Airwave Health Research
Tissue Bank Protocol

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Authors:	Mr Andrew Heard, Mr Graham Blakoe, Ms Kimberley Bennet, Mr Jordan Jenkins
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Address:	Imperial College London School of Public Health St Mary's Campus London, W2 1PG

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Executive Summary

The Airwave Health Research Tissue Bank (Airwave) is an epidemiological study of police service employees (officers and staff) in Britain. It was established to investigate possible long-term health effects associated with use of the TETRA radio system among the police service.

It is recognised that the cohort also provides a valuable opportunity for broader research into common diseases affecting a well-defined occupational group. It includes substantial numbers of men and women who are being followed up for many years. Participants who took part in a health screen gave broad consent for collection and storage of blood and urine samples for future research, and linkage to health and other records. Up to 95% of the volunteers who have been screened have given consent for sample storage. Those who have opted out of this clause have had their samples destroyed after testing in laboratory.

Since the launch of the study in 2003, 28 (of 54 that existed at the time) police forces agreed to participate. We currently have c. 53,000 participants, of whom c. 46,000 have undergone a health screening. This includes extensive lifestyle and questionnaire data, cognitive tests, clinical measurements, and collection of biological samples. Follow-up of the cohort is progressing through access to past and future medical, occupational and other health-related records, and re-screening.

In 2013, Airwave were given Reasearch Tissue Bank status by NRES. This has facilitated programmes of research without need for individual project-based ethical approval. Airwave has been set up to collect and store samples and data to establish a sampling framework from which people, who are presumed healthy at donation, can be selected based on their genotype and/or phenotype to be invited for observational studies or clinical trials.

The value of the Study is greatly enhanced by a follow-up health screening of participants. Researchers will be able to detect developments or changes in the characteristics of the target population at both the group and the individual level. As longitudinal studies extend beyond a single moment in time, they can establish sequences of events.

Airwave has Research Tissue Bank status with generic approval for projects receiving material or data. All external researchers that propose to recall participants need to have their own project-specific ethics approval.

Objectives of the Tissue Bank

A primary aim of Airwave is to promote collaboration with other research groups both within and outside Imperial college to avoid wasteful competition in the use of limited and precious resources.

Airwave is a rich and growing resource with comprehensive phenotyping (the observable physical or biochemical characteristics of an organism, as determined by both genetic makeup and environmental influences) of its participants. State-of-the-art methods can be used on the participants' data and samples to investigate genetic and environmental causes of disease, as well as the pathways to those diseases.

Airwave is providing a national cohort of volunteers who wish to participate in clinical research and are willing to provide clinical information and samples that enable identification of suitable volunteers for future studies by genotype and phenotype.

We will continue to invest in the cohort by:

- Re-screening members of the cohort and obtaining further biological samples from them.
- Offering questionnaires and other evaluations such as cognitive testing.
- Following up the cohort members via national registers and obtaining other health-related data from the NHS and other agencies.

By collecting and storing tissue and data, Airwave is providing the foundation for:

- Research related to a specific disease or group of diseases.
- Research across biomedicine for yet unspecified research questions.
- Research into the molecular mechanisms involved in disease development and its response to possible resistance to treatment.
- The discovery and validation of new targets and biomarkers for detection, diagnosis, treatment stratification, and development.

Follow-Up of the Cohort

The cohort is followed in two ways: actively, by rescreening participants; and passively, by obtaining health and other data about the participants from the NHS and other agencies.

Re-screening Programme

The average age of the cohort at baseline was c. 40 years; and with the mean number of cohort-years per participant exceeding twelve, it is appropriate to follow up participants with a new health screen. This will help identify the evolution and aetiology of chronic diseases (e.g., diabetes and incidence of metabolic syndrome) and diseases that may be related to Airwave exposure (mainly cancer).

Participants are offered a comprehensive health screen (clinical measurements, collection of biological samples, cognitive test(s) and a questionnaire). The clinical measurements performed may

include height, sitting height, weight, waist-hip ratio, blood pressure, bio-impedance, pulse-wave velocity (PWV), grip strength, spirometry, step test and heel ultrasound.

Cognitive function tests are performed to help researchers understand cognitive decline in the population (including neuropsychiatric and neurodegenerative effects which may be linked to sickness absence and early retirements).

Up to 50ml of blood and up to 50ml of urine will be collected at the visit. Some of the blood collected is used for haematology and clinical chemistry tests; the results of which are reported to participants. The remaining biological samples are stored for future use in research.

