



UK Health Data Research Alliance Principles for Participation

July 2025

The UK Health Data Research Alliance is a member-led collaboration of leading healthcare and research organisations united to establish best practice for the ethical use of UK health-relevant data for research at scale.

Overview

This document sets out the principles that organisations and individuals must adhere to as part of their participation in the UK Health Data Research Alliance (the Alliance) and its associated programmes, including use of the Health Data Research Gateway.

The UK has some of the richest healthcare datasets in the world. Combined with leading scientific, clinical and analytical capabilities, these resources offer the potential to transform health outcomes across the UK and globally. This potential can only be fully realised if the use of sensitive personal health data is undertaken in a manner that is transparent, ethical, secure and trustworthy – protecting privacy while delivering demonstrable benefits to patients, the public and the wider health system.

The principles for participation draw on national and international best practice frameworks, policies and recommendations, and will continue to evolve over time. They are intended for all organisations involved in the Alliance – whether as users of data, providers of Secure Data Environments (SDEs), Health Data Research Hubs, or data custodians. These principles guide working practices and may be reinforced through specific agreements through which organisations engage with one another and with Alliance programmes.

Originally developed under the Digital Innovation Hub Programme funded by Innovate UK, the principles have continued to evolve in response to policy, technological and scientific developments. In August 2024, the Alliance Council approved the addition of a principle focused on transparency and adoption of best practices. In August 2025, a further principle was introduced to promote responsible and inclusive development and use of artificial intelligence (AI) in health data research and innovation – recognising both the transformative potential of AI and the ethical, safety and equity challenges it presents.

Aligned with the UK Government's 2025 commitment to establish a Health Data Research Service, these principles provide a shared foundation for secure, trustworthy and efficient use of data for public good. They are intended to support interoperability, harmonisation, and the advancement of open and collaborative research across the UK and beyond.

The eleven principles are set out below, followed by a summary of the frameworks, best practices and recommendations that underpin them.

Principles for Participation

Every organisation involved in the Alliance and associated programmes commits to:

1. **Demonstrate active and ongoing engagement with patients and the public** in the design, development and governance of their activities involving health data to provide assurance that these activities are in the public interest [1, 2, 3].
2. **Encourage the availability and use** of structured and unstructured health and care data, including clinical, administrative, imaging, genomic and other molecular data, for research and innovation that serves **public interest purposes in line with guidance issued by the National Data Guardian** [4].
3. Promote the **protection of privacy and data security** in line with the OECD Recommendation of the Council on Health Data Governance [5] through the adoption of best practices in privacy enhancing technologies, including providing access to sensitive data through Secure Data Environments (also referred to as Trusted Research Environments) accredited by a recognised authority in line with Digital Economy Act [6], DHSC Secure Data Environment Policy [7], and Safe Havens Charter in Scotland [8].
4. Make data Findable, Accessible, Interoperable and Reusable by adopting the **FAIR Guiding principles for scientific data management and stewardship** [9].
5. Use a **proportionate approach to the governance** of data access based on the **five “safes”** [10] and adhere to the **Foundation Principles and Core Elements for Responsible Data Sharing** [11] set out in the Global Alliance for Genomics and Health Framework for Responsible Sharing of Genomic and Health-Related Data. The GUARDS principles [12] provide a complementary ethical framework and, together with the five “safes”, form the basis of the safeGUARDS model.
6. **Maximise the benefits of data for research and innovation through non-preferential access to data** for uses that serve the public interest, by ensuring that data remains available to, and accessible by, any organisation (concurrently or otherwise) provided the five "safes" criteria are met and the organisation meets the access requirements of the data custodian.
7. **Establish mutually beneficial ways of working in partnership** including contractual arrangements and Intellectual Property agreements in line with principles set out in the Life Sciences Sector Deal 2 [13] (and as updated by NHS England Centre for Improving Data Collaboration and equivalents in devolved nations).
8. **Work collaboratively to increase harmonisation** and reduce the complexity of data sharing arrangements and data governance models to improve the efficiency of accessing data for trustworthy and ethical research and innovation purposes. This includes adoption of the Alliance’s Data Access Transparency Standards [14] and the use of the Alliance’s Data Access Agreement Template [15].
9. Contribute to a **joined-up and UK-wide offer** for researchers in all sectors by collaborating with existing, relevant health research infrastructure, embracing open ways of working, code sharing and development of reproducible analytical pipelines in line with Goldacre Review [16].
10. **Demonstrate transparency and clarity in the processes** and criteria for accessing data, as defined by the Alliance Transparency Standards [14]. **Evidence of transparency of data use** includes publishing a register of active projects accessing the data under their custodianship and new data access requests received. The register should be available on a public-facing website and include at least the minimum dataset defined by the Alliance Recommendations for a Data Use Register Standard [17]. Transparency and openness in health and social care research are also emphasised in the Health Research Authority’s (HRA) ‘Make it Public’ strategy [18].
11. Take a proactive, responsible and transparent approach to the use of artificial intelligence (AI) in research and the development of AI-enabled health technologies. Ensure that applications of AI are effective, safe and equitable by using diverse and representative datasets, reported in line with the STANDING Together [19] recommendations, and by openly sharing methods and findings in accordance

