

# Balancing Social Licence, Trust and Data Utility: insights from consented longitudinal studies and progress towards a principles-led governance framework for data science.

**Andy Boyd**  
University of Bristol

**April 2026**



UK Research  
and Innovation



ESRC  
and MRC

# Strength in partnership



Led by:



Powered by:



Funded by:



In partnership with:



Partner Longitudinal Population Studies:



Collaborators:



# Today's talk

- 1) **A brief recap on Social Licence**
- 2) **A perspective from consented longitudinal studies**
- 3) **The “SafeGUARDS” – a principles led governance framework**

# 1) Social Licence

# A very brief recap...



**NHS delays plan to harvest your details: Victory for the Mail as database is shelved for six months**

## Review of data releases by the NHS Information Centre

Sir Nick Partridge  
17 June 2014

# Social Licence

## The social licence for research: why *care.data* ran into trouble

Pam Carter,<sup>1</sup> Graeme T Laurie,<sup>2</sup> Mary Dixon-Woods<sup>1</sup>

To be seen as publicly and politically acceptable, any data use will need a 'social licence' that is achieved through setting conditions that **extend beyond legal compliance and data protection and encompass ethical standards, the respect of individual rights and the delivery of public benefits.**

<https://jme.bmj.com/content/41/5/404>.  
short

# Social Licence

## The social licence for research: why *care.data* ran into trouble

Pam Carter,<sup>1</sup> Graeme T Laurie,<sup>2</sup> Mary Dixon-Woods<sup>1</sup>

Care.data failed to establish a 'social licence' as

- Conditions were not set to establish trust and acceptance
- Care.data breached established trust relationship between patients and GPs
- Uncertainty as to its public good motivations and benefits

[https://jme.bmj.com/content/41/5/404.  
short](https://jme.bmj.com/content/41/5/404.short)

# A period of listening and learning



## Understanding Patient Data

Structural bioinformatics

### Data Safe Havens in health research and healthcare

Paul R. Burton<sup>1,2,\*†</sup>, Madeleine J. Murtagh<sup>1,†</sup>, Andy Boyd<sup>1,†</sup>, James B. Williams<sup>3</sup>, Edward S. Dove<sup>4</sup>, Susan E. Wallace<sup>2,5</sup>, Anne-Marie Tassé<sup>2</sup>, Julian Little<sup>6</sup>, Rex L. Chisholm<sup>7</sup>, Amadou Gaye<sup>1</sup>, Kristian Hveem<sup>8</sup>, Anthony J. Brookes<sup>5</sup>, Pat Goodwin<sup>9</sup>, Jon Fistein<sup>10</sup>, Martin Bobrow<sup>11</sup> and Bartha M. Knoppers<sup>2,12,†</sup>



## Five safes

### A community response & Innovations, recognising the:

- need for clarity & transparency
- voice and role of the public(s)
- Importance of fundamental rights (opt-out)
- Trusted Research Environments
- Five Safes
- need to balance confidentiality with data utility
- Value of trusted entities (Caldicott Guardians)

# GP Data for Planning and Research programme (GDPR) - 2021



# GP Data for Planning and Research programme (GDPR) - 2021

**The Guardian**  
For 200 years

Subscribe →

News Opinion Sport Culture Lifestyle

**Opinion**  
Your medical records are about to be given away.  
As GPs, we're fighting back  
*Ameen Kamlana*

Thu 3 Jun 2021 11:56 BST

**EXPRESS**

HOME NEWS SHOWBIZ & TV SPORT COMMENT FINANCE

STYLE DIETS HEALTH GARDEN TECH PROPERTY LIFE CARS FOOD

Home > Life & Style > Tech

**MailOnline**

Home News U.S. Sport TV&Showbiz Australia Femail Health Science Money

Latest Headlines | Lilibet Diana Mountbatten-Windsor | Covid-19 | Royal Family | Prince Harry | Meghan Mark

**Fury over plan to share NHS files with tech firms as campaigners warn it could pose a risk to patient privacy**

- NHS plans to upload records of every person registered at a GP to one database
- The sensitive data includes details on physical, mental, and sexual health
- Patients have until June 23 to opt out by filling out a form and taking it to GP

**BBC NEWS**

Home News

**NEWS**

Technology

**Patient data transfer still set to start in July**

By Chris Vallance  
BBC News

**METRO**

NEWS SPORT ALL

**Campaigners threaten legal action over 'sneaky' NHS data sharing plans**

Comment

**Katherine Hignett**  
Friday 4 Jun 2021 12:30 pm

# Social Licence

## The social licence for research: why **GDPR** ran into trouble

Pam Carter,<sup>1</sup> Graeme T Laurie,<sup>2</sup> Mary Dixon-Woods<sup>1</sup>

**GDPR** failed to establish a 'social licence' as

- Conditions were not set to establish trust and acceptance
- Care.data breached established trust relationship between patients and GPs
- Uncertainty as to its public good motivations and benefits
- **Misplaced faith that COVID-19 had shifted the dial...**

<https://jme.bmj.com/content/41/5/404>.  
short

# Social Licence

## BMJ Open Media content analysis of general practitioners' reactions to care.data expressed in the media: what lessons can be learned for future NHS data-sharing initiatives?

Elizabeth Ford ,<sup>1</sup> Yalda Kazempour,<sup>1</sup> Maxwell J F Cooper,<sup>1</sup>  
Srinivasa Vittal Katikireddi ,<sup>2</sup> Andy Boyd<sup>3</sup>

- Care.data would give value for research and may improve care
- Patients lacked informed choice through proposed opt-out system
- Concerns about legal responsibilities regarding patient data
- Concerns about key safeguards
- Concerns about trust between patients and doctors

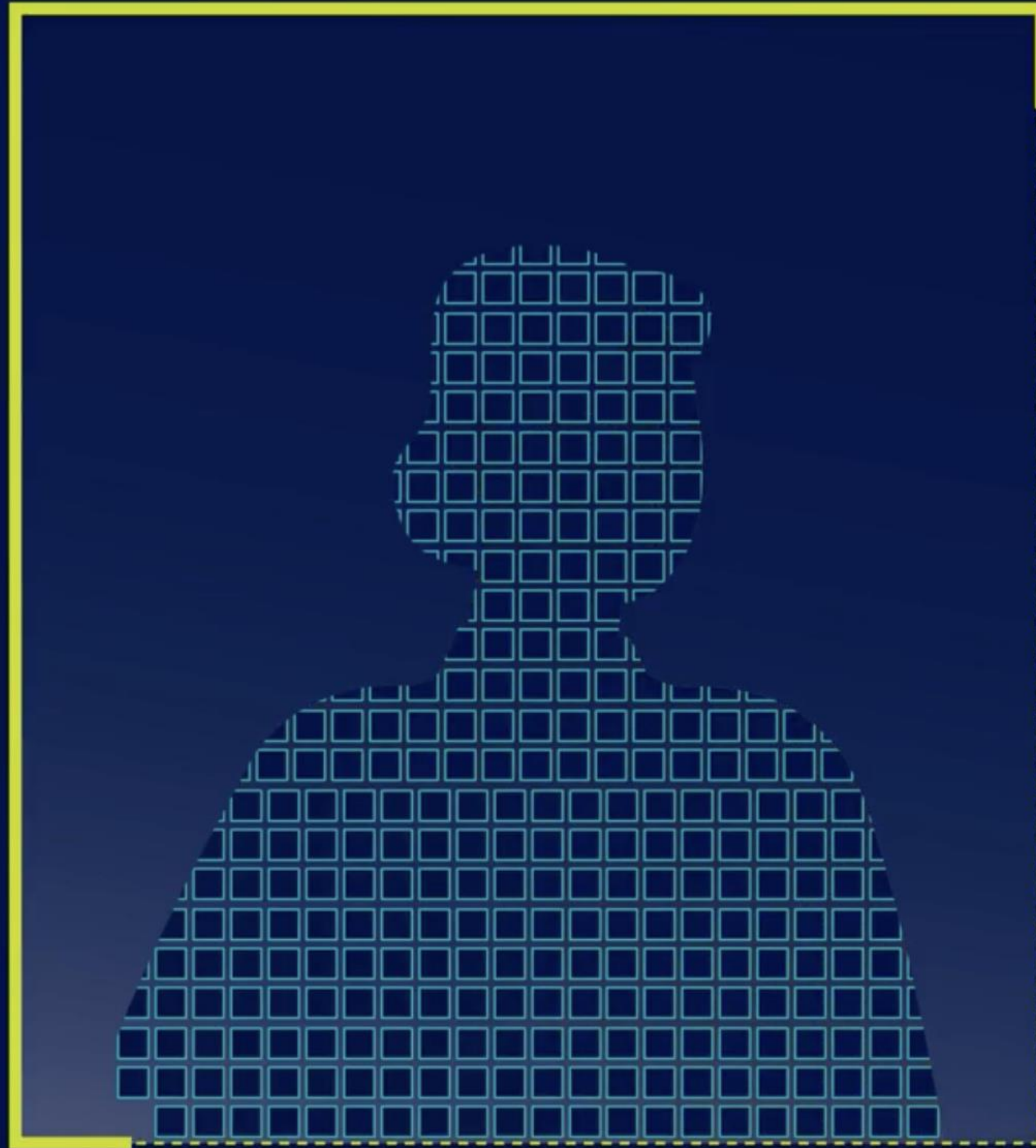
[doi.org/10.1136/bmjopen-2020-038006](https://doi.org/10.1136/bmjopen-2020-038006)

