BETTER TOGETHER

NHS
Royal Devon University Healthcare
NHS Foundation Trust

Data Strategy

July 2023

Data strategy:

Vision

Putting data-led insight at the heart of decision-making to improve quality of care and staff experience

Objectives

- **To ensure our workforce has access to timely, complete and reliable data to make evidence-based decisions**
- **To create a culture of data-led insight to identify needs, allocate resources and prioritise patients appropriately**
- **To optimise the data available from the Electronic Patient Record (EPR) and create a linked dataset for a wider set of Trust data to inform joined-up decision making**
- **To create a data infrastructure fit for the future including interface with the wider health and care system**
- **To develop and support a highly skilled analytical workforce that makes best use of scarce skillsets and achieve a cost-effective service model**

Strategic priorities

- **Data infrastructure:** delivery of a fit for the future data infrastructure that enables the production of timely and consistent data across different datasets
- **Access and governance:** improving our ways of working so users know how to access the data they need, how to make new requests and how they are prioritised
- **Data visualisation:** delivery of core suite of dashboards for widespread use across the Trust as well as models allowing more in depth analysis/research
- **Workforce development:** ensuring access to training, retention and continuous development of the highly skilled workforce required to meet the increasing analytical needs of a modern organisation

1. Data infrastructure

Delivery of a fit for the future data infrastructure that enables the production of timely and consistent data across different datasets

What does the end state look like?

Data architecture

A multi-tenanted (many users) data platform, system-wide to enable access to and use of a broad array of data sets across different systems and different organisations. An infrastructure that allows storage and integration of disparate data sets (e.g. electronic patient record (EPR), workforce, costing, benchmarking) into one place, which enables more sophisticated analysis.

The production of timely and consistent data (a “single version of the truth”) through common data architecture, which releases analytical resources to focus on value-added activities, and creates an environment to produce more sophisticated outputs (e.g. data science).

Data quality

A high quality, consistent, rich data set input by well-trained users. A rolling training programme so users across the Trust have a deep and broad understanding of the need for good quality data inputs, and can see the benefits in their analytical outputs.

End-to-end data quality tools / dashboards in place to identify data quality issues at source, and clear processes to correct / amend data quality issues. The use of automation and artificial intelligence tools to support in the identification and constant improvement in data quality.

How do we get there?

Year	Milestones
1	• Approval of Data architecture business case through Trust and ICB governance • Securing funding for preferred option • Agreeing system-wide technical solutions to create uniform data architecture • Establish Programme governance and resource and commence design • Agreed BI / Cogito Caboodle development plan • Assessment of data quality tools and processes and development plan for improvement
2	• Delivery of data quality improvement plan including development / production of dashboards • Data architecture build
3-5	• Rollout of new architecture (EPR / clinical > Finance / HR > non-trust data set (primary care, social care) • Continuous improvement / development to meet needs and alignment with national plans

2. Access and governance

Improving our ways of working so users know how to access the data they need, how to make new requests and how they are prioritised

What does the end state look like?

New requests and prioritisation

Standardised templates for making new requests and clear prioritisation matrix / scorecard for consistent approach to transparently identifying priorities, which are then send to Trust operational / clinical owners for validation. A unified approach between Business Intelligence, EPR, and Digital teams to agree on prioritisation of requests and shared objectives.

Clear, regular engagement and communication with users on the status of requests, backlogs and prioritisation.

Access

A central repository for all data products and tools that is quality assured, easily and widely accessed and meets users' needs.

Governance

Business Intelligence business partners embedded across the Trust proactively contributing to operational and clinical meetings. Including the presentation of insight / analytics, training and guiding users to available tools, and using data to help to address the biggest challenges and identify opportunities.

How do we get there?

Year	Milestones
1	• Standardised Trust templates for new data / analytical requests • Prioritisation matrix in place and used in prioritising requests • Update to Intranet to provide up to date information on team structure, communication routes, prioritisation process etc. • Development of product catalogue by area (e.g. RTT) and source (e.g. Epic, external) through establishment of internal working groups across BI and EPR • Clarity of ownership and responsibilities between BI and EPR teams • Closer working with BI and Operational teams
2+	• Continuous development of product catalogue covering all major categories • Continuing to develop relationships between end users and BI team

3. Data visualisation

Delivery of core suite of dashboards for widespread use across the Trust as well as models allowing more in depth analysis/research

What does the end state look like?

Dashboard suite

Easily accessible, intuitive, suite of dashboards across recognised core areas (operational, clinical, workforce, finance), covering 80% of users needs. Dashboards provide the "single version of the truth" across the organisation from Trust to site level to specialty / function and used widely for internal and external reporting. Dashboards are constantly updated to reflect the changing needs of users.

Clear signposting / guides for users highlighting which reports to use for different purposes. For example, signposting towards EPR reports for on-the-day information, data quality tools. Towards dashboards for trending analysis, and towards external benchmarking reports to identify variation by trust to inform opportunities and actions required.

Data science and research

Bespoke data tools made available for detailed requests, available for specific clinical / operational users depending on role. These can be accessed directly by trained and informed users, or through bespoke requests to the Business Intelligence teams through business partners. Active use of advanced data tools and techniques (predictive analytical models, machine learning) to support operational delivery.

How do we get there?

Year	Milestones
1	• Initial suite of dashboards to be made available to end users through a self-service interface • Agreement and procurement of preferred data visualisation software • Collaboration with ICS to enable access to shared dashboards • Development of product catalogue by area (e.g. RTT) and source (e.g. Epic, external) through establishment of internal working groups across BI and EPR • Training for analysts in preferred data visualisation software and end users
2	• Further development of dashboards • Bespoke training for analysts in advanced modelling techniques (role specific) • Re-development of dashboards required for any changes relating to data architecture
3-5	• Appraisal of current data visualisation tools and continuous development of offer

4. Workforce development

Ensuring access to training, retention and continuous development of the highly skilled workforce required to meet the increasing analytical needs of a modern organisation

What does the end state look like?

Shared service to make best use of resources

Maximising the benefits of scarce, highly skilled resource through formal collaboration across the Integrated Care System (ICS), to enable specialisation (data science, data architecture, data visualisation) within a limited resource envelope, and to generate economies of scale to make more time available for value-added activities.

Business Intelligence team and skillset

A highly skilled and respected Business Intelligence team, with deep technical and operational / clinical knowledge who are recognised experts in their field. A greater emphasis on automation / artificial intelligence to free up team resources to generate value added output.

To drive recruitment and retention through more formal collaboration with higher and further education partners, including graduate training schemes as well as ongoing continued professional development and technical development.

Wider user training and knowledge

An improved formal and informal training offer to end users to enable higher quality data input and output, to build confidence in using data to inform decisions.

How do we get there?

Year	Milestones
1	• ICS shared service review including consideration of benefits of sharing resource across organisations • Engagement with Trust-wide operational training programme • Development of academic programme offers with University of Exeter • Exploration of other ways of engaging with potential future recruits (external and internal) • Further development of automation within BI team to release more time to value-added activity
2+	• Rollout of formal academic offer with University of Exeter • Bespoke training for analysts in advanced modelling techniques (role specific) • Continuous development of automation within BI team to release more time to value-added activity