with recognised AI-specific reporting guidelines, such as TRIPOD-AI [20] and CONSORT-AI [21], and regulatory guidance such as the NICE Statement of Intent for AI [22]. Where relevant, organisations should also draw on national and regional frameworks, such as the Scottish AI Playbook [23], which provides practical guidance for trustworthy and inclusive AI deployment.

Summary of References

1. UK Standards for Public Involvement.

<https://sites.google.com/nih.ac.uk/pi-standards/home>

The standards are a description of what good public involvement looks like and encourage approaches and behaviours that are the hallmark of good public involvement such as flexibility, sharing and learning and respect for each other.

2. NCCPE Concordat for Engaging the Public with Research.

<https://www.ukri.org/wp-content/uploads/2020/10/UKRI-151020-ConcordatforEngagingthePublicwithResearch.pdf>

3. PEDRI Good Practice Standards.

<https://www.pedri.org.uk/about-us/our-work/>

4. What do we mean by public benefit? Evaluating public benefit when health and social care data is used for purposes beyond individual care.

<https://www.gov.uk/government/publications/what-do-we-mean-by-public-benefit-evaluating-public-benefit-when-health-and-adult-social-care-data-is-used-for-purposes-beyond-individual-care>

This National Data Guardian guidance will improve public benefit evaluations by defining and standardising the concept of public benefit to enable clearer interpretation and understanding.

5. OECD, Recommendation of the Council on Health Data Governance, OECD/LEGAL/0433.

<https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0433>

6. Digital Economy Act 2017.

<https://www.gov.uk/government/collections/digital-economy-bill-2016>

7. Secure Data Environment for NHS health and social care data – policy guidelines.

<https://www.gov.uk/government/publications/secure-data-environment-policy-guidelines/secure-data-environment-for-nhs-health-and-social-care-data-policy-guidelines>

These guidelines provide additional information about the use of secure data environments as outlined in the Data Saves Lives strategy.

<https://www.gov.uk/government/publications/data-saves-lives-reshaping-health-and-social-care-with-data/data-saves-lives-reshaping-health-and-social-care-with-data>

8. Safe Havens: Charter.

<https://www.gov.scot/publications/charter-safe-havens-scotland-principles-standards-scottish-safe-haven-network-support-use-data-enable-research-innovation-scotland/>

The operational framework for Safe Havens in Scotland providing principles and standards to support the use of data to enable research and innovation.

9. The FAIR Guiding Principles for scientific data management and stewardship. Wilkinson, M. D. et al. *Sci. Data* 3:160018 DOI: 10.1038/sdata.2016.18 (2016).

The FAIR Guiding Principles

To be Findable:

- F1. (meta)data are assigned a globally unique and persistent identifier
- F2. data are described with rich metadata (defined by R1 below)
- F3. metadata clearly and explicitly include the identifier of the data it describes
- F4. (meta)data are registered or indexed in a searchable resource

To be Accessible:

- A1. (meta)data are retrievable by their identifier using a standardized communications protocol
 - A1.1 the protocol is open, free, and universally implementable
 - A1.2 the protocol allows for an authentication and authorization procedure, where necessary
- A2. metadata are accessible, even when the data are no longer available

To be Interoperable:

- I1. (meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation.
- I2. (meta)data use vocabularies that follow FAIR principles
- I3. (meta)data include qualified references to other (meta)data

To be Reusable:

- R1. meta(data) are richly described with a plurality of accurate and relevant attributes
 - R1.1. (meta)data are released with a clear and accessible data usage license
 - R1.2. (meta)data are associated with detailed provenance
 - R1.3. (meta)data meet domain-relevant community standards

10. The Five Safes. *Desai, Tanvi; Ritchie, Felix; Welpton, Richard (2016). "Five Safes: designing data access for research". Bristol Business School Working Papers in Economics.*

Safe projects	Is this use of the data appropriate?
Safe people	Can the users be trusted to use it in an appropriate manner?
Safe settings	Does the access facility limit unauthorised use?
Safe data	Is there a disclosure risk in the data itself?
Safe outputs	Are the statistical results non-disclosive?