# GP Data for Planning and Research programme (GPDPR) - 2021



## **2) A perspective from consented longitudinal studies**

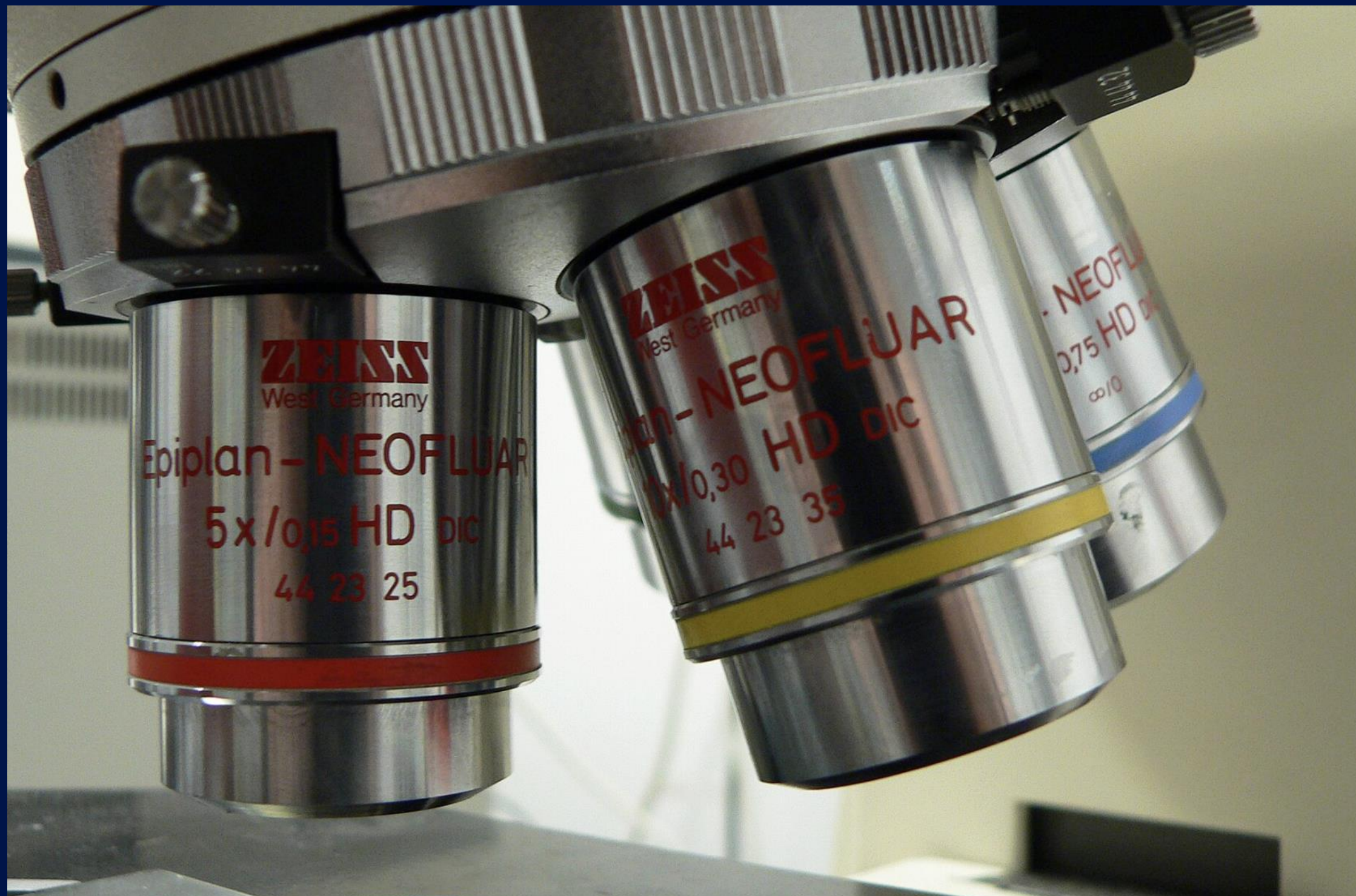
# An extraordinary UK scientific tradition



## Longitudinal population studies

- >200 studies; >5 million UK residents
- Unparalleled depth and diversity of data collection
- A “consented” relationship
- **Built on a foundation of trust**

# An extraordinary UK scientific tradition



## Longitudinal population studies

- >200 studies; >5 million UK residents
- Unparalleled depth and diversity of data collection
- A “consented” relationship
- **Built on a foundation of trust**

# Avon Longitudinal Study of Parents and Children (ALSPAC)



## ALSPAC aka “Children of the 90s”

- Recruited 14,541 pregnant women

### By age 18

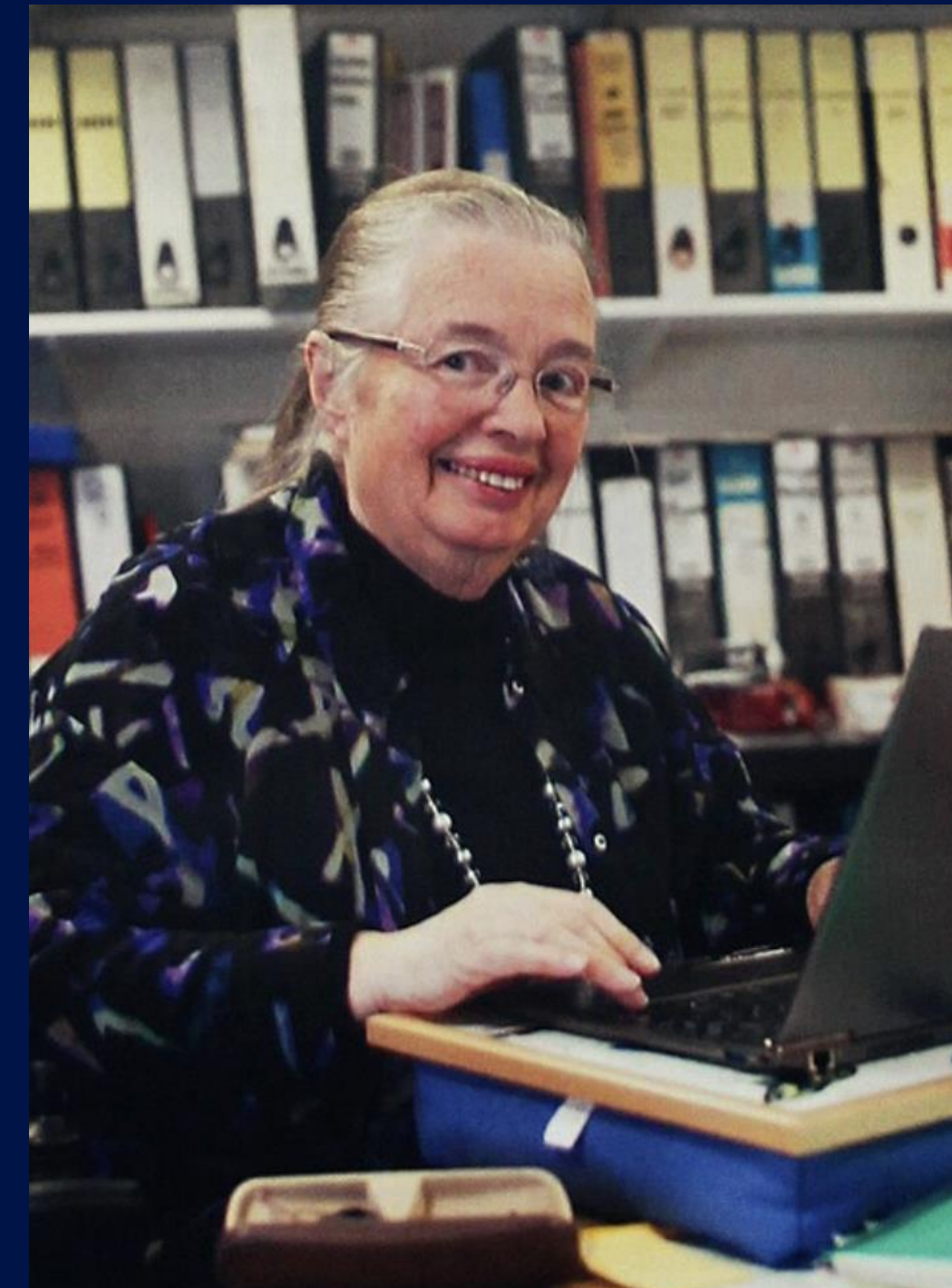
- >3000 families completed all 55 assessments
- ~8000 families completed 75%+ assessments

