

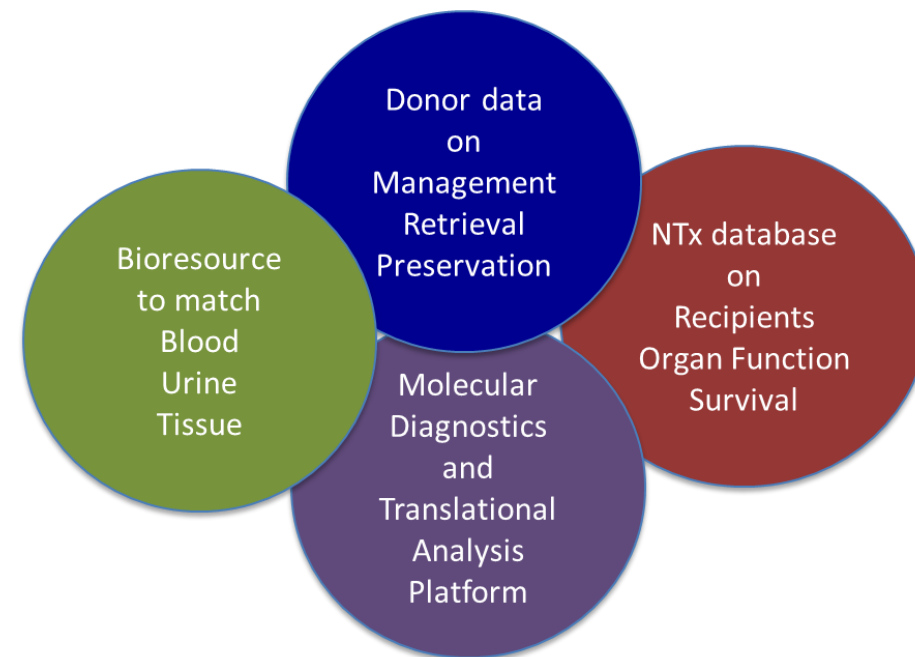


UK national biobank and scientific platform with integrated clinical data in organ donation & transplantation

2020 update

QUOD - Objectives and concept

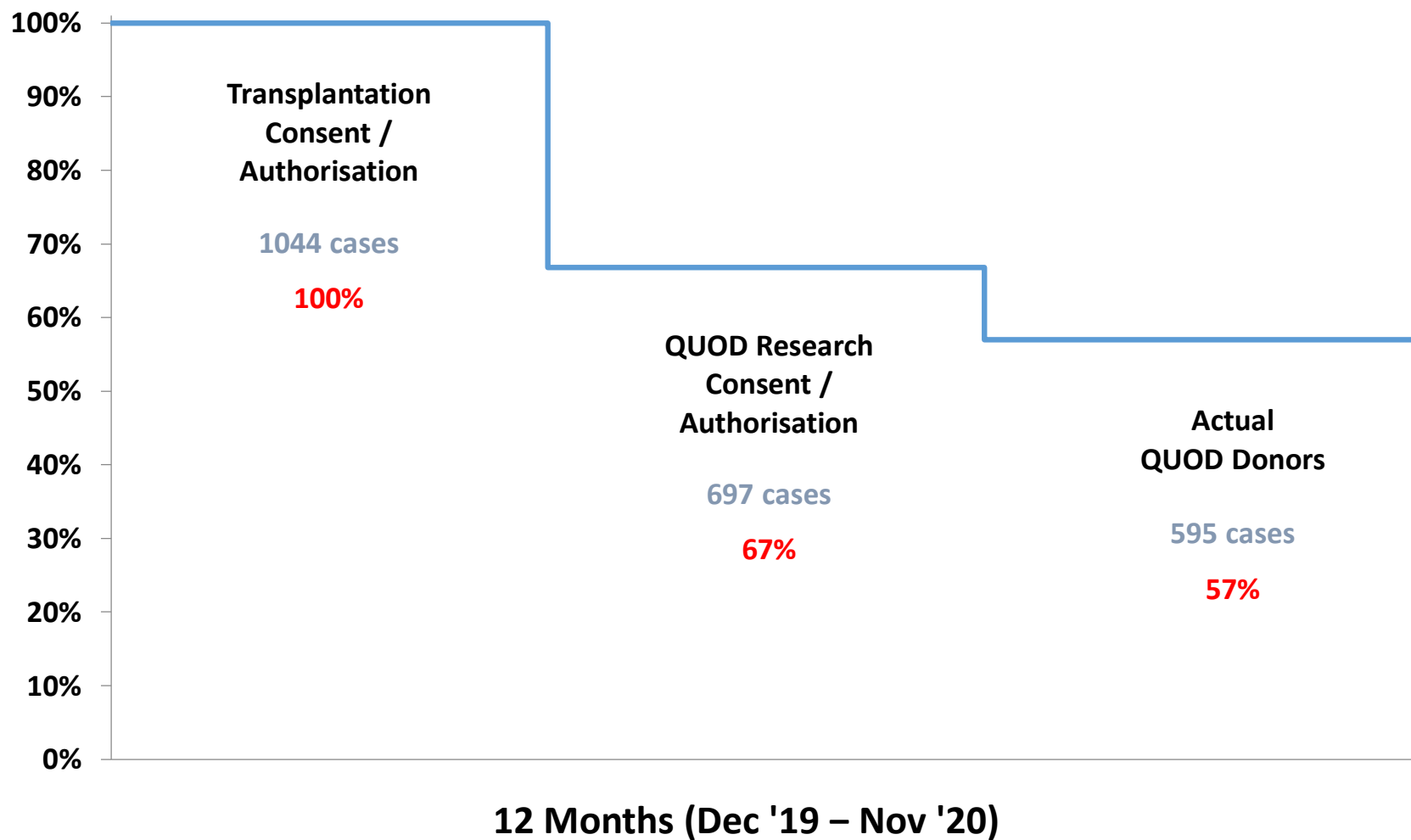
- Establish a robust biobank infrastructure
- Integrate clinical donor data & recipient outcomes
- Develop a national consortium & scientific platform
- Support mechanistic research & donor optimisation
- Identify pathways of injury and repair
- Validate novel clinically relevant markers
- Streamline research collaboration, facilitate service development & clinical studies