Informed consent is obtained by trained staff at the clinics. The consent is broad and requests permission to carry out future research using the samples and data collected, to follow participants' health via medical records, and to contact them in the future.

Feedback of the clinical measurements including the blood test results (haematology and clinical chemistry) is provided. If any of the results are of clinical significance, participants are advised to consult their GP for follow up or further investigation. We do not directly inform participants' GPs of their results.In line with objectives of the Research Tissue Bank we will continue to enrich the data with additional work being approved by the Data Access Committee and having a specific approval by REC where appropriate. This includes all omic analyses as funding becomes available.

Sample Size and Selection

We aim to re-screen at least 50% of participants screened at baseline (n=21,500). All participants who previously had a health screening are eligible to participate and are invited by email and/or letter to take part in the follow-up re-screening programme.

Invitation letters are sent out to participants offering an appointment at a local screening clinic, which are intended to be located within reasonable commuting distance of their home. Interested participants can book an appointment either by phone or online.

Support of the Police Federation has also been sought to increase uptake and improve participation across England, Wales & Scotland.

Design of the Re-screening Protocol

The format of the re-screen is based on the protocol operated during the enrolment phase, with some additions and deletions based on our evaluation of the usefulness of each component.

The physical measurements included in the Airwave Study protocol were chosen based on their relevance, reliability, and resources (time and money) available. With respect to relevance, the inclusion of a measure at baseline was dependent on other epidemiological studies having indicated that it was significantly associated with health outcomes. For reliability, methods were chosen within a quality assurance framework that involved calibration, maintenance, ease of use, training, monitoring and data transfer to IT systems.

At the appointment, a signed consent will be obtained electronically. Systems used to capture the consent and phenotypes will be based on those developed by Imperial College London (ICL) and used on Airwave and other studies. Some additional information may be captured such as contraindications and contextual data (pregnancy, menstruation) where relevant.

Other phenotypes collected include:

- Height
- Weight
- Waist and Hip
- Blood Pressure
- Grip strength

The SOP will detail the procedure to be followed by fully trained centre staff including what to do in case of an abnormal BP reading.

Participants will be asked to complete a food diary for 7 days. A lifestyle questionnaire and cognitive test is also to be completed, preferably before attending, or at the centre. If these remain incomplete after the visit, participants will be reminded and provided the links to complete online.

Feedback is provided to the participant only, giving the results and the reference range. If the participant has any cause for concern with regards to their health following the screening, they should address these concerns with their GP or other relevant health professional. The Airwave team is not qualified to provide treatment, counselling or support.

The legal duty of care for staff conducting enrolment is determined by the research context and applies mainly to safe and competent collection of questionnaire data, baseline measurements, and blood or other samples. Staff do not have the same duty of care that they would have in a clinical setting. However, even in this research context, there may be occasions when staff consider there to be a professional or ethical obligation to draw attention to abnormal measurements (such as elevated blood pressure) or incidental findings (such as possible melanoma). In such circumstances, participants will be encouraged to contact a relevant health care professional.

The target for issuing the feedback report to participants is eight to twelve weeks, subject to workload.

Participants are not notified of any further findings that may result from future assays, analyses, or other procedures (e.g., genetic and metabolomic tests) that are not provided for in their feedback letter. Unless the study in question has it's own REC approval to do so.

Sample Collection and Processing

The aim is to collect blood and urine samples in such a format as to facilitate the widest possible range of future assays.

Blood Samples Collected

Up to 50ml of blood will be taken in up to six tubes from each participant. The target is to spin the tubes within 40 minutes of needle, with a maximum of 90 minutes. The SOP will detail the procedure to be followed by centre staff.

Urine Sample

A mid-stream urine sample is collected in a sterile urine pot, aliquoted and cryogenically stored for future use.

Analysis of Samples

The following assays/procedures are carried out on participant blood samples.

- **SST:** sample is used for measuring serum blood chemistry. Biochemistry profile includes cholesterol, HS C-reactive protein, HDL, GGT, HbA1c, Apo-lipoprotein A1, Apo-lipoprotein b, Creatinine, triglycerides.
- **PST:** plasma is generally used in clinical chemistry and metabolomic analysis.
- **EDTA:** is used for haematology analysis and HbA1c. Haematology profile includes RBC, WBC, Haemoglobin, Haematocrit (HCT), Mean cell volume (MCV), Mean cell haemoglobin (MCH), Mean cell haemoglobin concentration (MCHC), platelets and DLC.
- **Tempus RNA:** These aliquots can be used to measure gene expression profile of important gene targets. Gene expression measurement is becoming an increasingly important tool in research.

