory committee which brings together all system partners to produce a health and care strategy.

All partners need to bring their data together in order to:

- improve the care we provide
- make the system more efficient
- predict future health needs
- keep researching and innovating new ways of working.

We will need to agree how we will manage data effectively, share it appropriately and safely, and provide the right training and support for our staff. At the same time, we must make sure we are working to the ambitions set out in our [ICP Strategy](#) and [Joint Forward Plan](#).

This [Data and Intelligence Strategy](#) outlines how we will achieve this, while also meeting all national legal requirements – both now and over the next five years. The Strategy is supported by a [delivery and transformation plan](#) – providing more detail and key dates for specific initiatives and projects.

The vision is to Provide, Deliver, Enhance and Enable

Our aim is to get the most value from the intelligence professionals at each of the partner organisations. This will be supported by a data management infrastructure, which will be accessible and maintained by all partners. The insight we gain through population health management (PHM) approaches and research will enable us to improve clinical delivery and care.

Our Strategy has been shaped by national plans

The [Hewitt Review \(2023\)](#) was an independent review into how ICSs make decisions. It made suggestions for how partners can work differently to better prevent ill health and improve NHS productivity and care:

- [Sharing data more effectively](#) between partners to manage health needs more proactively, improve outcomes and reduce demand for emergency and specialist services
- [Growing the use of smart data analytics tools](#) so that all partners work to the same purpose and goals
- [Upskilling the workforce](#) to transform data and digital
- [Developing, training and recruiting](#) more specialists in data science, risk management, analytics and intelligence
- Finding more opportunities to use digital technologies.

The [national guidance and supporting materials for developing the Joint Forward Plan \(2022\)](#) highlighted how NHS England expected ICSs to use PHM to plan and manage services:

- [Integrating and linking person-level data](#) across all partners, with clear arrangements and controls to ensure the data is held securely and only accessed when needed
- [Developing a single platform to analyse data](#) which will support a virtual, ICS-wide intelligence function
- [Providing timely population health insight](#) and analytical support to decision makers at every level
- [Improving analytical capabilities](#), including national work to establish analytics and data science as a professional discipline.

The [What Good Looks Like framework \(2021\)](#) provided clear guidance and direction for health and care leaders to connect and transform services safely, securely and sustainably to improve their efficiency and effectiveness. It lists the seven success measures for data and digital:



The new [NHS Federated Data Platform \(FDP\)](#) will enable hospital trusts and ICSs to connect with each other, making it easier to work together. Although the first stage is focused on acute trusts, at the same time, partnerships are being strengthened between NHS England, the developers of the FDP, and appropriate colleagues from ICSs, local government and the provider sector – including primary care, community and mental health, adult social care, and voluntary, community, faith and social enterprise (VCFSE) providers.

Nationally, it is recognised that while the adult social care sector has come a long way in improving the data collected and used, there is still much more to do. [Care data matters: a roadmap for better adult social care data \(2023\)](#) sets out the Government's plans for improving how adult social care in England collects, shares and analyses data.

The local challenges and opportunities

The COVID-19 pandemic showed how important it is to be able to draw upon the right intelligence at the right time. Analytical teams worked seamlessly with colleagues in digital and information technology, information governance, finance, service redesign, quality improvement, public health and the health and care workforce. This would not have been possible without intelligence and analytical collaboration between the NHS, councils and wider system partners.

- We are committed to building on existing ways of working and the approach used during the pandemic to make the best use of our analytical resource, data and insights.

There is significant interest across the ICS in using data and insight for a range of purposes.

While leaders are keen to use data and intelligence to inform decisions, we need to make sure that we have the capacity and capability to deliver this.

- We need to support our teams to explain their data requirements and to interpret data to drive data-informed decisions so they can shift focus from reactive reporting to forward-looking, predictive and proactive reporting.

We have significant digital ambitions, and it will be crucial to have the supporting infrastructure and intelligence in order to deliver our Digital Strategy.

- We need to make improvements in a number of areas to improve our digital readiness and upskill our workforce.

