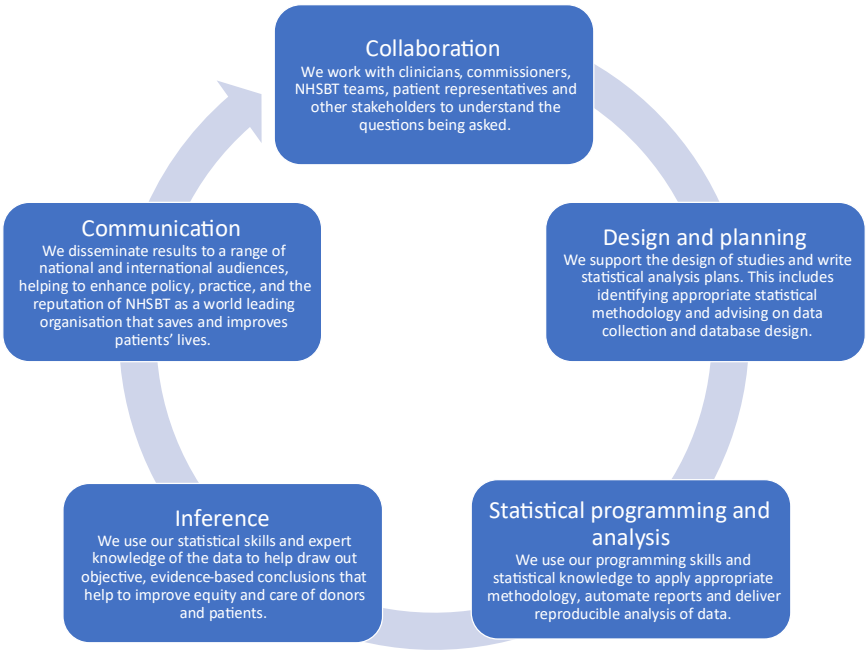
NHSBT Statistics team – Statement of voluntary compliance with the Code of Practice for Statistics

Introduction

NHS Blood and Transplant's (NHSBT) core purpose is to save and improve lives and uphold our core values: caring, expert and quality. The NHSBT statistics team are experts in statistical analysis and deliver objective evidence to monitor and improve the equity and quality of care provided to our donors and recipients.

Our workload life cycle



Voluntary application of the Code of Practice for Statistics

NHSBT Statistics team provide a statistical service to the clinical and operational management teams responsible for organ and tissue donation and transplantation, blood donation and transfusion medicine. We are responsible for the design and analysis of studies in organ and tissue donation and transplantation, blood donation and transfusion medicine. The service also undertakes clinical trials of blood and transplantation services designed to continuously improve the quality of care provided to donors and recipients of organs and blood components. The analysis and interpretation of results informs decision-making on developments in donation, transplantation and transfusion, the clinical care of donors and patients, and equity of access to treatment. NHSBT is not an official statistics producer body, however we are committed to applying the same standards by voluntarily applying the Code of Practice for Statistics across all our analyses and reports.

Our analyses consist of two key study types: retrospective observational studies and prospective clinical trials in organ and tissue donation and transplantation (OTDT) and blood donation and transfusion medicine.

We adhere to the NHSBT Analyst Code of Practice which outlines the principles and standards that guide analytical work in NHSBT. It ensures that all analysis is conducted with integrity, honesty, transparency, and in alignment with wider NHS, governmental and organisational policies and objectives.

This statement outlines our commitment to comply with the principles of the UK Statistics Authority's Code of Practice for Statistics[1] as much as possible and demonstrates how we encompass the three pillars of Trustworthiness, Quality and Public Value into our work. This aims to provide those we serve with confidence that our analytical outputs provide high quality, reliable and objective evidence to monitor and improve the equity and quality of care provided to our donors and recipients and serve the public good.

Trustworthiness

Trustworthiness provides confidence in the people and organisations that produce statistics and data.

'*Trustworthiness is a product of the people, systems and processes within organisations that enable and support the production of statistics and data. Trustworthiness comes from the organisation that produces statistics and data being well led, well managed and open, and the people who work there being impartial and skilled in what they do.*'[1]

How we comply:

- As an organisation we are accountable to the Department of Health and Social Care (DHSC) and the Devolved Administrations for the standard of our products and services and we uphold NHSBT values; caring, expert, quality.
- In all Clinical Trials work, we follow Good Clinical Practice (GCP) standards and we are part of a UK Clinical Research Collaboration (UKCRC) registered trials unit. We attend and contribute to UKCRC Statistics Operational Group meetings.
- We recruit qualified data analysts and statisticians and train all staff in key statistical methodology and programming. Continuous training opportunities are available to all staff, including supporting post-graduate studies in statistical subjects.
- Staff are trained in the Data Protection Act 2018 and organisation-wide data confidentiality policies and processes and all staff adhere to the NHSBT Analyst Code of Practice.
- We provide a statistics methodology panel to offer statistical advice and guidance.
- We have links with DHSC Health Protection Analysis Branch and the London School of Hygiene and Tropical Medicine for additional statistical advice.
- There is a well-established data application process for external requests for data and our Data Access Policy is published online. All data released for external analysis has the approval of the relevant clinical community as well as the NHSBT

Information Asset Owner. Details of studies resulting from such requests are also published online.