11. Foundation Principles and Core Elements for Responsible Data Sharing set out in the Global Alliance for Genomics and Health Framework for Responsible Sharing of Genomic and Health-Related Data.

<https://www.ga4gh.org/genomic-data-toolkit/regulatory-ethics-toolkit/framework-for-responsible-sharing-of-genomic-and-health-related-data/#fp>

Foundational Principles:

- Respect Individuals, Families and Communities
- Advance Research and Scientific Knowledge
- Promote Health, Wellbeing and the Fair Distribution of Benefits
- Foster Trust, Integrity and Reciprocity

Core Elements for Responsible Data Sharing

It is good practice for those involved in genomic and health-related data sharing to have core elements of responsible data sharing in place. The following Core Elements of the Framework aid in the interpretation of the Foundational Principles to individuals and organizations involved in the sharing of genomic and health-related data. The Core Elements should be interpreted in a proportionate manner that acknowledges different levels of risk and community cultural practices. This Framework applies to use of data that have been consented to by donors (or their legal representatives) and/or approved for use by competent bodies or institutions in compliance with national and international laws, general ethical principles, and best practice standards that respect restrictions on downstream uses.

- Transparency
- Accountability
- Data Quality and Security
- Privacy, Data Protection and Confidentiality
- Risk-Benefit Analysis
- Recognition and Attribution
- Sustainability
- Education and Training
- Accessibility and Dissemination

12. The **GUARDS Principles** have been developed to act as an overarching governance framework for the population data research community.

<https://ukhealthdata.org/trust-and-transparency/data-access-and-governance/safeguards/>

Guided	Research must be guided by and respectful of diverse range of public perspectives
Understandable	Research must be understandable and transparent to all stakeholders
Aligned	Research must have aligned governance processes and accreditation standards
Responsible	Research must be responsible to ensure that research access and benefits are fairly distributed across society
Deliver	Research must deliver public benefit and effectively balance safeguarding public rights with enabling research

Stewardship

Research must have effective
stewardship from trained and supported
professionals

The GUARDS principles act in synergy with the widely understood and accepted but more operational ‘Five Safes’ risk management framework, and we believe are best conceptualised and promoted together as the ‘safeGUARDS’ framework. The component parts of the GUARDS interact with wider principles, such as the FAIR principles for maximising the value of research data and the CARE principles for Indigenous Data Governance. GUARDS is explicitly designed to acknowledge and respect these (and wider) principles and frameworks and not overlap with or seek to replace them. A core objective of the safeGUARDS is to help collate and frame the breadth of thinking and best practice which exists, and to provide a means to communicate this both to professional and public stakeholders.

13. **Creating the right framework to realise benefits for patients and the NHS where data underpins innovation** – Guiding principles set out in the Life Sciences Sector Deal 2.

<https://www.gov.uk/government/publications/creating-the-right-framework-to-realise-the-benefits-of-health-data/creating-the-right-framework-to-realise-the-benefits-for-patients-and-the-nhs-where-data-underpins-innovation>