### Global impact

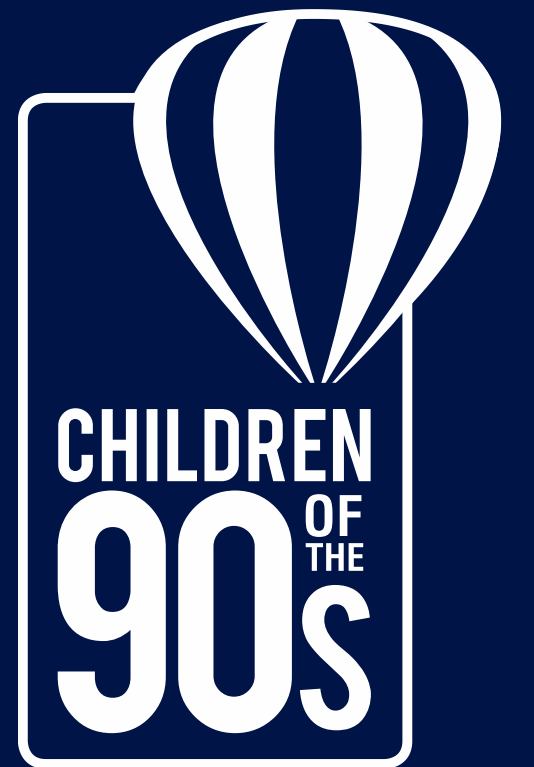
- >3000 scientific papers

### Multiple generations

- >3,000 3<sup>rd</sup> generation participants enrolled



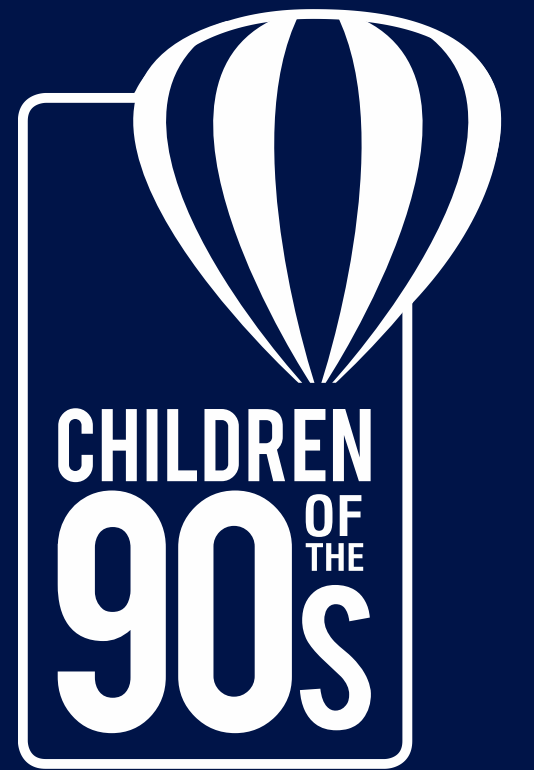
Professor Jean Golding



# Case Study - Project to Enhance ALSPAC through Record Linkage



- Wellcome Trust funded 2009-2014 (PI - John Macleod)
- Objective: to develop a generalisable framework for LPS record linkage, ALSPAC as an exemplar

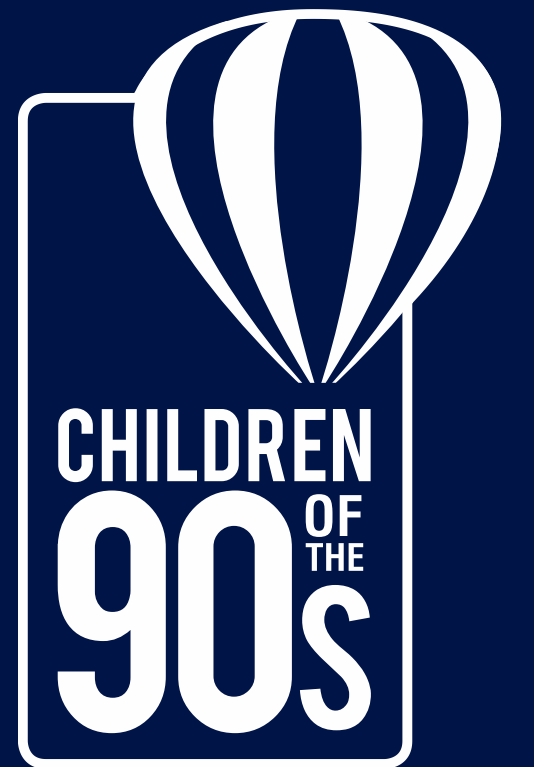


## Safeguards & trust at its heart

- Participant involvement
- Qualitative interviews
- A Trusted Research Environment (partnered with SAIL Databank)
- **Children of the 90s “consented” as adults**

## Young people's views about consenting to data linkage: findings from the PEARL qualitative study

Suzanne Audrey<sup>1\*</sup>, Lindsey Brown<sup>2</sup>, Rona Campbell<sup>1</sup>, Andy Boyd<sup>1</sup> and John Macleod<sup>1</sup>




doi: [10.1186/s12874-016-0132-4](https://doi.org/10.1186/s12874-016-0132-4)

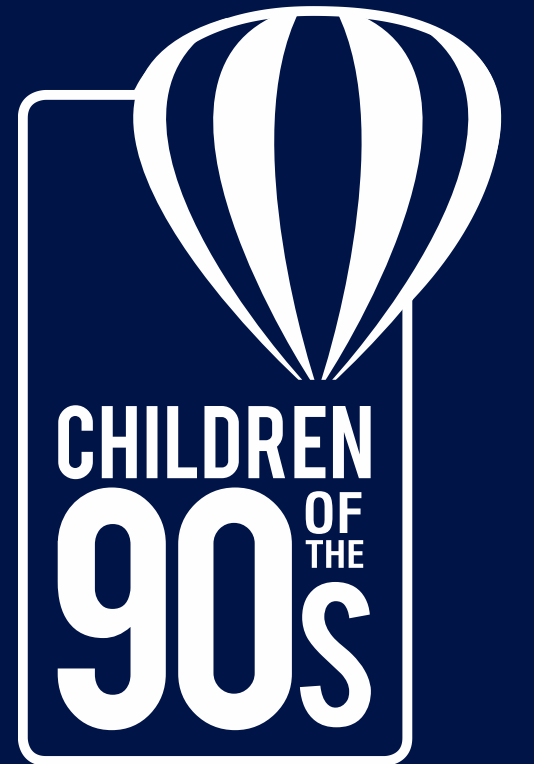
*“Despite different consent procedures being explained, participants tended to equate consent with ‘opt-in’ consent through which participants are ‘asked’ if their data can be used for a specific study. Participants raising similar concerns came to differing conclusions about whether consent was needed.”*

