



England

How NHS England is using data to deliver better health and care

Data4Good

19 October 2023

Presented by:

Ayub Bhayat

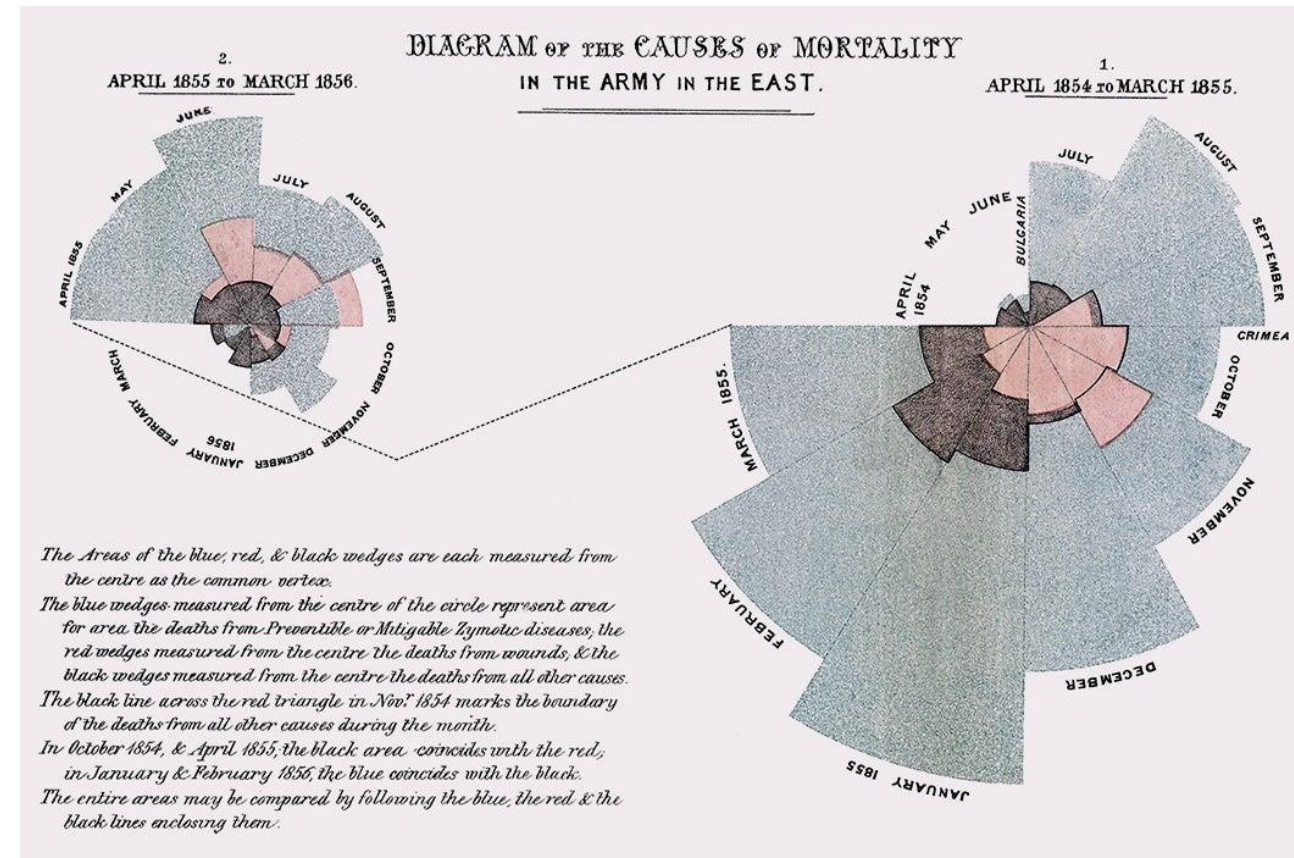
Director of Data Services

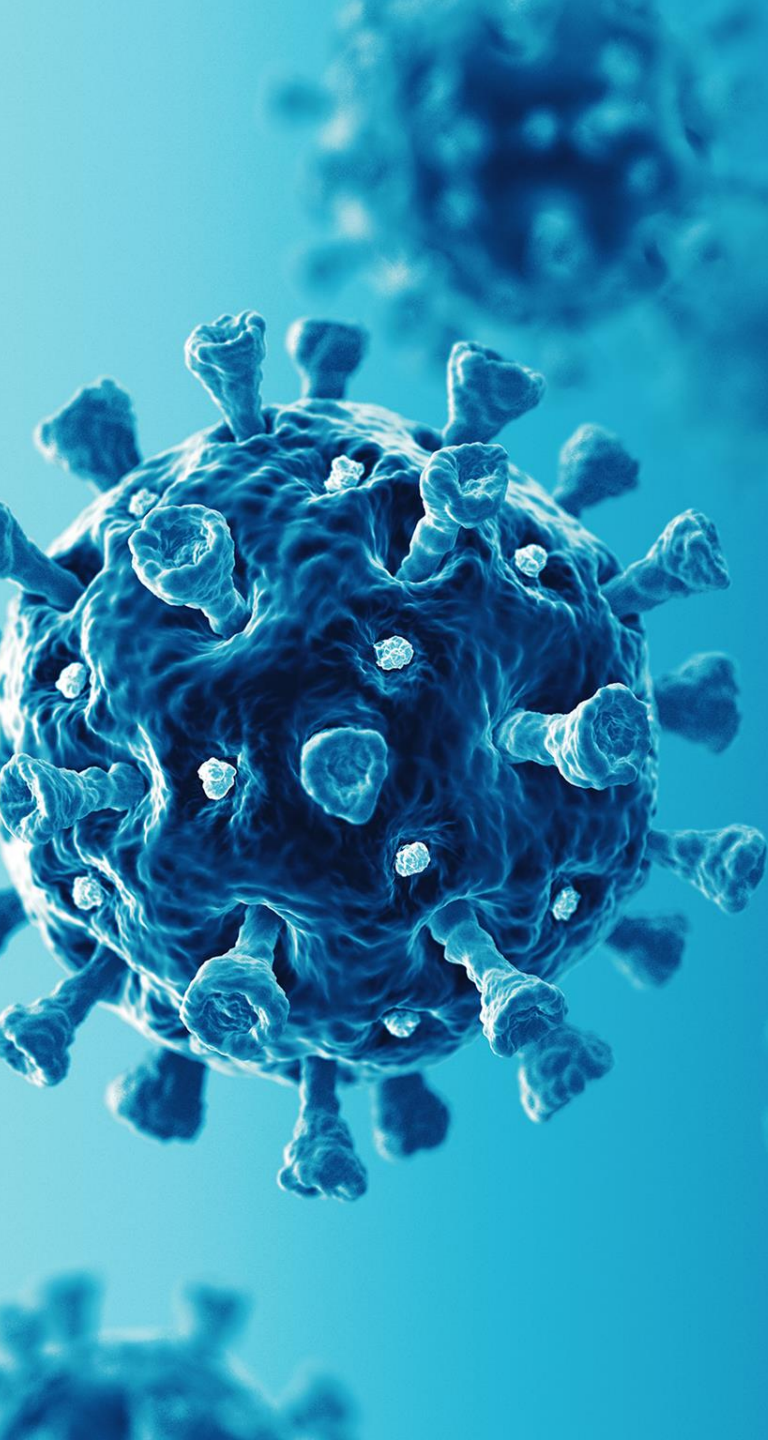
and Deputy Chief Data and Analytics Officer, NHS England

History of data and health

The NHS has always relied on data.

Before the establishment of the health service, Florence Nightingale used infographics to demonstrate the causes of soldiers' deaths in the Crimean war to MPs, government officials and army officers.





The pandemic underscored the need for real-time data collection, analysis and sharing to effectively manage and respond to the emergency situation

Or this slide...

Decision-makers needed information at their fingertips to understand a landscape that was changing by the hour.



As a result, the NHS embraced digital tools for contact tracing, monitoring patients remotely, and analysing epidemiological trends. This led to the establishment of centralised data repositories and collaboration platforms, enabling healthcare professionals to make informed decisions promptly.



NHS England established the COVID-19 Datastore and the National Data Platform to address some of these challenges. The Data Store provided a solution that would provide those national organisations responsible for coordinating the response with secure, reliable and timely data – in a way that protected the privacy of citizens – in order to make informed, effective decisions.



To provide the 'shared version of the truth' about the rapidly evolving Covid-19 situation, data processed via the Covid-19 Data Store needed to be analysed to make it meaningful – which is where the NHS National data platform comes in.

Background and vision to the care coordination solution

Waiting times are longer than ever, NHS Trusts need to quickly gain an accurate picture of who is waiting and for how long, better manage capacity planning and optimise the use of resources. However, the information needed to coordinate patient care and proactively plan elective procedures is not currently held in one easily accessible place.

