

PRANA

PRE-HOSPITAL RESEARCH AND AUDIT NETWORK

Linking pre-hospital data across patient pathways

- Presented by:
Phil Hyde

NHS England support



Part of the
**NHS Research Secure Data
Environment Network**

Data Access Request Service

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Data and Statistics DHSC

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PRANA Collaboration



Part of the
**NHS Research Secure Data
Environment Network**

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PRANA National Advisory Group

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- Jim Cook
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- Suzanne Hartley
- Louise Greenrod
- Seema Yalamanchilli
- Nick Reed
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Part of the
**NHS Research Secure Data
Environment Network**



Department
for Transport



Department
of Health &
Social Care



Making Roads Safer



IMPERIAL



Funding



Part of the
**NHS Research Secure Data
Environment Network**



Making Roads Safer

Wessex Health Partners

Wessex Experimental Medicine Network

Southampton NIHR Biomedical research centre

Wessex NIHR Applied Research Collaborative

Department for Transport

NHS England Data for Research and Development

NIHR programme grant application April 20026

Traumatic injuries of any cause (all age groups)



Medical illness of any cause (all age groups)



Injury/Illness
is not
prevented

Injury/Illness
recognised

Care provided
to patient
outside of
hospital

Resuscitation
Surgery
Intensive care

Rehabilitation
Re-enablement
Education

Functional
outcome



PRANA Aims

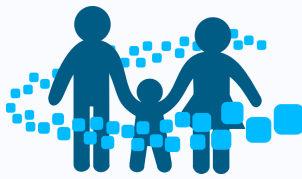


Part of the
**NHS Research Secure Data
Environment Network**

- Create a national registry of linked pathway data
- Provide outcome data back to services
- Enable analysis of PRANA data to **improve health care**
- Enable analysis of PRANA data to **prevent disease**



Data for healthcare improvement



Data for Disease Prevention

Research

- Epidemiology
- Who benefits
- Unmet need
- Death before hospital
- Appropriate staffing
- Dispatch criteria
- Advanced airway management
- Time windows for key critical interventions
- Role of pre-hospital ultrasound
- Standardised mortality ratio
- SNO-MED standardisation
- Tracking and clinical forecasting data collection

Improvement/Innovation

Structure of care delivery

- Access to critical care
- Case mix
- Staffing and work force planning
- Inform Public Health Outcome Framework

Access to critical care

- Inform NHS Outcomes Framework
- Patient Safety Incident reporting
- Never event reporting
- Safety and effectiveness of emergency anaesthesia
- Trauma care – oxygen delivery
- NICE Major Trauma Guidelines

Outcomes of care delivery

- Mortality and survival data
- Development of a standardised mortality scoring system
- Survival of major trauma patients
- Major incident response

Research

Cost of road traffic collisions to society

Velocity and injury relationship

Collision types and injuries

Improvement/Innovation

Sustainable linkage

Treatments to reduce collisions and the severity of injuries: car design, road design.

Regional policy change

National policy change

Legal change



Secure Data Environments:

E	England	POPULATION 57m
EE	East of England	POPULATION 6.6m
EM	East Midlands	POPULATION 5.1m
KMS	Kent, Medway & Sussex	POPULATION 3.8m
L	London	POPULATION 10.5m
NENC	North East and North Cumbria	POPULATION 3.2m
NW	North West	POPULATION 7.3m
SW	South West	POPULATION 5.2m
TVS	Thames Valley & Surrey	POPULATION 3.9m
W	Wessex	POPULATION 2.8m
WM	West Midlands	POPULATION 6.2m
YH	Yorkshire & Humber	POPULATION 5.9m