The stored urine sample could be used subsequently for assay of the urine proteome, metabolome and potentially, for characterization of the gut microbiome. Currently, no upfront analysis of urine is performed.

Follow-up Questionnaire

Collection of lifestyle and other health-related information through self-completed questionnaires complements the physical measurements and biological samples collected at the follow-up health screening appointments. This can also be used to select populations of interest within the cohort to follow with respect to molecular and genetic predictors of disease progression and prognosis.

The self-administered questionnaire is used to collect most of the information. This questionnaire typically takes participants 20 minutes to complete. Because it is self-administered, it ensures confidentiality and privacy to participants' responses to potentially sensitive questions.

The questionnaire can be categorised into the following broad areas of interest: socio-demographics and occupation; lifestyle exposures (including smoking, alcohol, physical activity, and diet); psychological state; cognitive function; family history of illness; mental health; medical history and general health. All the questions selected are from validated questionnaires and have been previously used in large population studies.

We have included extensions to the questionnaire jointly with collaborators from the Universities of Edinburgh, Manchester, Glasgow, and Swansea that will allow evaluation of:

- Exposure assessment and creation of job exposure matrices (JEMs) relevant to the police forces, with a focus on chemical, physical, infectious and psychosocial risk factors that may be associated with chronic disease or reduced health and wellbeing.
- Examining relationships between operational and organisational risk factors and mental health, with a view to identification of factors that promote resilience within the workplace and future development of workplace-based interventions, co-designed with key stakeholders. This will act as an exemplar case study.

Hearing Test

Exposure of the ears to excessive noise, including via in-ear devices, is the main cause of preventable hearing loss worldwide. All participants will be invited to test for effects of in-earpieces on hearing, assessed both via self-report and via a self-administered online listening task.

Participants will complete a short online survey (assessing use of in-ear devices and self-perceived hearing), followed by a short online listening task. The participant receives feedback on their performance, relative to age-related norms from the UK Biobank. This is a standard test that has been developed by Manchester University and has been widely used in research.

Passive Follow-up

Permission is obtained as part of the consent procedure to access past and future medical and other health-related records. Participants must consent to long-term follow up from medical records to be accepted for a re-screen.

Health records are used to supplement information recorded at enrolment about previous medical history, family history, investigations (e.g., radiology reports and blood tests) and exposures (e.g., medication, occupational health). Most importantly, access to such records is needed to provide follow-up information related to cancers, cause-specific mortality and other health events.

Mobile telephone numbers and e-mail addresses are collected to allow re-contact for future research. These identifiers help to ensure that participants are not lost during follow-up. Any re-contact with participants for future research activity will be conducted by Airwave staff only.

The sections below explain health datasets obtained on the cohort. We are actively pursuing other data covered by our consent that may become available.

Death and Cancer Registries

We have “flagged” participants through national registries so that we are notified of cancers, certified causes of death, as well as loss of follow-up (due to emigration, for example). We have an ongoing agreement with NHS to provide these data regularly.

Hospital Records

The Airwave Study data repository needs to include information about health events and activities that are experienced by participants when they attend hospitals. HES are the national statistical data warehouse for England of the care provided by NHS hospitals and for NHS hospital patients treated elsewhere.

For each episode of care, HES includes information about:

- Patient identifiers (including NHS number);
- In-patient, day case and out-patient episodes, maternity records and psychiatric census;
- Administrative details (e.g., admission and discharge date) and the organisation providing the treatment;
- Clinical information relating to diagnoses (ICD10 codes) and procedures;
- OPCS4 codes: Classification of Interventions and Procedures (OPCS-4) is a procedural classification for the coding of operations, procedures and interventions performed during in-patient stays, day case surgery and some out-patient attendances in the National Health Service (NHS).

In all cases, the provision of these data to Airwave should be acceptable since all participants have given signed consent at enrolment for extraction of their individual hospital records and other health-related information.

Other data including GP records (Wales and Scotland)

We have access to SAIL which can provide data for Wales only. We may pursue the addition of GP record data in Scotland through Albasoft Ltd. Other resources such as prescription data in Wales and Scotland are also being sought.