The question we asked...

Can we devise a technology-led solution that brings all the information together in one place (with the right controls) to enable near-real-time, effective decision making?



The programme has **35 Trusts onboarded** so far, with **26 now live and realising benefits with the inpatient module.** (August 2023)

Care Coordination Solution (CCS)

Developed with clinicians at Chelsea and Westminster Hospital NHS Foundation Trust

Funded by NHSE with implementation support

Enabling trusts track to targets...

1. Size of waitlists
2. Theatre productivity
 - Surgical review and assessment
 - Patient selection and pre-op
 - Booking list
 - Follow-up
3. Outpatient Clinic Optimisation
 - Reduce follow-ups by patients
 - Reduce number of patients not attending appointments

How does the CCS help our patients?

Waiting times are longer than ever.

The Care Coordination Solution (CCS) gives hospitals more accurate up-to-date information meaning that...

Theatres are being used more efficiently



Consultants can request bookings according to clinical priority with near-real-time views of theatre and staff.

They can see all upcoming theatre sessions including where they are, the patients, the procedures and where patients are in pre-op status.

Theatre schedulers can easily see annual leave and staff constraints, and immediately see how many 'unbooked' minutes there are in a theatre session so new patients can be booked in and time optimised.

We are treating more patients



CCS gives greater visibility of numbers of people waiting, their booking status and those waiting according to priority.

This optimises clinic productivity and reduces the likelihood of cancellations.

The system automatically alerts users to potential data quality issues such as duplicate requests or entries that have not been completed or closed.