# Case Study - Project to Enhance ALSPAC through Record Linkage



## Cohort Profile: The 'Children of the 90s'—the index offspring of the Avon Longitudinal Study of Parents and Children

Andy Boyd , Jean Golding, John Macleod, Debbie A Lawlor, Abigail Fraser, John Henderson, Lynn Molloy, Andy Ness, Susan Ring, George Davey Smith



[doi.org/10.1093/ije/dys064](https://doi.org/10.1093/ije/dys064)

Active participants (at age 17-18) were

- more likely to be female
- more likely to have higher educational attainment
- less likely to come from households with low income

# Case Study - Project to Enhance ALSPAC through Record Linkage



Journal of Clinical Epidemiology 68 (2015) 877–887

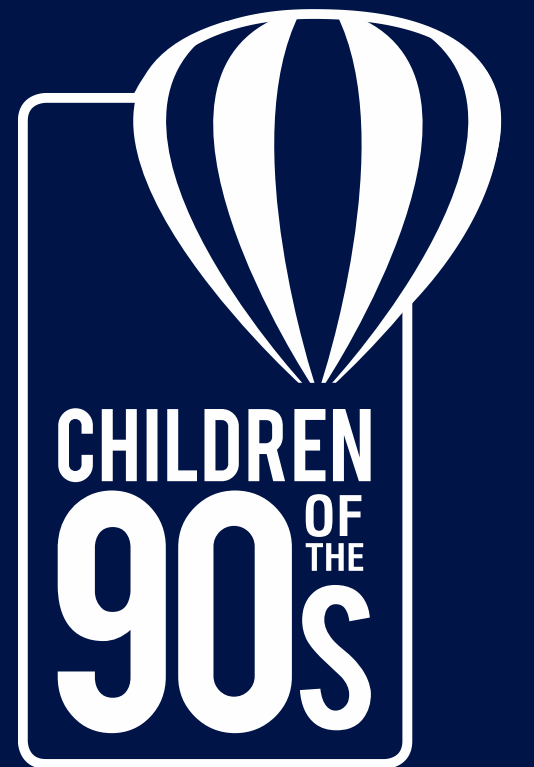
Journal of  
Clinical  
Epidemiology

Professionally designed information materials and telephone reminders improved consent response rates: evidence from an RCT nested within a cohort study

Andy Boyd\*, Kate Tilling, Rosie Cornish, Amy Davies, Kerry Humphries, John Macleod

*ALSPAC, School of Social and Community Medicine, University of Bristol, Oakfield House, Oakfield Grove, Bristol BS8 2BN, UK*

Accepted 23 March 2015; Published online 31 March 2015



[doi.org/10.1016/j.jclinepi.2015.03.014](https://doi.org/10.1016/j.jclinepi.2015.03.014) 0895-4356

**Of 1,950 participants, 806 (41%) responded.**

- This sample over-represented engaged participants
- Responders were
  - more likely to be female
  - more likely to have higher educational attainment
  - less likely to come from households with low income

# Case Study - Project to Enhance ALSPAC through Record Linkage



Journal of Clinical Epidemiology 68 (2015) 877–887

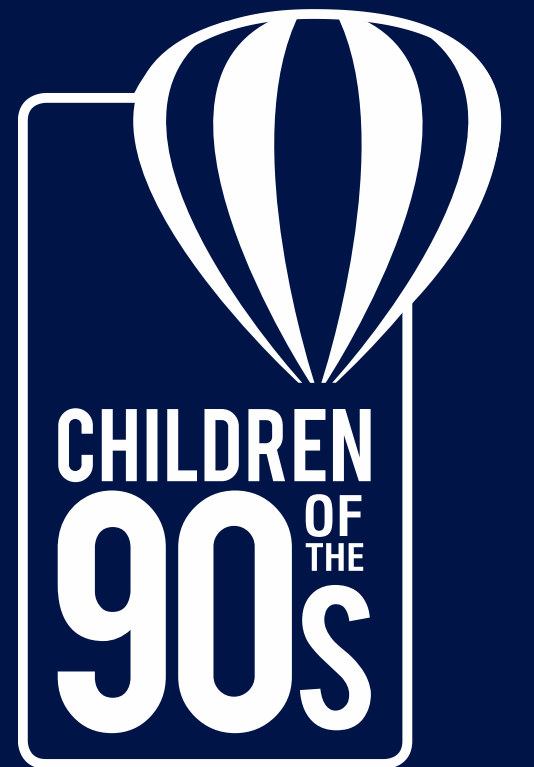
Journal of  
Clinical  
Epidemiology

Professionally designed information materials and telephone reminders improved consent response rates: evidence from an RCT nested within a cohort study

Andy Boyd\*, Kate Tilling, Rosie Cornish, Amy Davies, Kerry Humphries, John Macleod

*ALSPAC, School of Social and Community Medicine, University of Bristol, Oakfield House, Oakfield Grove, Bristol BS8 2BN, UK*

Accepted 23 March 2015; Published online 31 March 2015



[doi.org/10.1016/j.jclinepi.2015.03.014](https://doi.org/10.1016/j.jclinepi.2015.03.014) 0895-4356

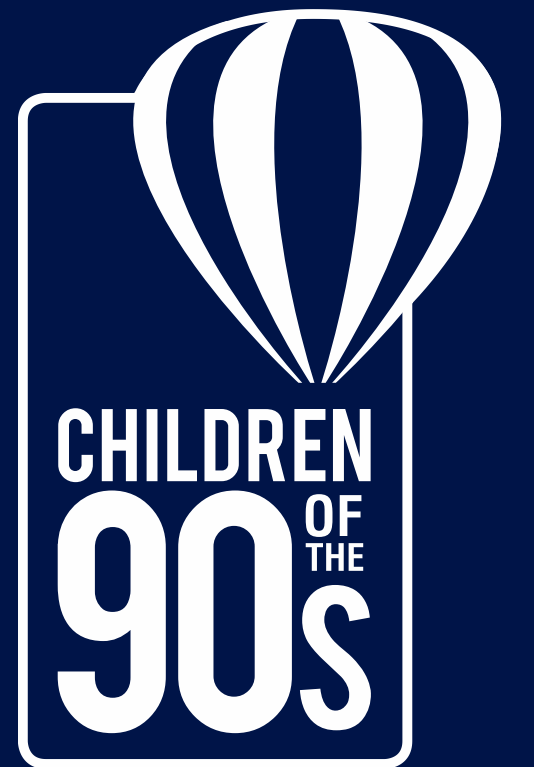
**Of 1,950 participants, 806 (41%) responded.**

- 96% Consent to re-enrol into ALSPAC as an adult
- 92% Consent for NHS linkages
- 93% Consent for Education linkages
- 85% Consent for HMRC/DWP linkages
- 90% Consent for Criminal Justice linkages



Opt in  
Consent?

Opt Out?  
(Section 251)



Opt in  
Consent?

Opt Out?  
(Section 251)

*Care.data failed to establish a 'social licence' as*

- *Conditions were not set to establish trust and acceptance*
- *Care.data breached established trust relationship between patients and GPs*
- *Uncertainty as to its public good motivations and benefits*

# Case Study - Project to Enhance ALSPAC through Record Linkage



Opt in  
Consent?