Support for Other Research

A key objective of Airwave is to use the data, samples, and our register of active participants to support future research and researchers both within and outside Imperial College.

Discovery of the Cohort

Airwave is promoting itself via its own website and by registering on web-based registers of biobanks, such as those listed below:

- The Airwave website (https://www.police-health.org.uk)
- MRC cohort directory (https://www.mrc.ac.uk/research/facilities-and-resources-for-researchers/cohort-directory/)
- Joint Programme – Neurodegenerative Diseases (JPND) initiative (http://www.neurodegenerationresearch.eu/jpnd-global-cohort-portal/
- Dementia Platform UK (https://portal.dementiasplatform.uk/)

A full list of resources through which the cohort can be discovered is maintained at https://police-health.org.uk/cohort-discovery.

Application Process

Applications to access data and samples for research projects must be submitted to the Study's Access Committee for consideration. A research proposal will be requested, in which the researcher may be asked to provide proof of peer review and confirmation that the research is scientifically and ethically sound.

The Access Committee comprises the Principal Investigator (PI), a member of the Airwave team, an epidemiologist and a lay representative of the Police Federation. The Committee reviews each application and decides whether the project complies with the terms of donor consent, whether the project is scientifically worthwhile and has reasonable chance of success. It may then authorise the release of samples and/or data, as appropriate.

Applications can be for any combination of data, biological samples, and permission to contact the cohort via the Airwave team, to invite them to join a separate research study with its own ethical approval.

Airwave policy applies equally to academics and private or public-sector researchers, whether they work in, or with, a for-profit or not-for-profit organisation, subject to them having relevant ethical approval.

Use of Biological Samples

Blood and urine samples are banked to provide a resource for collaborative research projects that encompass a wide variety of techniques including biochemistry, molecular biology, and biomarker studies. The strategy is to collaborate with research groups involved in a range of medical conditions with the aim of devising new treatments and therapies and promote preventative interventions.

Airwave endeavours to make bio-samples available to researchers provided that the:

- Stated research objectives have been approved by the Access Committee.
- Proposed research is covered by the scope of the donor consent.
- Research is sufficiently funded and resourced.
- Necessary bio-samples can be sourced and supplied.
- Proposed research is supported by the institution or organisation in which it will take place.
- Researcher's organisation enters into a contract that governs the transfer and use of any biological samples and data.
- The researcher accepts the Airwave Publications Policy.

Where relevant, we can make available to the researcher basic demographic information (typically, age at collection, gender, and ethnicity) about the sample donor for quality assurance purposes.

Return of Samples and Data

Each researcher's institution must sign a material and / or data transfer agreement. This stipulates that, following completion of their project, any material that has not been used should be returned to Airwave. Researchers are asked to provide their results back to the tissue bank for linking to results from other projects using samples from the same donor.

Invitations to Join Research Studies

Invitations to participants to join external studies approved by the Access Committee will be sent by Airwave staff and will always come from Airwave, not the external researcher. Participants may be selected for such studies based on their genotype and/or phenotype, and Airwave will support this selection process as required.

Information regarding the new study would be provided to all invited participants, and any risks and benefits explained. Participants who express an interest in taking part will be sent an invitation for joining or providing more samples according to that study's protocol.

There is no obligation for participants to take part in these additional studies. Participants are free at any time to fully withdraw from Airwave, which allows for destruction of any remaining biological samples; or they can request simply to be excluded for further invitations and correspondence.

Management of Airwave

Day-to-day operation of Airwave is conducted by a small team that comprises Data Managers, Epidemiologists, a Study Project Manager, a Project Support Officer and an Administrator. They report to a Senior Scientific Programme Manager and the Principal Investigator (PI), Professor Paul Elliott. An Access Committee governs use of data and samples. The previous Home Office Chaired Steering Committee is being replaced by a new Steering Group to be chaired by Prof Mark Caulfield, Queen Mary University of London. Imperial College is the Sponsor and Research is Governed by the Imperial College Research Governance and Integrity Team.

Storage of Samples

We are consolidating the long-term archive of the Airwave bio-sample collection at two centres (Oxford & Milton Keynes) operated by the National Biosample Centre - https://www.ukbiocentre.com/. The samples are stored according to an agreement between UK Biocentre Ltd. and ICL, which governs the terms under which they are managed. The National Biosample Centre is licenced by the Human Tissue Authority (HTA).