Built to maintain patient confidentiality



Part of the
NHS Research Secure Data Environment Network

Cyber secure, penetration tested

ISO 27001 compliant



National governance support



Wessex
SECURE DATA
ENVIRONMENT

Part of the
**NHS Research Secure Data
Environment Network**

Legal basis for England and Wales

HRA Research Ethics support

HRA Confidentiality Advisory Group support

NHS England support

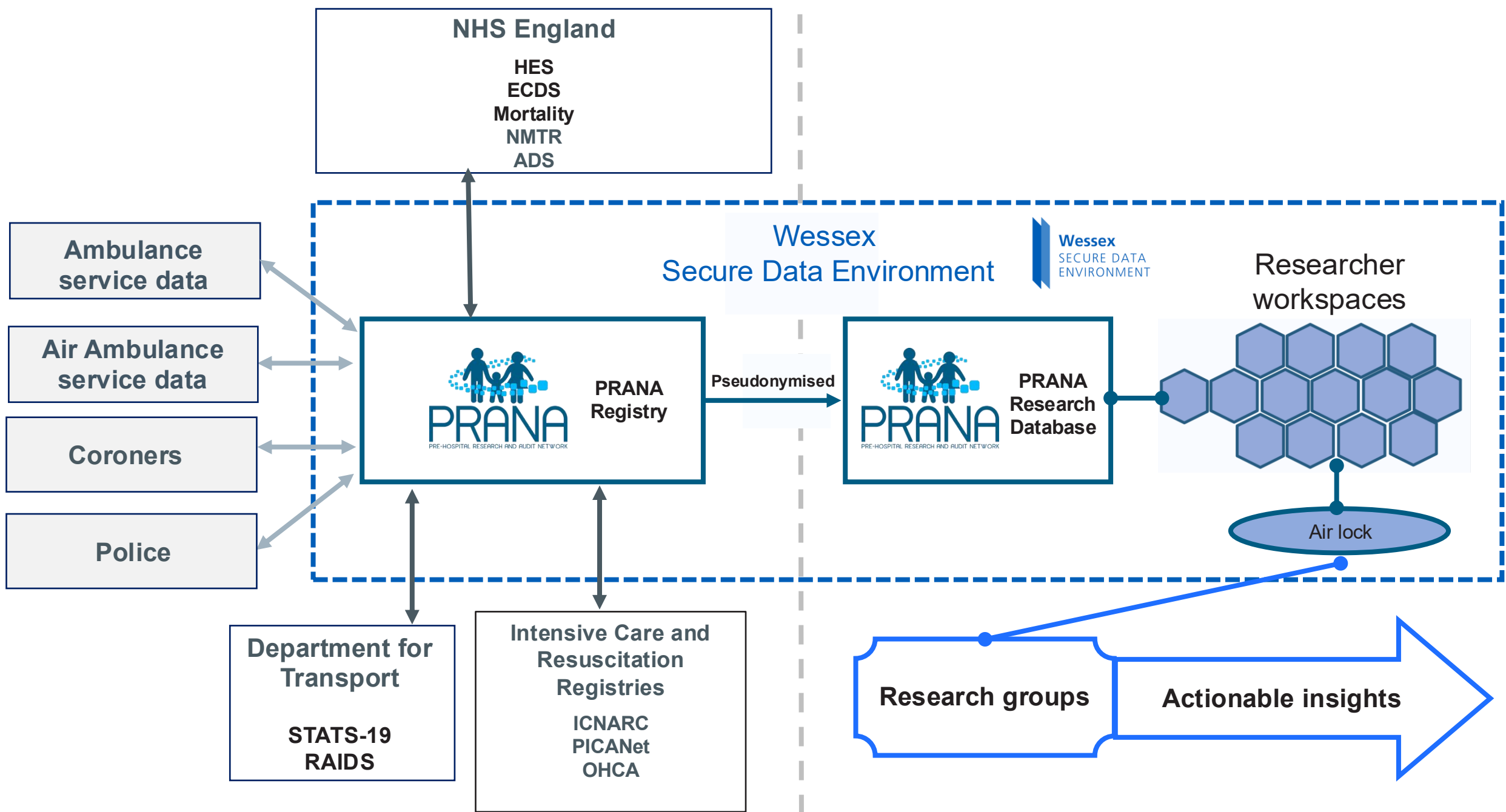
NHS England Advisory Group for Data support

NHS England signed data sharing agreement



National and regional identifiable datasets

Anonymised and collated research dataset





[NHS Digital](#) > [Services](#) > **Data Access Request Service (DARS)**

Data Access Request Service (DARS)



NHS England's Data Access Request Service (DARS) is the gateway to accessing NHS health and social care data.