- Our Statistical team's professionalism has been recognised by receipt of the UK Award for Excellence in Organ and Tissue Donation and Transplantation – Exceptional NHSBT Team 2023.
- We follow a standard schedule for the publication of all annual reports in OTDT. Annual reports on whole OTDT activity are published in July and area specific reports are published in September. Power BI key performance reports are updated at the beginning of each month. Exceptional deviations from the schedule are agreed in advance with the Assistant Director of Statistics and Clinical Research and key stakeholders such as Clinical Advisory Groups and NHSBT Communications team where relevant.

Quality

Data and methods that produce assured statistics.

'*Quality means that statistics fit their intended uses, are based on appropriate data and methods, and are not materially misleading. Quality requires skilled professional judgement about collecting, preparing, analysing and publishing statistics and data in ways that meet the needs of people who want to use the statistics.*'[1]

How we comply:

- In collaboration with the Statistics Team, other NHSBT departments - OTDT Hub Operations, Information Services, Digital Data and Technology Services and Clinical Trials Unit (CTU) Data Management - design data collection systems and collate and validate data collated to ensure high quality are available for statistical analysis and reporting.
- Much of our OTDT work is obtained from regularly refreshed standard datasets derived by the Statistics team, which are accompanied by data set specific documentation and Standard Operating Procedures (SOPs). These standard data sets are logically structured and combine various database tables using validated code into a usable format, with documented derivation of data fields.
- We conduct source data verification of randomly sampled clinical trial data, on a risk-proportionate basis as determined by the study design and study monitoring plan.
- Final data checks and cleaning within the Statistics team precedes all our analysis.
- In all our reports and papers, we are explicit about all assumptions and limitations that underpin our analyses and transparent about methods and data used.
- For quality control purposes, programming code is quality checked for errors and output is quality checked and validated against other similar reports or outputs.
- For model validation purpose we will always consider goodness of fit, residual analysis, influential observations, and sensitivity analysis where appropriate.

- All areas of our work are overseen by a senior statistician. All members have access to a statistical methodology panel; a group of experienced statisticians advising on statistical approaches.
- When undertaking analysis using unfamiliar methodology, we will seek advice from external statistical experts.
- We have developed a statistical training programme that teaches the key methods used in our work. We have also developed a good programming practice document. Standardised quality control practice documents and a guide for good data visualisation practices are in development.
- In accordance with GCP, in clinical trials we run sensitivity analyses to evaluate the sensitivity of results to the assumptions made, as well as independent replication of primary outcome results for validation. We have validated programming language functions to carry out the most frequent actions.
- To ensure the quality of our models and judgements we consult with clinical experts such as advisory groups and steering groups. These groups often include lay members who ensure our outputs are comprehensible.
- Our key reports, published on our website, go through a thorough proof-reading and quality checking process prior to publication. In addition, all hospital level reports are reviewed by local clinical teams before publication.

Value

Statistics that support society's needs for information.

'*Value means that the statistics and data are useful, easy to access, remain relevant, and support understanding of important issues. Value includes improving existing statistics and creating new ones through discussion and collaboration with stakeholders, and being responsible and efficient in the collection, sharing and use of statistical information.'*[1]

How we comply:

- Our analytical outputs are used for evidence based clinical and operational decision making, organ allocation, and clinical research.
- We run an enquiries service that provides timely answers to both internal and external applicants including parliamentary office, freedom of information and media requests.
- We make our publications and website accessible to ensure they reach a wide audience and publish infographics to summarise key reports in an easily digestible format.
- We actively engage with patient groups and the clinical community to develop publications and analysis in response to their requirements.
- We monitor clinical teams that service the blood, organ and tissue donation and transplant communities to identify deviations from expected performance to drive improvement.
- We make available models and predictive tools in an accessible way to support clinicians and patients make clinical decisions. Risk communication tools and organ specific patient score calculators can be found on our website.

- We involve patient and public groups in clinical trial design, delivery and dissemination.
- Our commitment to producing valuable statistical analysis has been recognised by receipt of the SAS Data for Public Good Award in 2019 for using SAS to develop national organ allocation schemes and the Florence Nightingale Excellence in Healthcare Award in 2020 for development of a new algorithm to improve kidney transplant matching.
- We produce a wide range of publicly available reports including publications in peer reviewed journals and regularly present at both national and international conferences. We provide nationally and internationally renowned and trusted key data for NHSBT services.
- OTDT and CTU data are available through a data application process for external parties to independently analyse the data.
- We collaborate and routinely consult with Clinical Advisory Groups and Patient Representative Groups to ensure our work is valuable and accessible.
- Interactive reporting tools, such as Power BI and SAS Visual Analytics, are increasingly utilised, and published online, to share key performance metrics in OTDT and create risk communication tools to assist patient decision making when considering a transplant.

Review

We acknowledge that our commitment to producing statistics for the public good and building public confidence in data and statistics is an ongoing process. We need to regularly review and improve our practices where necessary. To strengthen our processes, we commit to the following actions:

Action	Purpose	Timeline
Develop a statistical analysis plan template	To determine a consistent approach to detailing methodology utilised and improve our transparency in terms of assumptions and limitations of all analyses	Summer 2025
Develop a quality assurance checklist	To provide a reference to the quality assurance process followed	Summer 2025
Review of statement of VA	To promote continuous improvement in the application of the Code of Practice	January 2026

This statement will be reviewed annually and updated accordingly.

Contact information

If you have any comments, questions or feedback on any of our analytical publications or on this statement please contact statistical.enquiries@nhsbt.nhs.uk.

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[1] UK Statistics Authority's Code of Practice for Statistics (https://code.statisticsauthority.gov.uk/)