Opt Out  
(Section 251)

# Case Study - Project to Enhance ALSPAC through Record Linkage



## “Pro” Social Licence

- Participant co-development
- Participant involvement in decision making
- Trusted Research Environment
- Transparency & right to opt-out
- Equitable public benefit strategy
- Clear “Social Contract” with specified data use parameters
- Multiple independent ethical approvals
- ISO27001

## “Counter” to Social Licence

- Opt-out



# Case Study - Project to Enhance ALSPAC through Record Linkage



**“Pro” Social Licence**

**8**

**Home Victory?**

**“Counter” to Social Licence**

**1**



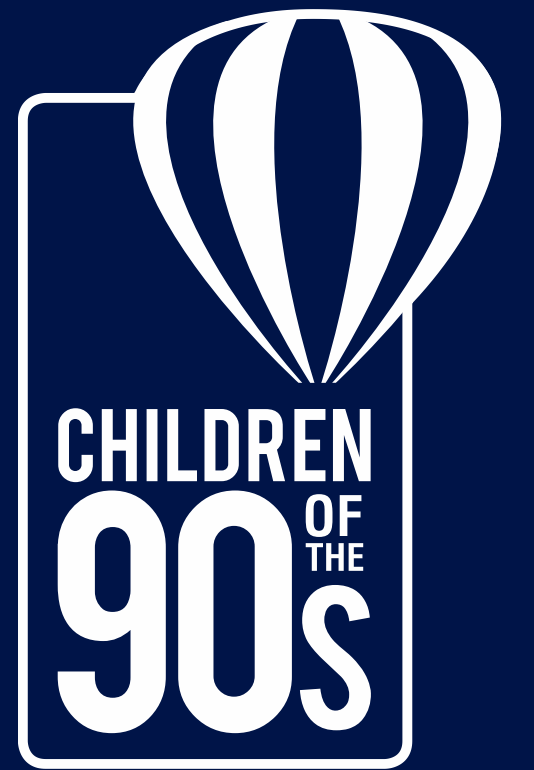
# Case Study - Project to Enhance ALSPAC through Record Linkage



**Factors associated with participation over time in the Avon Longitudinal Study of Parents and Children: a study using linked education and primary care data**



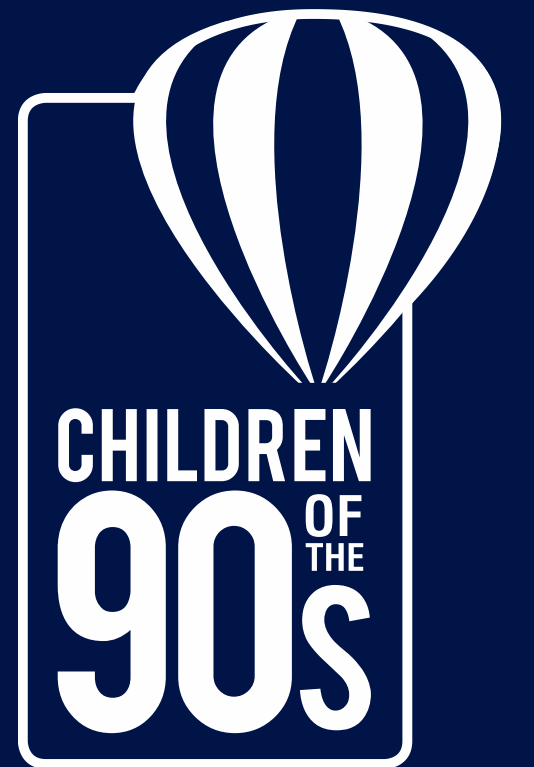
Rosie P Cornish ✉, John Macleod, Andy Boyd, Kate Tilling



[doi.org/10.1093/ije/dyaa192](https://doi.org/10.1093/ije/dyaa192)

*“Lower levels of school attainment, lower general practitioner (GP) consultation and prescription rates, higher body mass index (BMI), special educational needs (SEN) status, not having an asthma diagnosis, depression and being a smoker **were associated with lower participation** after adjustment for baseline factors.”*

## Early life adversity, contact with children's social care services and educational outcomes at age 16 years: UK birth cohort study with linkage to national administrative records



Alison Teyhan <sup>1</sup>, Andy Boyd,<sup>1</sup> Dinithi Wijedasa,<sup>2</sup> John Macleod<sup>1</sup>

[doi:10.1136/ bmjopen-2019-030213](https://doi.org/10.1136/bmjopen-2019-030213)

# UK Longitudinal Linkage Collaboration



- The national Trusted Research Environment (TRE) for data linkage in longitudinal research.
- A partnership of infrastructure/service experts, LPS & the public/participants
- Enables the linkage of participants' study data with health, socio-economic and environmental records at scale
- A FAIR TRE where researchers can apply to access to integrated and linked data from many studies simply and efficiently.

# Interdisciplinary four nations follow-up

**20+ Longitudinal Population Studies  
with >570,000 participants**

Any and all study data, including:

- Behaviours and aspirations
- Socio-economic indicators
- Genomics and other Omics
- Education to employment trajectories
- Occupational role & workplace experiences
- Devices and “smart data”
- Relationships and support networks
- *Anything collected by LPS.*

## Administrative records

- Employment and earnings
- Benefits
- Pensions



## Health records (NHS)

- Primary care
- Secondary care (Hospital)
- Prescribing
- Mental health (Community)
- Cancer & Mortality



## Place-based datasets

- Air pollution
- Noise
- Greenspace
- Neighbourhood
- Property data

**Full documentation  
“Guidebook”**



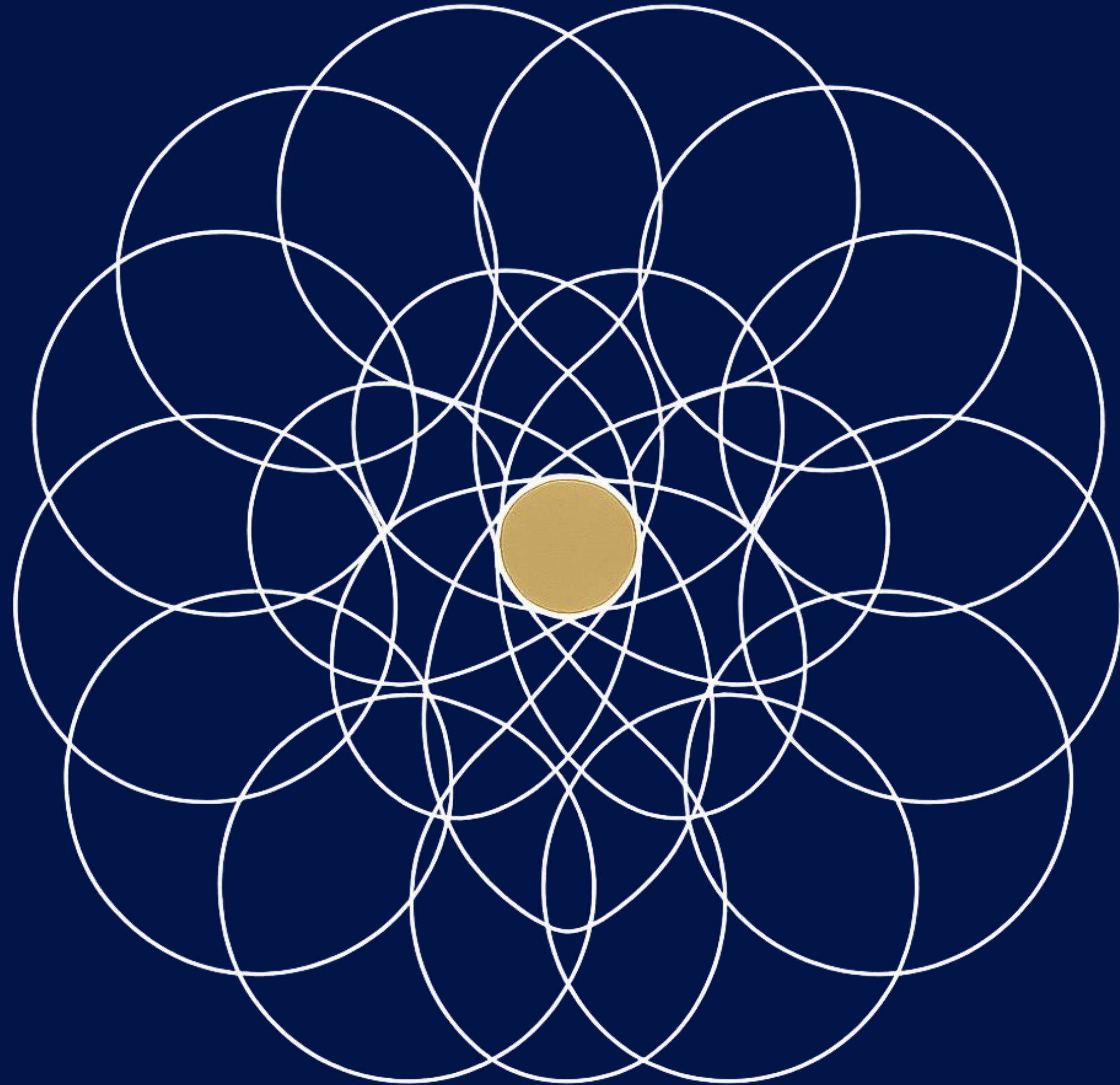
# Innovative partnership working



- A partnership of studies and infrastructure specialists
- Co-design between UK LLC core team and study data managers
- Informed by study participants and co-developed with UK LLC public contributors
- **Studies control whose data is linked to which record and who uses that data for each purpose**
- SeRP UK providing secure compute in the UK and essential trusted third-party functions

Powered by SeRP | UK

# Getting governance “just right”



The Goldilocks Effect – can we get our information governance “just right” to ensure our social licence to operate is in place?