Some samples are also stored at UK Biostores Ltd in Manchester and some are stored short term at Affinity Biomarker lab. All storage facilities have their own HTA licences.

Delivery of Screening Services

All clinical measurements and venepuncture are carried out by trained health care professionals with appropriate training. All activity is planned, implemented and managed by the Airwave team.

Analysis and storage of biological samples is carried out by various local facilities, and a central laboratory, as with REACT-LC. The datasets are securely sent to Airwave regularly as agreed. Samples are stored locally in -20°C and -80°C freezers.

When corresponding with participants by letter, we use the secure Docmail service - http://www.docmail.co.uk/.

Archiving of Paperwork

Paper food diaries are scanned and a copy is securely sent to Airwave for long term storage. Hard copies are shredded after confirmation that electronic copies have been received and are scanned to a high standard.

Ethical Issues & Consent

Consent has been obtained from all participants to take part in Airwave. The study was originally founded to investigate the possible health impact of Airwave radio use. The wider utility of the study to facilitate a broad range of biomedical research has been widely recognised. By continuing to contribute to the resource, participants are increasing it's scientific value.

Participants may personally benefit from the health screening freely offered by Airwave through identifying previously undiagnosed, treatable conditions, e.g., hypertension.

Because it is not possible to anticipate all future research uses from the samples and data collected, wide-ranging consent was sought for future research in general, subject to approval by the relevant ethics committee.

Participants who attend a follow-up screen renew their consent to be a part of Airwave as well as the procedures being carried out at the clinic. They are provided with an information leaflet prior to their visit, which explains the purpose of the follow-up study and what to expect in the clinic. They are encouraged to ask any questions and get satisfactory answers before signing the consent form.

Consent to participate in Airwave Study will apply throughout the lifetime of the Tissue Bank unless the participant withdraws. Further consent will be sought for any proposed activities that do not fall within the existing consent.

Right to Withdraw

Participants have been advised at enrolment that they have the right to withdraw from Airwave at any time without giving reasons. This is essential to preserve and demonstrate the voluntary nature of participation.

Two withdrawal options are offered via the study website at https://www.police-health.org.uk/withdrawal-from-study. We ask that participants make their intent clear when they contact us with a final decision.

The following statements are taken from the Airwave website:

Participants can withdraw from the Tissue Bank at any time without providing a reason. Withdrawal will not affect your healthcare or legal rights.

*Please note that it is **NOT** necessary to withdraw from the Tissue Bank just because you have retired from the Police Service or have moved to a job where you don't use the Airwave system. Your continued membership of the cohort is valuable to the ongoing research and we hope you will stay with us.*

There are two options for withdrawing your data from the cohort, which are described below.

***No Further Contact:** We will not contact you again. We may continue to use samples and information provided previously, and to obtain and use further information from your health records.*

***No Further Access:** We will not contact you again or obtain further information about you. We will anonymise the records we hold about you by erasing all personally identifying information linked to your data. Some personal identifiers stored in secure archives may remain for the lifetime of the archive but will not be used again.*

You can inform the Study team of your withdrawal by downloading the withdrawal form here, then return the paper or scanned copy to the address shown on the form.

Please do not hesitate to contact a member of the research team at airwave@imperial.ac.uk if you have any queries about the way we use your data or samples in the Study.

Permission to Contact Participants

It was clearly explained to participants during enrolment that they may be contacted by Airwave for various reasons, including:

- To collect new information (such as questionnaire data, measurements or samples) for the benefit of future research.
- To seek consent for proposed new uses for the samples and data that have passed scientific and ethics review but do not fall within the existing consent.
- To ask participants whether they would be willing for researchers to contact them to discuss possible involvement in a study that requires new information or samples.
- Occasional newsletters from the Tissue Bank.

It was emphasised that agreeing to re-contact is voluntary and they may still be part of the Tissue Bank even if they decline to be re-contacted.

No personal contact details will be shared with any third-party researchers and so any re-contact will always be conducted by Airwave staff.

Information for Participants and the Public

Donation of samples to Airwave is a gift and we are grateful to everyone who consents to donate. Consenting to donate or refusing to donate samples does not affect routine care in any way, and donors' personal details remain confidential. Samples and their associated data will only be used for ethically and scientifically approved research. Everybody who has given consent for long term storage of samples since the start of the Study is a part of the Tissue Bank.

When researchers are issued with samples for projects, the samples are identified via a pseudonymised identifier so that no participant can be identified by their samples. Only relevant clinical information is released to researchers. All participant identifiers are removed.