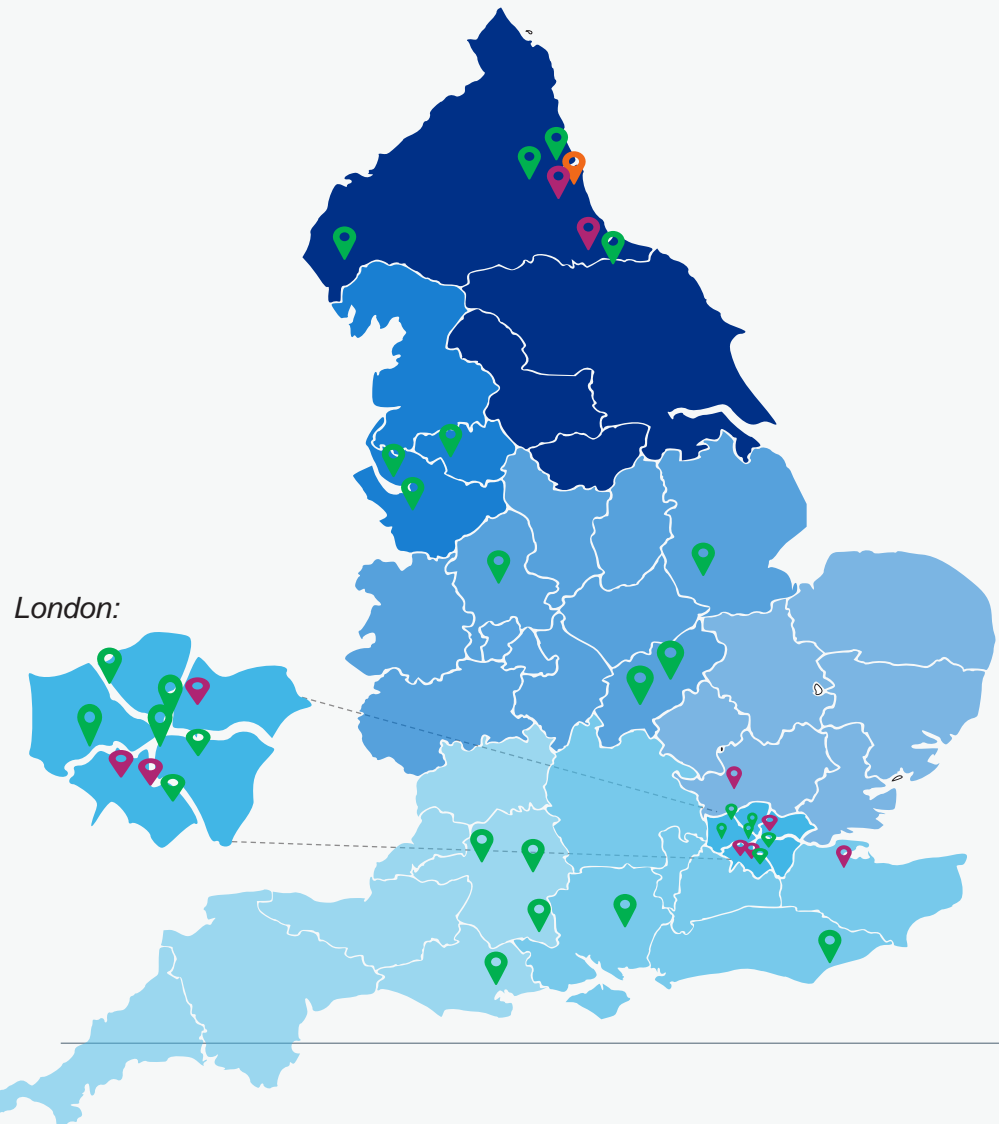
We are reducing waiting lists




CCS can fully manage waiting lists in just a few clicks.

By using a single tool to access information about waiting lists and prioritise patients, clinicians can work with schedulers to book patients in for procedures and complete one scheduling action in a few seconds.

Programme achievements to date



 **Trust with Data Quality Benefits and Theatre Benefits**

 **Trusts achieving Data Quality Benefits**

 **Trusts still in implementation prior to benefits realisation**

“What’s great about the Care Coordination Solution is that it is entirely clinically and operationally driven, putting the needs of our patients waiting for care at the heart of the approach and making a real, measurable difference for them.”

The programme delivers all three principles of transformation: making the right thing to do for the patient be the easiest thing for the clinician to do, whilst also helping align clinical capacity to pathway demand, and getting the patients to the most appropriate environment, for their assessment, for their treatment and for their care.”

James Friend - Director of Digital Strategy for London, NHS England

The Trust Care Coordination Solution is helping Trusts to treat patients faster and in the right order...

“CCS has changed everything for the better, everything is there, ready in one place making our working day easier and much more efficient”.

Claire Turner - Urology Nurse Specialist

“I think the Care Coordination Solution (CCS) has really improved our efficiency of work. The theatre team were previously required to manually update and validate every day, this would take about 2 -3 hours. The only way we could see how many cases had been booked, tracking theatre utilisation was to manually look through the spreadsheet. Now we have a system that updates in real time.

Within the first month of using CCS our utilisation increased by 7% and then by another 1% the following month. The CCS has made running 6-4-2 meetings easier as we only need to validate the information once a week instead of spending 2-3 hours a day on the spreadsheet, freeing up valuable time.”

Claire Sheppard - Divisional Director of Operations

*‘Our priority is reducing the number of patients on the waitlist who are breaching a certain number of weeks. **Trust CCS has been invaluable in identifying slots that we previously didn’t realise could be utilised.** As a result, we’ve been able to book in more procedures and reduce our priority waitlists faster’.*

Trust Executive

The Trust Care Coordination Solution was built by clinical staff for clinical staff

It contains four modules:

- 1 Elective Waiting List Management
- 2 Theatre Scheduling
- 3 Outpatients Management
- 4 Referral to Treatment Validation

For further information contact:
england.fdp@nhs.net.



Waiting List Module

Provides a fast and effective way for clinicians to process their waiting list, prioritise patients and work with schedulers to book patients in for procedures – all in a single tool.

- The Trust Care Coordination Solution is helping Trusts to treat patients faster and in the right order.
- It flags waitlist errors to ensure those on the list are 'true' waiters.
- Clinicians can tell patients where they are on the waiting list and easily reprioritise them where required.



The Theatre Scheduling Module

Integrates with the cleaned elective waiting lists, as well as rostering, annual leave, and pre-op status data.

- The Trust Care Coordination Solution calculates the number of 'unbooked' minutes in a theatre session as 'suggests' patients to fill gaps based on their priority.
- Increased theatre utilisations - booking requests can be made to bring this to 100%.
- Consultants can request bookings according to clinical priority with near-real-time views of theatre and staff.
- Clinicians can easily see annual leave and staff constraints.



Outpatients Module

Bringing the Care Coordination Solution's proven tools for waiting list validation and data quality to teams tackling outpatient backlogs.

- Greater visibility of numbers waiting, booking status and those waiting according to priority.
- Optimise clinic productivity and reduce likelihood of cancellations.
- Automatically alert users to potential data quality issues such as duplicate requests or entries that have not been completed or closed.