- Since of

# Getting governance “just right”

**Who? What? Why? Is it fair?  
Is it clear how data are  
used?**

**Considerations rooted in  
their specific context**

**(how is a niche interest)**

Or, do we focus on principles?

- Since of

# Getting governance “just right”



31 MARCH 2021

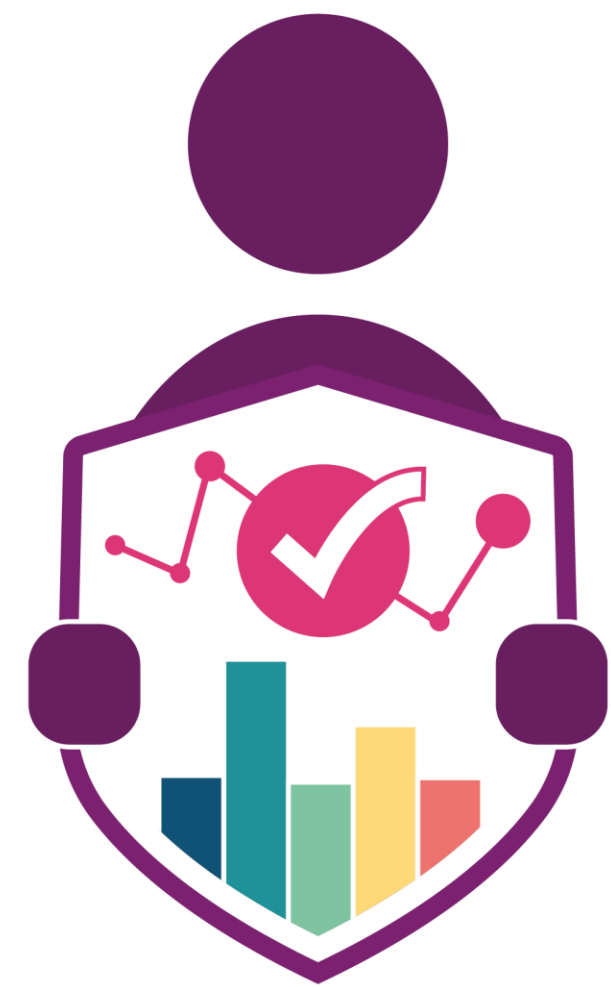
## Data for international health emergencies: governance, operations and skills

This Statement has been created by the Science Academies of the Group of Seven (G7) nations. It represents the Academies' view on the need for the G7 countries to realise a better level of 'data readiness' for future health emergencies.

The G7 should champion the cause of establishing health data as a global public good. To achieve this, the nations of the G7 and beyond should work together to: **adopt principle-based governance systems for securing safe sharing and use of data for health emergencies**; build and implement the operational systems, infrastructures and technologies or implementing a principle-based and privacy-preserving approach to equitable use of data for health emergencies; and foster the skills and capabilities at all levels – from the general public to health professionals – needed for trusted and accurate use of data.

<https://royalsociety.org/-/media/about-us/international/g-science-statements/G7-data-for-international-health-emergencies-31-03-2021.pdf>