Our Digital Vision: Using the latest digital technology to deliver new models of health and care across Staffordshire and Stoke-on-Trent

By supporting in the transformation of local health and care services, digital has the power to help people to live healthier lives, manage their own health and wellbeing and reduce the demand on local services. [Read more about our Digital Road Map Strategy.](#)

There are complexities in data sharing, information governance and requirements around handling identifiable personal and confidential information for commissioning purposes. Without a clear and comprehensive view of existing data sharing agreements, Business Intelligence teams are unable to share data between more organisations.

- We need to make sure that all system partners can freely access data from across the ICS.

At the moment, separate data sources, infrastructure and reporting systems between the ICB and providers remain largely unlinked to wider partners such as councils and VCFSE organisations. Some teams are only using Microsoft Excel, while others are using specialist tools for analysing and visualising data such as [PowerBI](#).

- We need to ensure a consistent approach to the tools and systems that are used across our organisations. Having a single data warehouse for the system (a central system for storing data which can be accessed for reporting) will be key to improving accessibility, while also reducing financial and environmental costs.

Goals and benefits

We will use the following goals and benefits of delivering this Strategy to set clear and measurable targets to achieve our vision. We are putting data-driven decisions at the centre of our work to transform health and care, while also ensuring that we meet our legal requirements, the ambitions of national plans, and the local challenges listed above.

1. A data-centric culture and workforce

Goals	Benefits
<p>Career development:</p> <ul style="list-style-type: none"> • Develop the careers of all analytical staff in the ICS • Align apprentice and graduate pathways with national frameworks • Standardise job descriptions and grades across the ICS organisations • Engage academic partners to identify graduate opportunities • Identify wider opportunities such as apprenticeships, shared data science capability and data scientist programme • Recognise analytics as a profession through registration with professional bodies. <p>Training:</p> <ul style="list-style-type: none"> • Encourage staff to share their skills and knowledge with each other • Use existing resources and training • Use third party supplier training • Develop programming skills • Identify formal and informal learning and development opportunities for data and non-data roles • Develop the digital and data skills of the wider workforce through specialist and clinical champions, data literacy training and awareness. 	<p>For staff:</p> <ul style="list-style-type: none"> • Can access and coordinate the data they need for patient care • Can ask structured questions about data to inform decision making • More people with data science skills working in the ICS • Extended and future-proofed workforce with graduates, apprentices and trainees • Have clear progression routes with national career frameworks and professional membership. <p>For Business Intelligence consumers (all system partners):</p> <ul style="list-style-type: none"> • Can access reports more easily as there are fewer systems and tools • Can access and use the tools and products built by the analytical teams, with training support.

2. A unified data warehouse (DW)

Goals	Benefits
<p>Build and capability:</p> <ul style="list-style-type: none"> • Use the FDP as it is commissioned, and involve all partners in development • Comply with the legal processes for handling identifiable data 	<p>For staff:</p> <ul style="list-style-type: none"> • Decreased administration for data sharing with partners sharing the service, infrastructure and reporting tools.

<ul style="list-style-type: none"> • Ensure storage and consumption can be downsized or upsized in the future • Follow national standards to improve how systems connect and share data • Include security and privacy tools including role-based access and multi-factor authentication • Have capability to store and process Internet of Things, and deliver artificial intelligence (AI) and machine learning. <p>Content and outputs:</p> <ul style="list-style-type: none"> • Create a single version of activities to support partners to transform services and make decisions • Provide real-time, consistent population-centric data • Include national, local and reference datasets • Pseudonymise and link data • Provide an expanded view of the wider determinants of health • Have potential to contain data from all parts of health and social care such as finance, estates and patient feedback. <p>Access and accuracy:</p> <ul style="list-style-type: none"> • Make available to all partners and stakeholders in an accessible format • Enable leads to access retrospective reports on a self-service basis • Ensure data catalogues are up to date and easy for partners to understand. 	<p>For Business Intelligence consumers:</p> <ul style="list-style-type: none"> • Can find and access the data reporting environment on a self-service basis • Maintain control of their patient data • Potential to develop real-time or near-time dashboards such as system-wide bed management • Reduced information governance overhead as only appropriate data is stored • A shared space supporting ICS goals – all clinical data is linked, plus some links to social care and other provider data • Reduced burden of assurance reporting – internally and externally • Links with the national FDP • Improved chance of return on investment as a cloud DW environment is flexible and scalable • Opportunity to develop tools such as AI, machine learning and Internet of Things within a cloud DW environment.
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3. Governance and information governance (IG) processes