Referral To Treatment (RTT) Validation Module

Designed to support the validation of patients on RTT pathways. The solution helps ensure that waiting lists are accurate.


- Accurate RTT waitlists and the ability to track live performance against national targets for elective recovery.
- Acceleration of RTT pathways through landing actions with the right teams.
- High speed-to-value for validation teams, building rapidly on existing Care Coordination Solution modules.


Benefits include...


Inpatients benefits overview


Outcomes

 Treat the right patients, in the right order

 More effective use of staff time

 Improved theatre utilisation

 Reduction in waitlist size by removing patients safely

 Reduction in theatre cancellations and rescheduling

Percentage of patients on waitlist flagged for investigation

13.3%

Average increase in affected theatre session utilisation (booked vs actual)

6.3%

across 22 mature Trusts

Patients on waitlists requested for removal to date

52,371

Number of patients on waitlists flagged for investigation and potential removal

144,907

Outpatients benefits overview

Bringing the CCS' proven tools for waiting list validation and data quality to teams tackling outpatient backlogs.

Designed to support managing outpatient throughput by:

- maximising efficiency of clinics;
- providing visibility over specific cohorts; and
- creating a comprehensive digital infrastructure around end-to-end outpatient activities and processes.

Target outcomes




Referral To Treatment Validation benefits overview

Designed to support Trusts to:


- Define customisable rules to cohort, prioritise and assign RTT (Referral to Treatment) patients to validation teams;
- Seamlessly create actionable requests out of validation comments for dedicated teams to track; and
- Report live validation performance.

Benefits for RTT Validation team

 Track live performance against national targets for elective recovery

 An ability to flexibly set up automation to organise the Patient Tracker List (PTL), if the rules change so does the PTL


 Land actions directly with the right team


 See complete validation history and updates in real-time

Benefits for Services

 Readily available access to an up-to-date PTL

 Avoids duplication of validation effort

 Rich task management and communication tools



OPTICA

Patient discharge optimisation

OPTICA is an application built on the Foundry platform by NECS with North Tees & Hartlepool FT that tracks all admitted patients and the tasks relating to their discharge in real-time through their hospital journey.



Fully **integrated with hospital electronic patient records, other health data systems** incl. lab results **and social care systems** to ensure relevant information related to discharge is available to clinical teams and leaders in one place.



Drives an **efficient, shared** way of working for **health and social care** teams providing **actionable intelligence** to help care teams **properly plan** for timely discharges, helping ensure avoidable delays leaving hospital are kept to a minimum and that hospital beds aren't unnecessarily occupied.



Enables the multi-disciplinary team to **easily understand** exactly where discharges from hospital are being avoidably delayed, for how long, why, who's responsible and attaches a proxy indication of missed opportunity cost to the organisation.

Actual & Forecasted National Benefits / RoI



Better patient flow resulting in better bed utilisation to support medical divers



More efficient use of MDT staff time



Improved NHS and Social Care collaboration



Increased system resilience by accommodating more medical divers



Reduction in average length of stay



Improved patient experience – Less exposure to infections, return home as soon as possible

50% fewer patients occupy a hospital bed for 21 days or more compared with the England average

36% reduction in the average number of delay days for patients with a length of stay of 21+ days

25% reduction in long length of stay patients within 2 months of implementing OPTICA

43% fewer beds occupied by patients with a Length of stay of 14+ days compared to the national averages