QUOD bioresource key figures

- **Date** **1 December 2020**
- **Donors** **5,146**
- **Samples** **93,706 in total, including:**
 - **Blood** **48,598 samples**
 - **Urine** **11,289 samples**
 - **Kidney** **13,036 samples (6,601 biopsies)**
 - **Liver** **6,872 samples (3,453 biopsies)**
 - **Ureter** **7,490 samples (3,784 biopsies)**
 - **Spleen** **3,847 samples (3,847 biopsies)**
 - **BAL** **145 samples**
 - **Heart** **2,429 samples (1,221 biopsies)**

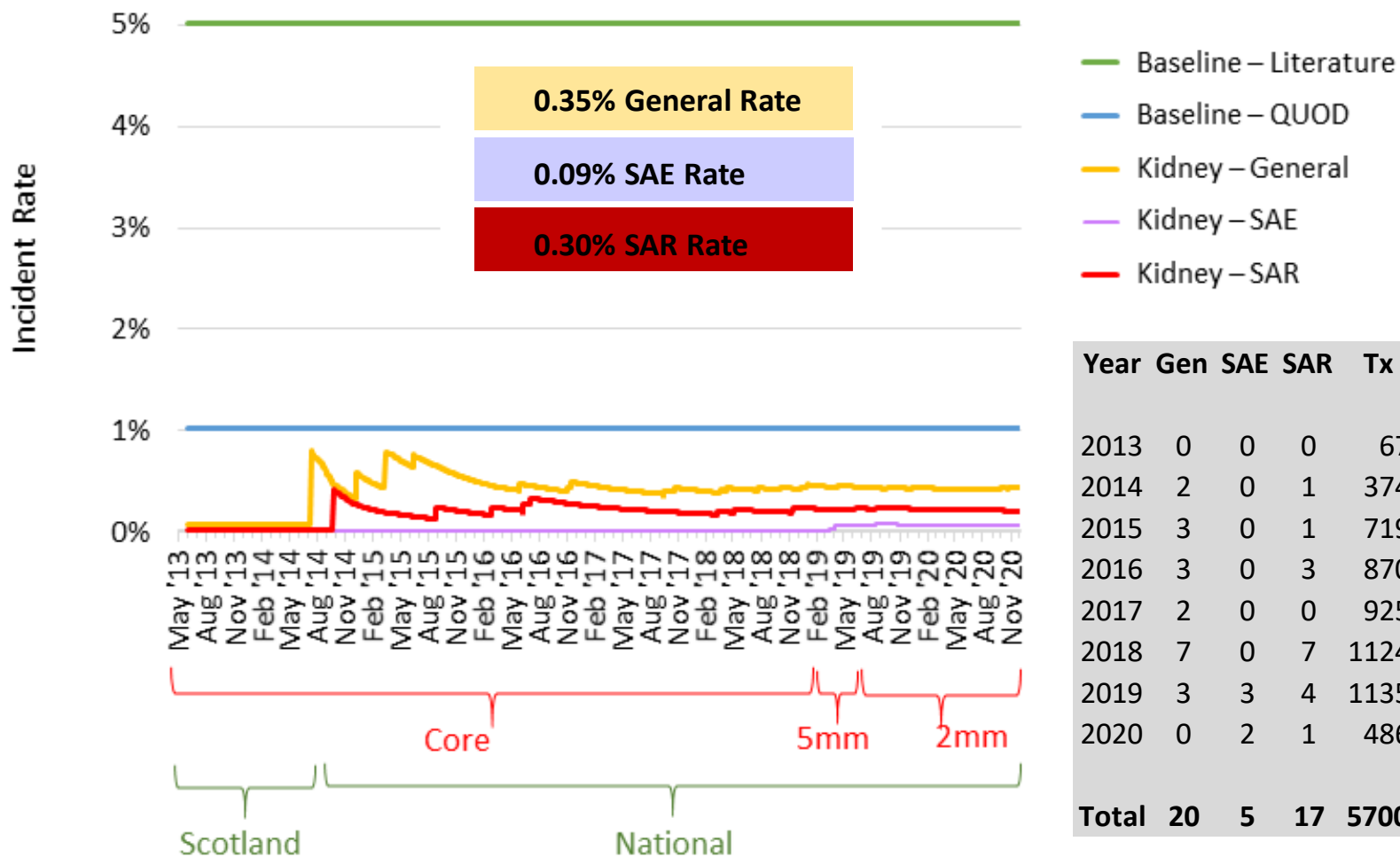
Consent for research and QUOD



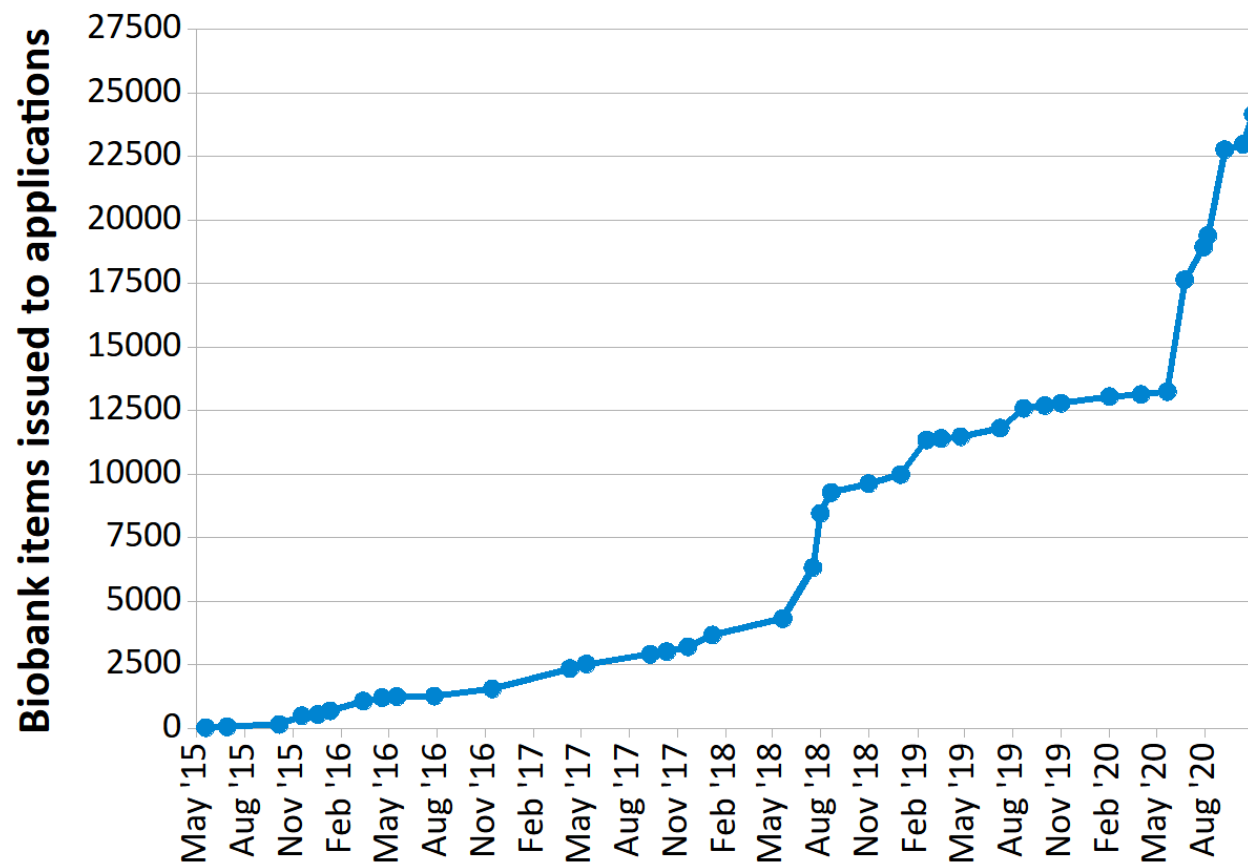
*QUOD sample collection was paused from end of March 2020 - end July 2020
Pre-pandemic consent rates were 80-90%