Goals	Benefits
<p>Public assurance:</p> <ul style="list-style-type: none"> • Maintain and build on the public trust as custodians of their data • Be transparent about how data is used – that it is ethical and for the public good • Respect patients’ privacy while creating a safe space for addressing the questions needed for non-patient care. <p>Governance and processes:</p> <ul style="list-style-type: none"> • Submit and share provider-based datasets into the ICS DW 	<p>For local people:</p> <ul style="list-style-type: none"> • Can be reassured that their data is used lawfully and with respect <p>For staff:</p> <ul style="list-style-type: none"> • Proactive networks with IG teams enable challenges to be shared jointly while shaping data sharing initiatives. <p>For Business Intelligence consumers:</p> <ul style="list-style-type: none"> • Can be assured that appropriate data governance and processes are

<ul style="list-style-type: none"> • Comply with all Government mandatory or recommended IG principles • Apply FAIR (Findable, Accessible, Interoperable, Reusable) principles to data usage • Establish IG processes and documentation which support data sharing for research and innovation, direct care, PHM, care planning and secondary usage, particularly GP data • Establish an IG work programme to include linking to more datasets including those outside of health and care such as education and housing • Take a collaborative and integrated approach through clear policies and data sharing agreements. 	<p>being followed for different uses of data</p> <ul style="list-style-type: none"> • Maintain control of their patient data • Simplified IG process • Can readily access data to identify challenges of increasing demand • Can access wider data such as education and housing • Can work together to promote healthy lifestyles and identify patients at risk earlier.
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4. Provide intuitive reporting and insight

Goals	Benefits
<p>Development:</p> <ul style="list-style-type: none"> • Maximise the potential of using PowerBI for automating routine reporting • Expand use of visualisation tools and further develop programming skills • Develop a locally-maintained PHM tool which all partners can use to enable data-driven decision making, tackle health inequalities, and drive prioritisation • Explore scenario and forecast modelling and root cause analysis • Support providers to add and implement medical coding systems. <p>Governance and reporting:</p> <ul style="list-style-type: none"> • Support operational planning and monitoring, and follow governance processes to demonstrate delivery • Investigate AI and machine learning tools and their potential for improving patient outcomes • Share data quality process improvements and tools across ICS providers. 	<p>For analysts:</p> <ul style="list-style-type: none"> • Improved productivity and capability to develop predictive and proactive reporting • Clearer direction on the tools and methods to use <p>For Business Intelligence consumers:</p> <ul style="list-style-type: none"> • Data is used effectively both in direct patient care for coordination and supporting clinicians in near real-time analysis, in performance, flow, inequalities and outcomes for patients • Follows and maintains industry standards and developments combined with the DW. <p>For local people:</p> <ul style="list-style-type: none"> • Patients, their care givers and the ICS population can access live data through tools like SharePoint.

How we will deliver this Strategy

To deliver our Strategy successfully and realise the benefits of coming together as a system, we will need to [change our ways of working](#). We want to [draw on best practice approaches](#) and similar work currently being done elsewhere.

We will make sure that the digital and intelligence programmes across the system [work together – rather than in isolation](#).

Any proposals around [data warehousing must deliver reporting, analytics, PHM and research](#). They must demonstrate how the system would align with the [One Health and Care Shared Care Record](#) and the national Federated Data Platform.

As there is so much work to do, we are not recommending a ‘big bang’ approach. Instead, [our approach will be realistic and gradual](#).

As we move through to delivery and implementation, we will [continue engaging our stakeholders](#) on the ambition and delivery expectations for our ICS. These conversations must also include how we will [manage the risks and dependencies](#) of our Strategy.

We must be mindful that each of the providers are legal entities with their own responsibilities and reporting requirements for processing and managing data. Through this Strategy, we want to [build on the successes of the digital and data strategies at each of our provider organisations](#) – with a focus on working together to accelerate our intelligence approach to support the provision of health and care across the system.