Forecasted national impact of this one metric

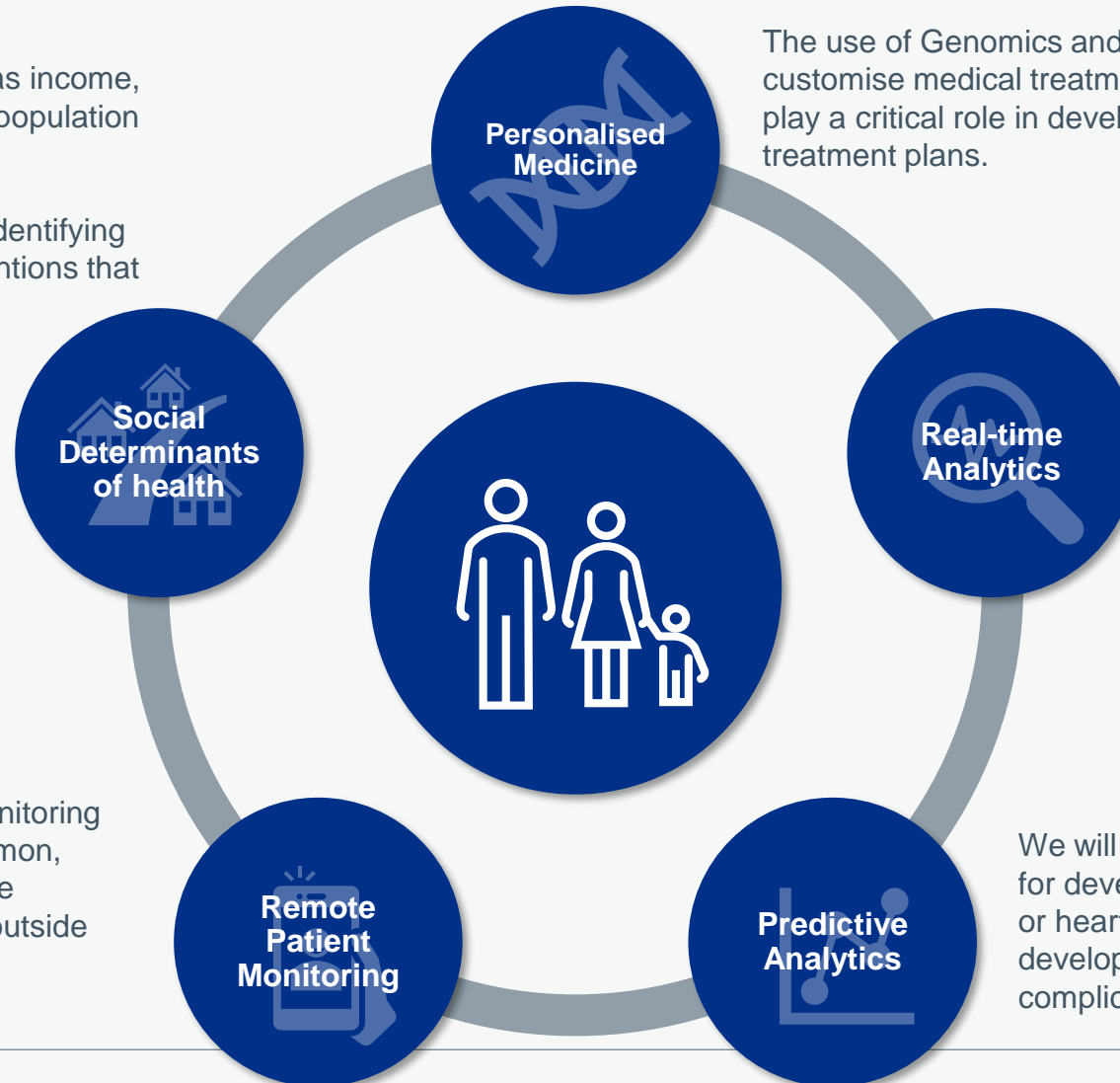
- **1.8 million delay days per year** could be saved for patients with a length of stay of 21+ days, equiv to **£700M** missed opportunity cost
 - Assuming 6.1 days avg LoS for a Surgical Patient, this translates to being able to see an **additional 295,081 elective patients**
 - DHSC modelling suggests this could also result in a **national 3% improvement in A&E 4hr performance / 26% reduction in handover delays** of 60+ mins
- **10 Trusts** with the highest number of delay days account for **35%** of the national potential missed opportunity cost savings (**627,000 days/£246M**)

The Future of Data and Analytics in Health and Care

Social determinants of health, such as income, education will combine with existing population health data.

Data and analytics will be critical in identifying these factors and developing interventions that address them.

The use of wearables and other remote monitoring technologies is becoming increasingly common, allowing healthcare providers to collect large amounts of data on patients' health status outside of traditional clinical settings.



The use of Genomics and other biomarkers to customise medical treatments for patients will play a critical role in developing personalised treatment plans.

Real-time analytics will help systems quickly identify patients who are at risk for developing complications or other health issues, allowing for early intervention and treatment.

We will be able to identify patients who are at risk for developing chronic conditions, such as diabetes or heart disease earlier. The NHS will be able to develop treatment plans that can reduce the risk of complications.

Thank You



england.fdp@nhs.net



future.nhs.uk/FederatedDataPlatformInfo