<https://digital.nhs.uk/services/data-access-request-service-dars/process/data-access-request-service-dars-pre-application-checklist>

Data available through this service

Below are the data sets available through the DARS service. The data set catalogue also contains information about the access methods available for each data set.

Data set catalogue

Browse the data sets available through DARS

[View the data set catalogue](#)

Pre-application checklist



Data Access Request Service

	PRANA
Data security and protection toolkit	<input checked="" type="checkbox"/>
ISO 27001 - Information security management system	<input checked="" type="checkbox"/>
Data items and data flow diagram	<input checked="" type="checkbox"/>
Legal basis	<input checked="" type="checkbox"/>
Purpose	<input checked="" type="checkbox"/>
Non-commercial	<input checked="" type="checkbox"/>
Data protection Act registration	<input checked="" type="checkbox"/>
Data controller and data processor and storage clarity	<input checked="" type="checkbox"/>

Web portal



Data Access Request Service



Data Access Request Service

Phil Hyde [Sign out](#)

[Manage applications](#)

[Manage DSAs](#)

[Data Sharing Framework Contract](#)

[Help](#)

[Updates](#)

[Guidance](#)

Applications for Data Sharing Agreements

The data access request



Data Access Request Service

- Link ambulance service data to HES, ECDS, mortality, NMTR and ADS data.

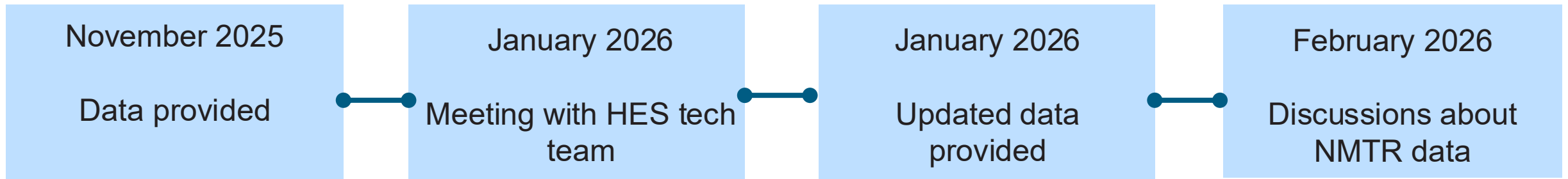


Data provisioning



Data Access Request Service

- HES, ECDS, mortality data.



On going support and development



Data Access Request Service

- Amendments to HRA support – updates to the NHS England data sharing agreement.
- Link ambulance service data to NMTR and ADS data.
- Updated Data sharing agreement April 2026