# 3) The “SafeGUARDS” – a principles led governance framework



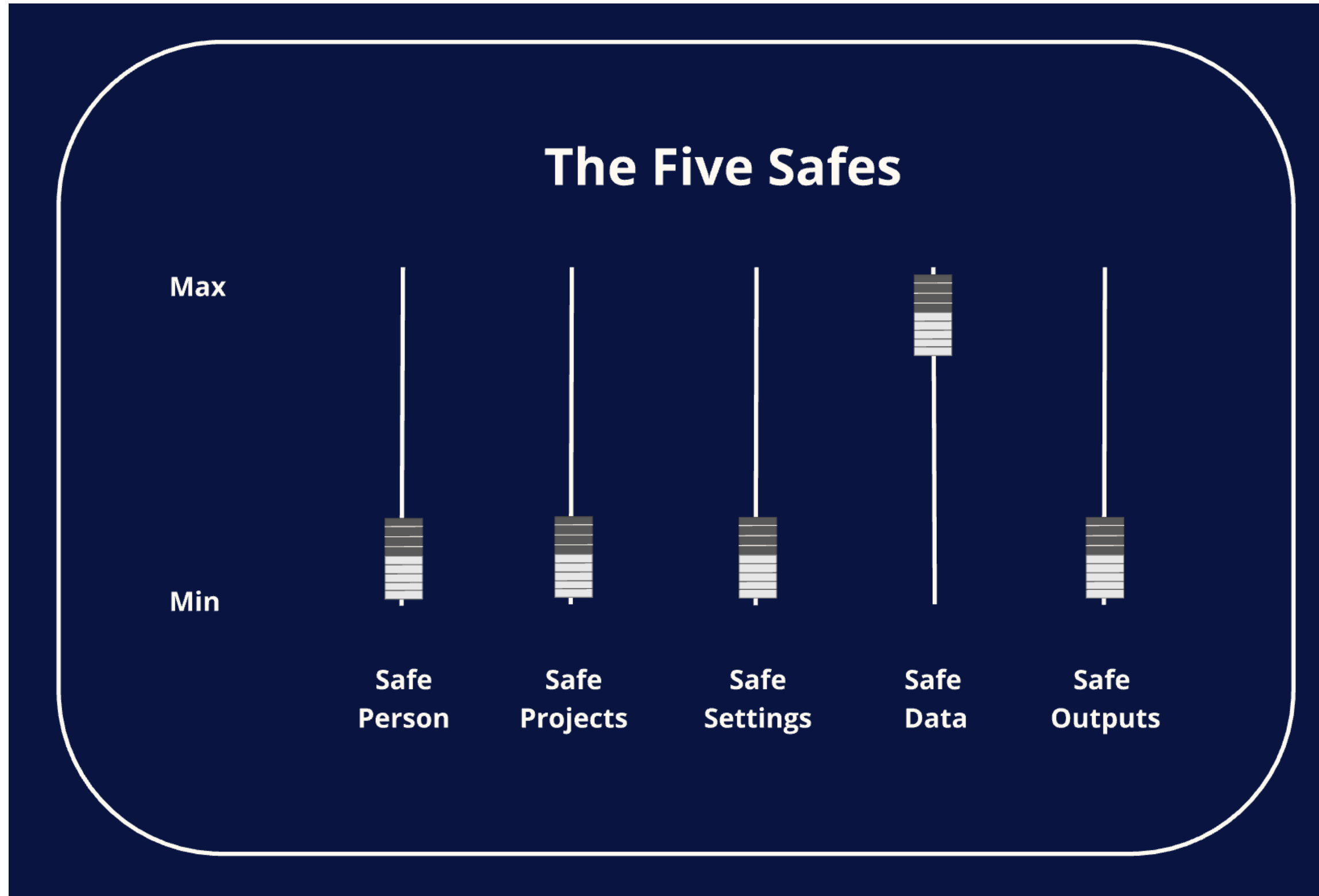
# SafeGUARDS

**A principles-based governance  
framework for responsible and ethical  
data research**

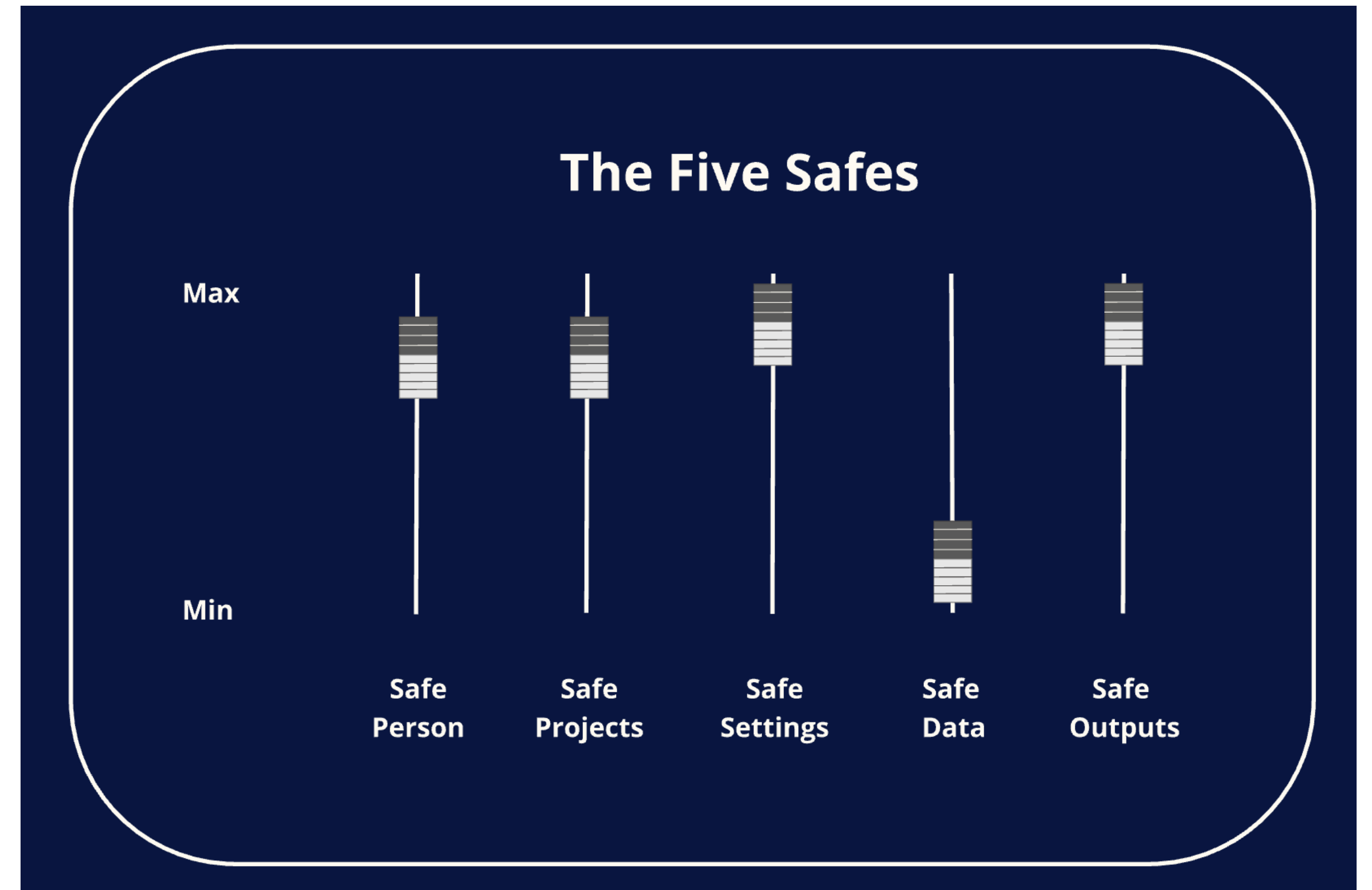


# Five safes

Desai T, Ritchie F, Welpton R. Five safes: designing data access for research.  
Economics Working Paper Series. 2016 Feb;1601:28



**safe** public domain data



**safe** data in a Trusted Research Environment

**Current controversy****OPEN ACCESS**

# The social licence for research: why *care.data* ran into trouble

Pam Carter,<sup>1</sup> Graeme T Laurie,<sup>2</sup> Mary Dixon-Woods<sup>1</sup>

<sup>1</sup>Health Sciences, University of Leicester, Leicester, UK

<sup>2</sup>Department of Law, University of Edinburgh, Edinburgh, UK

**Correspondence to**

Professor Mary Dixon-Woods,  
Health Sciences, University of  
Leicester, 2nd Floor, Adrian  
Building, University of  
Leicester, University Road,  
Leicester LE1 7RH, UK;  
md11@le.ac.uk

**ABSTRACT**

In this article we draw on the concept of a social licence to explain public concern at the introduction of *care.data*, a recent English initiative designed to extract data from primary care medical records for commissioning and other purposes, including research. The concept of a social licence describes how the expectations of society regarding some activities may go beyond compliance with the requirements of formal regulation; those who do not fulfil the conditions for the social licence (even if formally compliant) may experience ongoing challenge and contestation. Previous work suggests that people's

Although *care.data* has numerous aims (box 1), we focus specifically on its research purposes. We begin by offering some brief background on the use and regulation of routine medical data before introducing the concept of a social licence.

**THE USE AND REGULATION OF MEDICAL RECORDS FOR RESEARCH**

Researchers have long relied on access to personal medical information routinely collected during the course of patient care in order to conduct studies,

<https://jme.bmj.com/content/41/5/404>



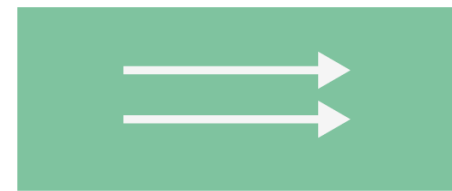
# GUARDS



Guided



Understandable



Aligned



Responsible



Deliver



Stewardship

Research using data about people must:

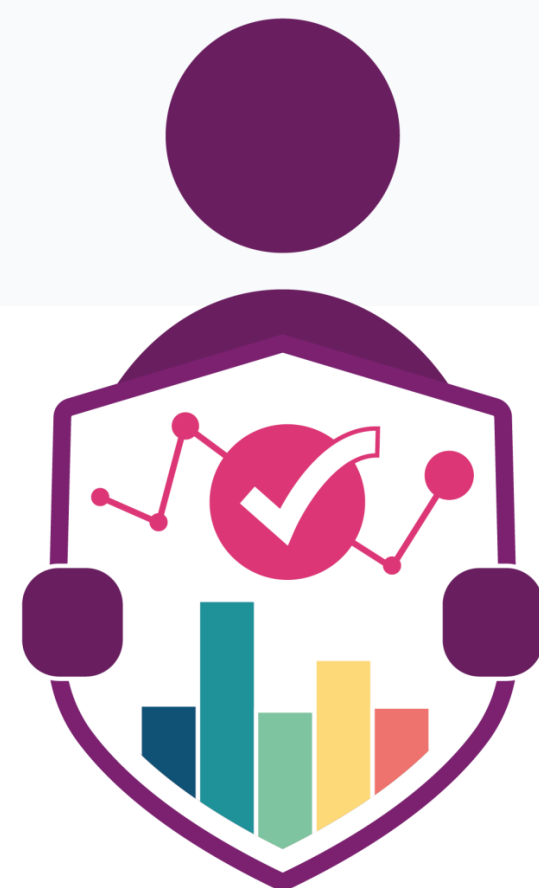
- ▶ Be **guided** by, and respectful of, a diverse range of public and professional perspectives.
- ▶ Be **understandable** and transparent to all stakeholders.
- ▶ Have **aligned** governance processes and accreditation standards.
- ▶ Be **responsible** to ensure that research access and benefits are fairly distributed across society.
- ▶ **Deliver** public benefit.
- ▶ Have effective **stewardship** from trained and supported professionals.



**Five safes**



**GUARDS**



**SafeGUARDS**



**driving alignment and  
awareness of existing  
standards, tools and initiatives**



# SafeGUARDS

## Stakeholder consultation and development

### Pan-UK Data Governance Steering Group



## HDR UK Public Advisory Board

## HDR UK Voices Network



**Principle:**

Research using data about people must be **guided** by and respectful of a diverse range of public and professional perspectives.