- Principle 1: Any use of NHS data, including operational data, not available in the public domain must have an explicit aim to improve the health, welfare and/or care of patients in the NHS, or the operation of the NHS. This may include the discovery of new treatments, diagnostics, and other scientific breakthroughs, as well as additional wider benefits. Where possible, the terms of any arrangements should include quantifiable and explicit benefits for patients which will be realised as part of the arrangement.
- Principle 2: NHS data is an important resource and NHS organisations entering into arrangements involving their data, individually or as a consortium, should ensure they agree fair terms for their organisation and for the NHS as a whole. In particular, the boards of NHS organisations should consider themselves ultimately responsible for ensuring that any arrangements entered into by their organisation are fair, including recognising and safeguarding the value of the data that is shared and the resources which are generated as a result of the arrangement.
- Principle 3: Any arrangements agreed by NHS organisations should not undermine, inhibit or impact the ability of the NHS, at national level, to maximise the value or use of NHS data. NHS organisations should not enter into exclusive arrangements for raw data held by the NHS, nor include conditions limiting any benefits from being applied at a national level, nor undermine the wider NHS digital architecture, including the free flow of data within health and care, open standards and interoperability.
- Principle 4: Any arrangements agreed by NHS organisations should be transparent and clearly communicated in order to support public trust and confidence in the NHS and wider government data policies.
- Principle 5: Any arrangements agreed by NHS organisations should fully adhere to all applicable national level legal, regulatory, privacy and security obligations, including in respect of the National Data Guardian’s Data Security Standards, the General Data Protection Regulation (GDPR) and the Common Law Duty of Confidentiality.

14. **UK Health Data Research Alliance data access transparency standards.**

<https://zenodo.org/records/8262453>

- Standard 1: Custodians should have an accessible copy of the data access application form and accompanying guidance notes on their website.
- Standard 2: Custodians should provide clear information on every step of the data access process, including the criteria for granting access and how members of the public are involved in the process.
- Standard 3: Information about the data access processes should be easily discoverable and comprehensive.
- Standard 4: Websites should use language appropriate for the audience and should include content specifically developed for members of the public in readily understandable terms.
- Standard 5: Website content should be periodically reviewed and updated as appropriate.
- Standard 6: Custodians should be transparent about how data is used for research.

15. UK Health Data Research Alliance Data Access Agreement Template.

<https://zenodo.org/records/15052790>

This Data Access Agreement (DAA) is freely available to use and is intended for use where data is accessed within a Trusted Research Environment (TRE) for the purposes of research and development for the public good.

The DAA has been developed by the TRE Legal Toolkit Action Force of the Pan UK Data Governance Steering Group. The Pan UK Data Governance Steering Group is a working Group of the UK Health Data Research Alliance representing data custodians and policymakers across the four nations. The Steering Group is focused on simplifying and streamlining data access governance processes.

The DAA terms and conditions should not be modified. The annexes are customisable to allow for differences between TREs.

16. Better, broader, safer: using health data for research and analysis.

<https://www.gov.uk/government/publications/better-broader-safer-using-health-data-for-research-and-analysis>

17. UK Health Data Research Alliance Recommendations for a Data Use Register Standard.

<https://zenodo.org/records/5902743>

- Recommendation 1: All data custodians and controllers responsible for the collection, storage and sharing of data for the purpose of research, innovation and service evaluation should publish and actively promote a public record (data use register) of approved research studies, projects and other data uses
- Recommendation 2: Data use registers should, as far as possible, be populated in near real time directly from information provided through the Data Access Request process to improve timeliness and accuracy of entries.
- Recommendation 3: Data use registers should be made available in both human readable and machine-readable formats to maximise their utility.
- Recommendation 4: Data use registers should have a consistency of format and content, based on the Five Safes framework, to enable ease of understanding and aggregation of registers.
- The recommended minimum data elements includes: organisation name, project title, lay summary, public benefit statement, latest approval date, dataset(s) name and access type.

- Recommendation 5: Researchers, data custodians and funders should use data use registers to close the loop on the impact of data use by including, where possible, links to research findings and other outputs as these become available. This is aligned with the #MakeItPublic strategy set out by Health Research Authority.

18. Make it Public: Transparency and openness in health and social care research.

<https://www.hra.nhs.uk/planning-and-improving-research/policies-standards-legislation/research-transparency/make-it-public-transparency-and-openness-health-and-social-care-research/>

19. STANDING Together.

<https://www.datadiversity.org/>

20. TRIPOD-AI: Guidance for reporting clinical prediction models that use regression or machine learning methods.

<https://www.equator-network.org/reporting-guidelines/tripod-statement/>

21. CONSORT-AI: Reporting guidelines for clinical trial reports for interventions involving artificial intelligence.

<https://www.equator-network.org/reporting-guidelines/consort-artificial-intelligence/>

22. NICE Statement of Intent for Artificial Intelligence (AI).

<https://www.nice.org.uk/corporate/ecd12>

23. The Scottish AI Playbook. Scottish Government guidance on the development and deployment of trustworthy, inclusive and ethical AI technologies.

<https://www.gov.uk/data-ethics-guidance/the-scottish-ai-playbook>