PRANA's journey with DARS

NHS

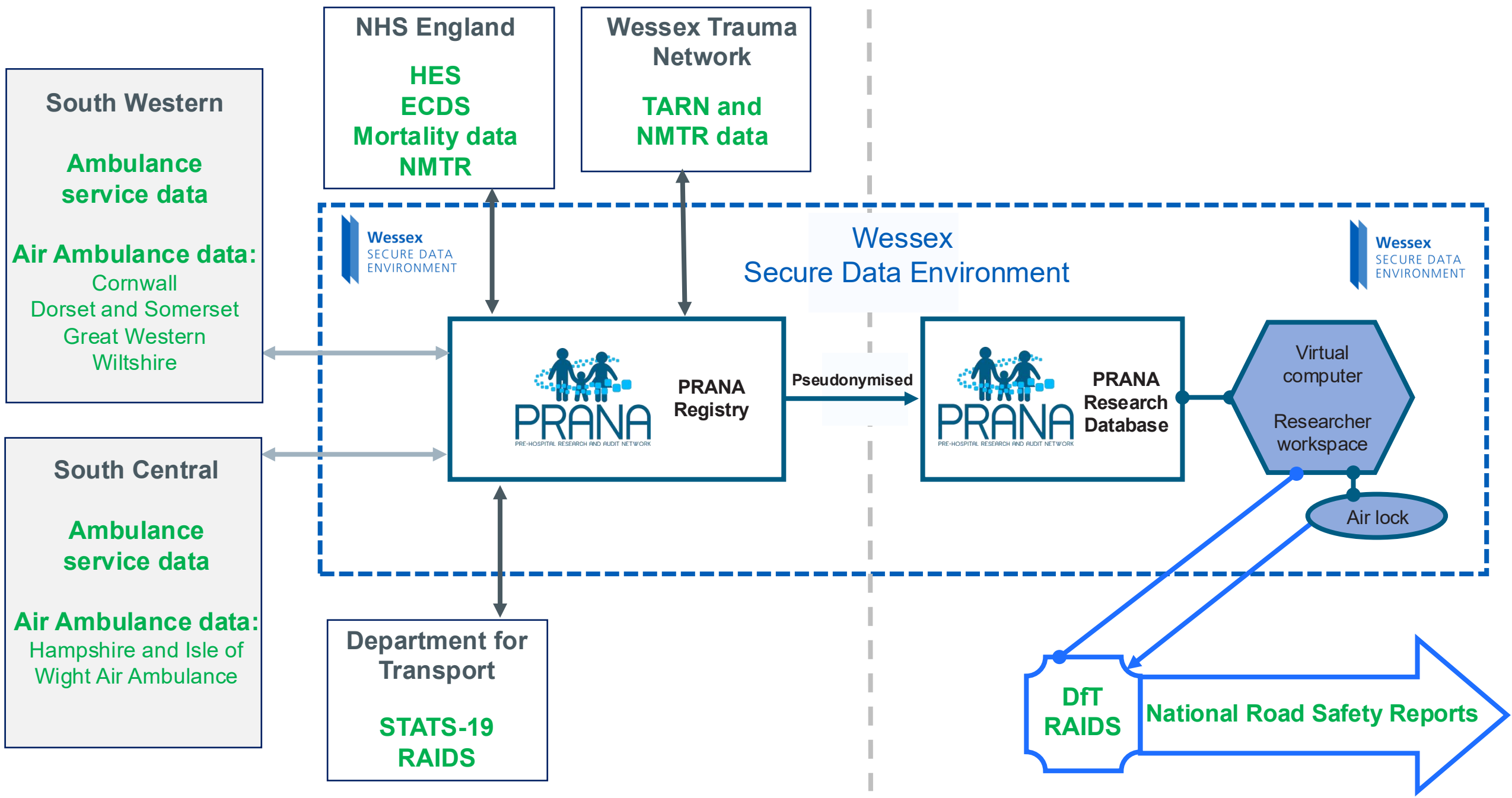
Data Access Request Service

- Extremely professional integrated team
- Patient centred
- Interested in empowering data
- Responsive and innovative
- Really care



National and regional identifiable datasets

Anonymised and collated research dataset



Linked data utility



Part of the
**NHS Research Secure Data
Environment Network**

- Sepsis
- Blood transfusions
- Out of hospital cardiac arrest
- Paediatric physiology across pathways
- Major trauma
- Road traffic collisions
- Brain injury
- Major incidents





OPEN ACCESS

Healthcare system impacts of the 2017 Manchester Arena bombing: evidence from a national trauma registry patient case series and hospital performance data

Paul Dark ¹, Martin Smith,² Harry Ziman,³ Simon Carley ⁴, Fiona Lecky ⁵
Manchester Academic Health Science Centre (MAHSC) Collaborators



“Following arrival in emergency departments, it proved impossible to retrieve patient-level data recorded at scene and so these data were not recorded in the TARN registry or linked to subsequent hospital care records”

NHS data enhancing road safety

Using data to prevent traffic-related injuries and fatalities.



In a world-first, the NHS is taking part in a data-sharing initiative to reduce road deaths and injuries in the UK.

<https://digital.nhs.uk/data-and-information/keeping-data-safe-and-benefitting-the-public/powerful-moments/nhs-data-enhancing-road-safety>

Unlocking the Power of Linked Road Safety and Health Data

We know that when data is shared effectively, it leads to better outcomes. In health, linked datasets have helped drive improvements in prevention, care and patient safety. In justice, data-sharing initiatives have informed policies that reduce harm. There is every reason to believe that linking road safety and health data will have a similarly transformative effect - helping us understand how and why injuries occur, improving emergency response, and shaping long-term strategies both to prevent collisions from happening and mitigating their injury impact when they do.