QUOD related incidents (2013 ...)

Donor kidney biopsies of transplanted kidneys

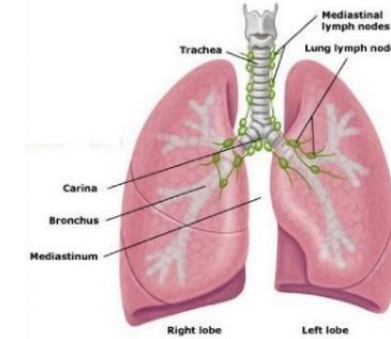
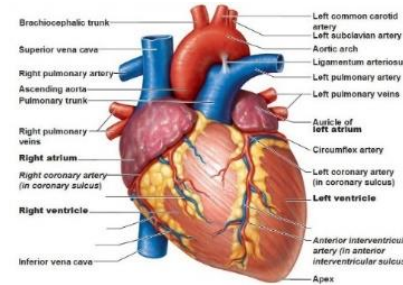
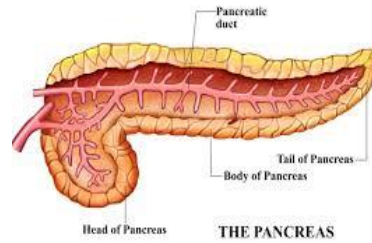


Research support and impact



- Biobank items issued: **24,148**
- Research project applications: **65**
- New applications (at preliminary stage): **14**
- Applications approved by the Steering Committee: **51**
 - **36** completed
 - **15** in progress

QUOD MRC Expand Grant



- Collection of **whole organs** in addition to samples
- To determine **transcriptome and proteome** of donor organs
- Creating **organ atlas** with state-of-the art pathology & imaging
- Delivering a **searchable data library**

→ First organs collected after Covid-19 delays

- Better understanding of normal vs diseased & causes of stress
- Optimise transplant success, but also help prevent or reverse chronic diseases

Research support: collaboration with industry



Contract with **Evotec** for 2 years: £100,000 in core support & request of >1,000 samples per year



Donation of £150,000 from **Novo Nordisk**, plus funding for a Research Assistant for 3 years to facilitate collaborative working



Ochre Bio supplied with liver & blood samples from 1,000 donors



In discussions with **Genentech Pharmaceuticals** as to how we can work together

➤ Essential support for infrastructure & science while keeping sample fee low for the individual researcher

Research support: collaboration initiatives

- NHSBT Oxford COVID-19 BioArchive (**COBA**)
- Support of **NRP** and **PITHIA** as a service development in ODT
- Collaboration with **UK Renal Imaging Network** to develop whole organ imaging assessing donor kidneys and complement the 'organ atlas'
- Supporting **UKODTRN** for national studies including trials, NTxD analysis and biobanking
- Support **Human Cell Atlas** project by providing whole organs and hyper-sampled tissues (e.g. heart, kidney)
- Support a bid for the **IMI2 Digital Pathology repository** using slides from QUOD samples



QUOD
Quality in Organ Donation

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