**Aspirations:**

- ▶ To involve the public in developing, reviewing, and continually improving the policies controlling data access.
- ▶ To involve the public in decision-making processes regarding data access.
- ▶ To ensure public involvement is meaningful and inclusive of a wide range of voices.
- ▶ Approaches should actively draw on diverse professional perspectives and integrate global, traditional, and discipline-specific ways of working.



# GUARDS



## Understandable

### Principle:

Research using data about people must be **understandable** and transparent to all stakeholders.

### Aspirations:

- ▶ To develop and adopt an inclusive, respectful, and shared language to explain research governance and safeguards.
- ▶ To develop and adopt good practice standards for publicly accessible and transparent operations.
- ▶ To publish information on the data access process, review criteria, and decision-making criteria.
- ▶ To maintain a publicly available and complete data use register.
- ▶ To provide easy-to-read information in a variety of accessible formats.
- ▶ To publish annual reports summarising data use, impact, improvements to the system and audit findings.





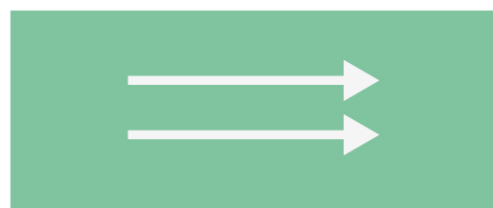
 Aligned

### Principle:

Research using data about people must have **aligned** governance processes and accreditation standards.

### Aspirations:

- ▶ To align the accreditation of SDEs to a common standard and reporting measures to avoid duplication of effort, streamline access processes and reduce burden.
- ▶ To establish a centralised register of accredited researchers.
- ▶ To use the Five Safes Framework to balance and manage the risks associated with data use in research.
- ▶ To adopt a standardised data access application form and contract template(s).
- ▶ To adopt a system of sharing data access decisions to promote consistency and establish precedents.
- ▶ To follow the FAIR guiding principles to ensure the maximum research value of data and metadata.
- ▶ To consistently evaluate what is meant by “public benefit” research.





# GUARDS



## Responsible



### Principle:

Research using data about people must be **responsible** to ensure that research access and benefits are fairly distributed across society.



### Aspirations:

- ▶ To ensure the processes and mechanisms for data access are fair, inclusive, and non-discriminatory for legitimate researchers from all backgrounds.
- ▶ To develop mechanisms to strengthen professional research capacity in under-represented groups.
- ▶ To design strategies for inclusion of data representing under-researched, vulnerable, and/or marginalised groups to enable research for the benefit of these communities.
- ▶ To develop the associated methods, tools and learning to support researchers to deliver equitable and fair research outputs.
- ▶ To empower communities to shape and influence the use of their data for inclusive research.
- ▶ To implement safeguards to respect confidentiality and to protect against the risk of data misuse and fraud.



# GUARDS



Deliver

## Principle:

Research using data about people must **deliver** public benefit.



## Aspirations:

- ▶ To co-develop tools with the public to understand what “public benefit” means.
- ▶ To prepare for emerging challenges and crisis situations by scenario testing research and data needs under a range of plausible situations and how these relate to the needs of different population groups.
- ▶ To adopt, test, and refine strategies that improve research data processes, overcome operational challenges, and drive continuous improvement.
- ▶ To understand changes in the research context by consulting experts and the public.



# GUARDS



## Stewardship

### Principle:

Research using data about people must have effective **stewardship** from trained and supported professionals.



### Aspirations:

- ▶ To develop an aligned definition of a “data steward” and their roles and responsibilities across the career progression pathway.
- ▶ To agree and standardise a set of training, career progression, and support mechanisms to develop and uphold professionalism in those with stewardship responsibilities.
- ▶ To create distinct stewardship role that are independent of those analysing the data, with reporting pipelines and a remit to receive and respond to the public view.

# SafeGUARDS toolkit



## Stewardship

The aim of the 'Stewardship' principle is to ensure data is managed with care and professionalism. Effective stewardship involves an agreed upon set of standards including the development of training, career progression and support mechanisms that are standardised.



- Guided
- Understandable
- Aligned
- Responsible
- Deliver
- Stewardship

- Have effective stewardship from trained and supported professionals
  - To develop an aligned definition of a 'data steward' and their roles and responsibilities across the career progression pathway
  - To agree and standardise a set of training, career progression, and support mechanisms to develop and uphold professionalism in those with stewardship responsibilities
  - To create distinct stewardship roles that are independent of those accessing or managing the data, with reporting pipelines and a remit to receive and respond to the public view

## Resources

### National Institutes of Health Data management and Sharing Policy

The Data Management and Sharing Policy ensures that all funded researchers create a stewardship plan, including roles, responsibilities and training.

[Find out more](#)

### Report available on Zenodo

'Recommendations for Data Stewardship Skills, Training and Curricula with Implementation Examples from European Countries and Universities.' The article defines the core competencies and training strategies to professionalise data stewardship.

[Find out more](#)

### National Institutes of Allergies and Infectious Diseases - Practicing Data Stewardship During Research

The article offers lifecycle-based best practices for managing sensitive research data in line with ethical and legal standards.

[Find out more](#)

### The Alan Turing Institute workbook series

'Responsible Data Stewardship in Practice.' The workbook clearly outlines what responsible data stewardship is how to put it into practice whilst exploring the different components of responsible data stewardship.

[Find out more](#)

### NHS England Understanding Health Data Access project

Understanding Health Data Access (UHDA) project breaks down complex governance into accessible and educational resources for all stakeholders, allowing clarity and stewardship.

[Find out more](#)

### TRE legal toolkit

TRE legal toolkit clearly defines roles and responsibilities between data custodians, data processors and researchers.

[Find out more](#)



**SafeGUARDS** - holistic governance for a Trusted Research Environment

# Conclusions

- Social Licence should be first and foremost in our thinking
- Public consultation is broadly consistent in terms of what is needed
- My view is that Social Licence is rooted in enduring principles, societal norms and altruism
- It's vital to understand context specific factors and track changing expectations
- The public are not the only key stakeholders we need to involve
- Social Licence is not about “governance” – but the solutions lie in governance not technology or law  
se add effective teaching of public benefit data science to the national curriculum...

# Two final points

Building and maintaining Social Licence is everyone's responsibility – a system wide effort is needed

Can we please please please add effective teaching of data science and public benefit to the national curriculum

- effective teaching of public benefit data science to the national curriculum...

# Thank You!

**Population Data Linkage**  
NETWORK

Mon 13 Tue 14 Wed 15 Thu 16

Search program Presentation type Your bookmarks

Room 1 Room 2 Room 3 Room 4 Room 5 Room 6

13 July 2026, CEST

09:00-12:30

- Workshop 1: Using Linked Data Wisely to Improve the Confidence and Accuracy of Analysis and Decision Making
- Workshop 2: A practical guide to collecting digital trace data using data donation
- Workshop 3: International consultation and co-development workshop on "The SafeGUARDS": Building a Global Principles-Based Data Governance Framework**
- Workshop 4: From clicks to comprehension: Advancing awareness of data research through digital campaigns
- Workshop 5: Practical approaches to tackling real-world challenges encountered in public and community engagement in research
- Workshop 6: Building international collaborations: Researchers using the new International Data Access Tools Repository

13:00-16:30

- Workshop 7: Integrating Health Data: Foundations and Frontiers in Record Linkage
- Workshop 8: Data Governance Policy Frameworks and How You Can Use them Today!
- Workshop 9: Beyond the Single TRE: Governing and Operationalising Federated Analysis Across Trusted Data Environments
- Workshop 10: The past, present, and future of Population Data Science**
- Workshop 11: Assessing and Improving the Reference Quality of Linked Datasets

09:00-12:30

**Workshop 3: International consultation and co-development workshop on "The SafeGUARDS": Building a Global Principles-Based Data Governance Framework**

**Shameless plug: IPDLN Workshops**

[a.w.boyd@bristol.ac.uk](mailto:a.w.boyd@bristol.ac.uk)

13:00-16:30

**Workshop 10: The past, present, and future of Population Data Science**