Today the challenges of linking data across sectors remain significant. Complex regulatory frameworks, technical barriers, and inconsistent data-sharing processes have hindered progress - leaving policymakers with an incomplete understanding of road safety risks and researchers deterred by the process. Valuable insights that could be gained from analysis of publicly-held data remain hidden.

In 2023 alone, 1,624 people lost their lives on the roads in Great Britain, with many thousands more suffering serious, life-altering injuries. Despite significant efforts, these figures have shown little improvement in over a decade - reflecting not only personal tragedy on a vast scale, but also a substantial and ongoing economic cost to society.

That is why, we are convinced that action is needed now from decision-makers across health, transport, and data governance to work collaboratively, prioritise data integration, and ensure that road safety benefits from the same evidence-based approach that has improved outcomes in other sectors.

We sense strong momentum across government, academia, and industry to overcome the barriers.

A recent roundtable involving all the key players revealed a promising way forward building on the Pre-hospital Research and Audit Network (PRANA) project to create a single, rigorously implemented, and properly governed linked dataset to serve as the new standard product, moving us beyond siloed statistics whilst maintaining adherence to the highest standards of data security, governance, and accountability. We believe that a dataset such as this will accelerate understanding of the systemic causes of road injuries and enable targeted action to improve road safety.

We urge all involved to make it happen



Lucy Vickers
Chief Data Officer
Department for Health
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Ed Humpherson
Director General
Office for Statistics
Regulation