There are updates on the Study website - https://www.police-health.org.uk/ - that links to scientific publications that involve the use of Airwave Study samples and data. Periodically, a newsletter is also sent by email (where available) or by post to all participants.

Expectation of Financial Gain

Participants are not offered financial or other inducement to contribute to Airwave irrespective of whether the use of data or samples might ultimately lead to profit. Imperial College may work in partnership with the private sector (e.g., the pharmaceutical or biotech industry) to develop any invention for the benefit of patients. Part of the profits earned from inventions may come back to Imperial College.

Data Handling and Security

Airwave is committed to protecting the confidentiality of data and samples. Systems have been established for the secure data flow and storage of data in order to protect confidentiality.

We operate within the Information Security policies of Imperial College with extra provisions that implement an environment that is compliant with the ISO27001, the international standard for information security that sets out a specification for an information security management system (ISMS). Study data is used exclusively on this ISO27001 compliant infrastructure, which was most recently reviewed in July 2021.

Secure Operating Environments

The College's ISO27001 certified secure environment – "the Enclave" - is a fully managed infrastructure and secure environment providing high availability, resilience and business continuity through multiple servers, backups and disaster recovery measures.

Two Enclaves have been developed. Data relating to participants from all sources will be transferred securely to one of these environments, where they will be linked:

- For identifiable data, we use the Identifiable Zone. Access is locked down to the core Airwave team who need to use data of these sensitivity.
- For research data, there will be the Pseudonymised Zone, designed for internal and external researchers whose work does not require access to the identifiable data. Access to this area is also restricted and controlled appropriate to the need of the data held and the uses to be made of it.

We have also shared our pseudonymised research data with Dementias Platform UK. It is made available to their Dementia research projects subject to approval by the Access Committee.

Other appropriately encrypted cloud-based services may be used to share data with researchers who have been granted access to the Airwave dataset.

Extracts of data that have been fully anonymised may be made available to researchers for whom this is sufficient. They are still required to sign a confidentiality agreement with Imperial College and are then permitted to make local copies of research data to carry out the work approved by our Access Committee.

A robust data security model has been designed to protect sensitive personal and medical data from the potential risk of unauthorised access. The information held is sensitive in nature and therefore requires protection from unauthorised access or distribution. All information input, viewed or extracted is to be protected so that only users with the correct authority and access can create, view, amend, or delete information. Access to the system is to be governed by authentication and authorisation privileges that check:

- Access is by an authorised person and the user is who they say they are. This is controlled by a username and complex password.
- The user accessing the system is authorised to do what they are attempting to do. That includes searching, updating, deleting, and uploading information at the appropriate authorised level for the database(s) or table(s).

In summary, the security architecture provides the maximum protection available through implementing best practice network, hardware, software, and data security measures.

Coding of Samples and Data

Samples supplied to researchers are pseudo-anonymised with a 5-digit identifier that links the components, i.e., questionnaires and samples of a single clinic visit together. Participants also have a separate participant identifier that links together the various clinic visits individuals make.

Pseudonymisation

During the follow-up health-screen, the clinic hold identifying information (such as name, address, birth date, sex) together with information collected from the participant during the visit. All identifiable information is separated from participants' other data and samples where possible. It is linked using a code that has no external meaning (not the NHS number, for example).

All identifiable information is held centrally by Imperial College in a restricted access database. Only a few named people within Imperial College have access to the "key" to the code for relinking the participants' identifiable information with their health data and samples (i.e., "reversible pseudonymisation"). It is necessary to retain this link with identifiable information to:

- Allow follow-up of participants' health.
- Verify correctness and completeness of data against original records.
- Establish correct linkages among databases.
- Recall participants for additional research.
- Find specific data or samples if participants withdraw.

Maintaining Confidentiality

Airwave is committed to maintaining confidentiality of personal data and samples collected from the population. This research project is registered for data protection and the requirements of the Data Protection Act 2018 apply in full. All personal information collected is used solely for biomedical research purposes.

Researchers and Airwave staff must sign a confidentiality agreement, attend relevant training and pass the associated tests. Researchers must not attempt and be able to identify individual participants from the anonymised data or samples that are provided to them.

Re-identification

The security policy is designed to minimise the risk of identification of individual participants from the data received by researchers. Even if it was possible to identify an individual through analysis, all researchers are bound by written undertaking that they will maintain the privacy of that participant.