Prof. Sarah Sharples
Chief Scientific Adviser
Department for Transport

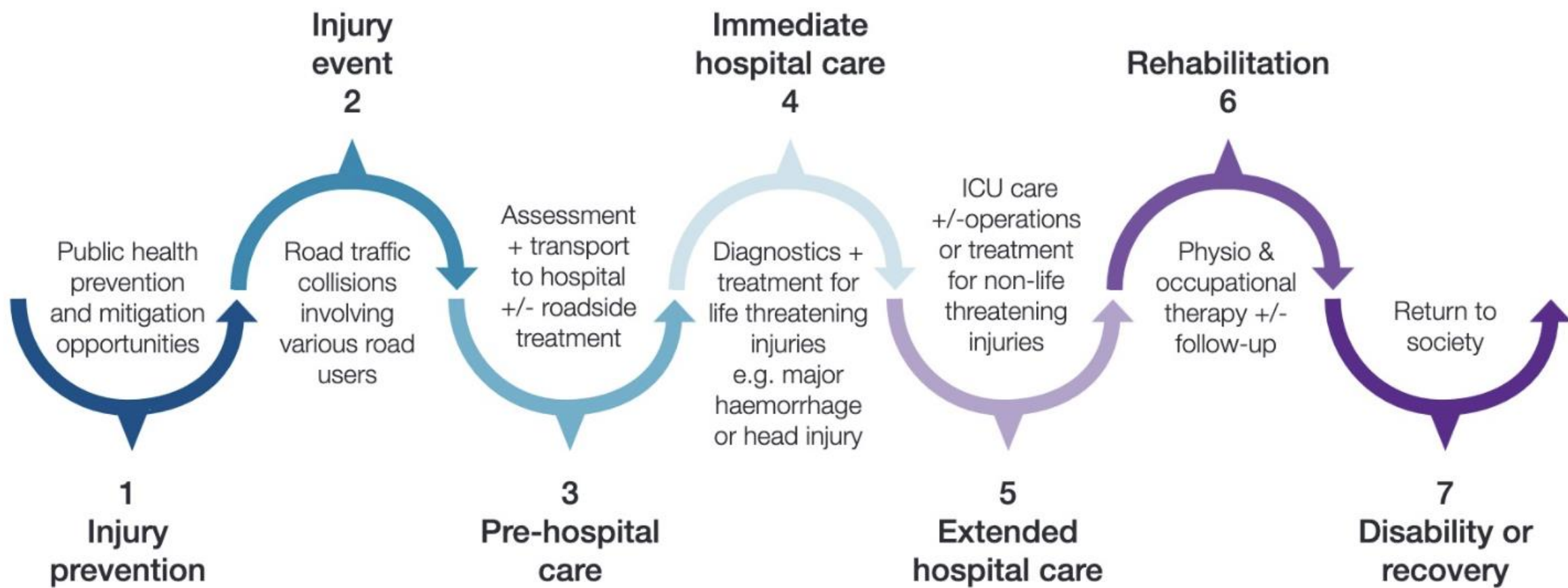
June 2025



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**NHS Research Secure Data
Environment Network**

Cross government support





PRANA STATS-19 / Ambulance data / ECDS / HES-APC + CC / NMTR / Deaths



PRANA Research database



STATS-19 / Ambulance data / ECDS / HES-APC + CC / NMTR / Deaths

Regional dataset

South West region

2017-2025

Ambulance – HES –
ECDS - NMTR –
Mortality - STATS-19

National dataset

England

2000-2025

HES - ECDS –
Mortality - STATS-19

Department
for
Transport

Air lock
Scientific review

Actionable insights



Official Statistics

Linking police and health data on road collisions: an initial feasibility study (updated)

Updated 27 November 2025

Applies to England

Contents

1. Main findings
2. Background
3. Data sources
4. Linkage methodology
5. Results: linkage rate
6. Results: severity coding
7. Overall conclusions and next steps
8. Annex: Background information
9. Instructions for printing and saving
10. How to search

About this report

This report summarises initial work to link the Department for Transport's data on road casualties reported to police (known as STATS19) with healthcare data, in what is hoped will be the first stage of a wider project. This report demonstrates the feasibility of linking police and ambulance data for a small subset of data for the South West region.

This work was initially published in September 2025, and subsequently updated, in November 2025, to reflect improvements in the data linkage. As a result, the linkage rates have increased, though the broad patterns shown remain unchanged.

- Linkage is possible at scale.
- 30% of RTC casualties - no STATS-19 record.
- Pedal cyclists - least STATS-19 records.
- Potential to re-describe the extent and consequence of road traffic collisions.

<https://www.gov.uk/government/statistics/linking-police-and-health-data-on-road-collisions-feasibility-study/linking-police-and-health-data-on-road-collisions-an-initial-feasibility-study>.

Road Safety Strategy



Linked Road Safety and Health Data

The DfT, NHS England and the Department of Health and Social Care (DHSC) have **committed to making the secure linkage of police-recorded collision data and healthcare data a shared policy priority**, to deepen understanding of the root causes and impact of road traffic collisions.

A pilot phase will use the Pre-hospital Research and Audit Network (PRANA)

<https://assets.publishing.service.gov.uk/media/695e2cff8832ab3a48513809/road-safety-strategy.pdf>

STATS-19

Validate accuracy of
STATS-19 injury
severity classification.

Patterns of life
threatening collisions



Inform the Road
Safety Investigation
Branch's

- Analytical approach
- Data priorities
- Evidence base

Engineering

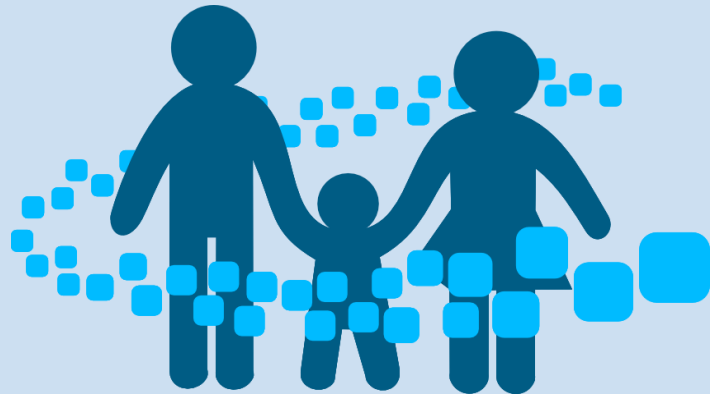
Brain injury research

Post collision care

Impact of collisions on
NHS services.

Road safety
partnerships

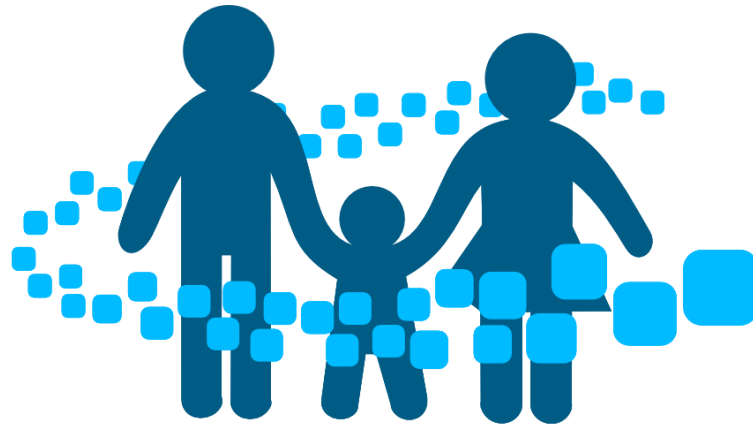
Support regions to
understand their RTC
consequences



Opportunities

- **Functioning data linkage across patient pathways.**
- **Achieved due to NHS England DARS**
- **Improving health care and preventing disease.**
- **Potential to become a sustainable national data asset.**

PRANA Future User Survey



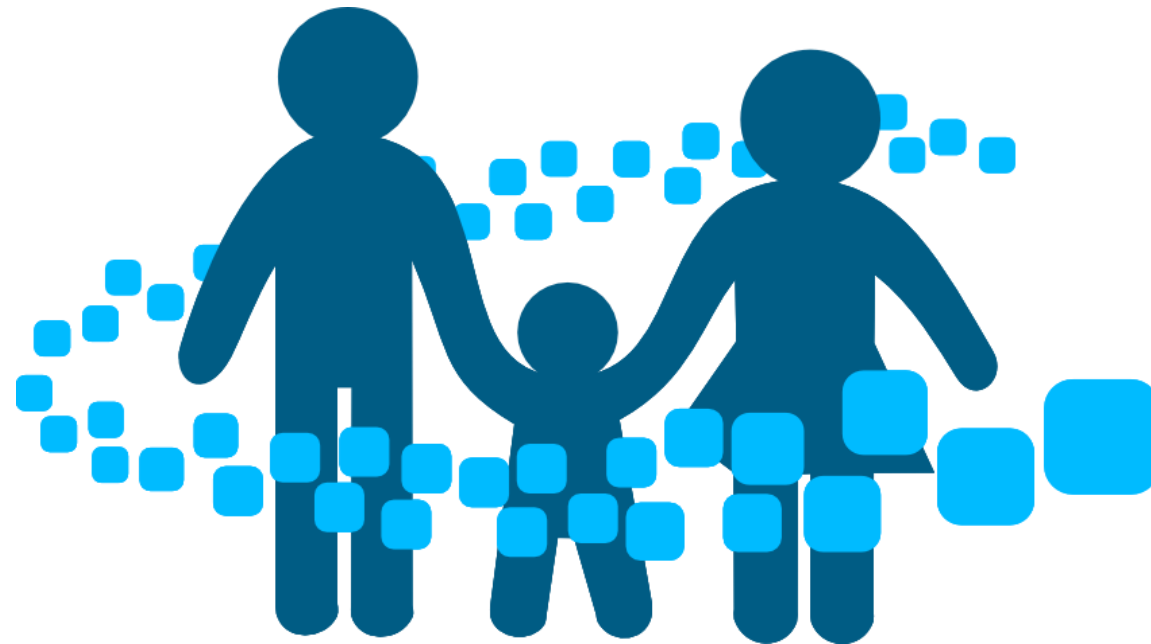
PRANA

PRE-HOSPITAL RESEARCH AND AUDIT NETWORK

PRANA Future User Survey



YOUR QUESTIONS



www.prananet.org