



Improving the health of future generations

UK Biobank Imaging Project

Steve Garratt

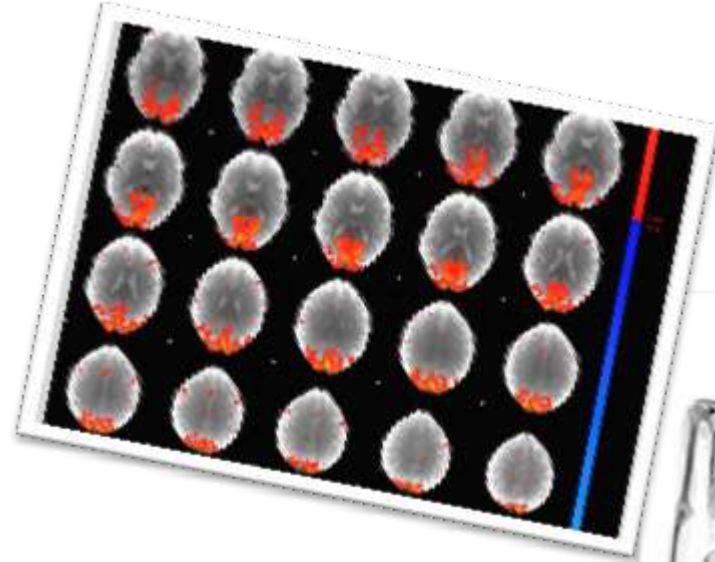


UK Biobank Imaging Project

- Around seven years to complete
- Operating 3 imaging centres
 - Co-ordinating centre
 - Then one in the South, the other North East
- Around £35 million in funding
- A total of 100,000 participants

Imaging Modalities

- MRI
 - Brain (3T)
 - Cardiac (1.5T)
 - Abdomen (1.5T)



- Dual-Echo X-Ray Absorptiometry (iDXA)



- Carotid Ultrasound



Scientific Value

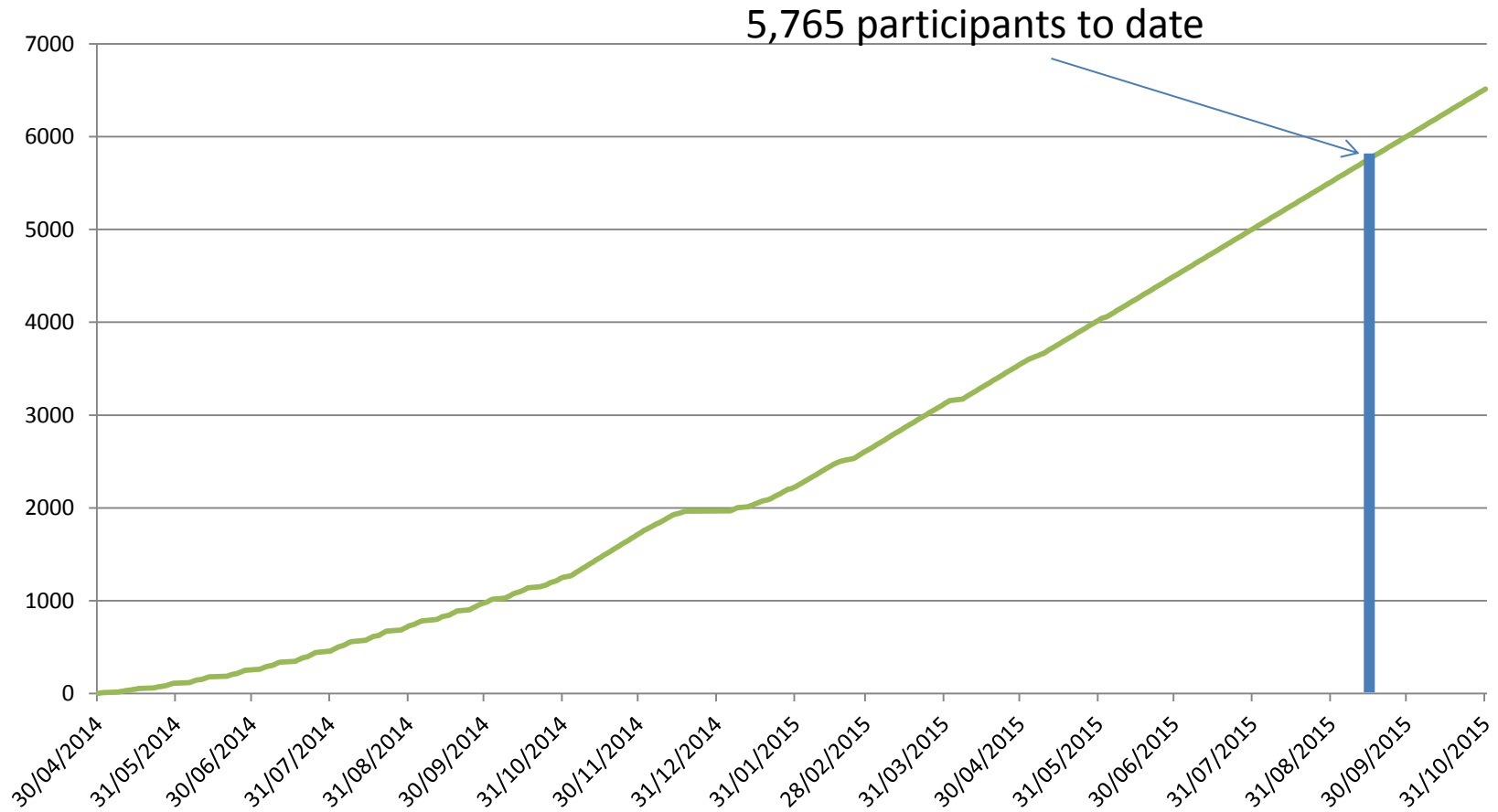
- Integrated with detailed non-imaging data
- investigation of associations
- Meaningful risk assessments can be made
 - Phenotypic measures made before disease

UK Biobank Imaging Project –Phase 1

- Up to 7,000 participants from the North West
- Duration of 18 months
- Coordinating Centre, South Manchester
- Initial funding of £9.5 million from the MRC

The first phase of the study alone will be the largest imaging study of its kind in the world

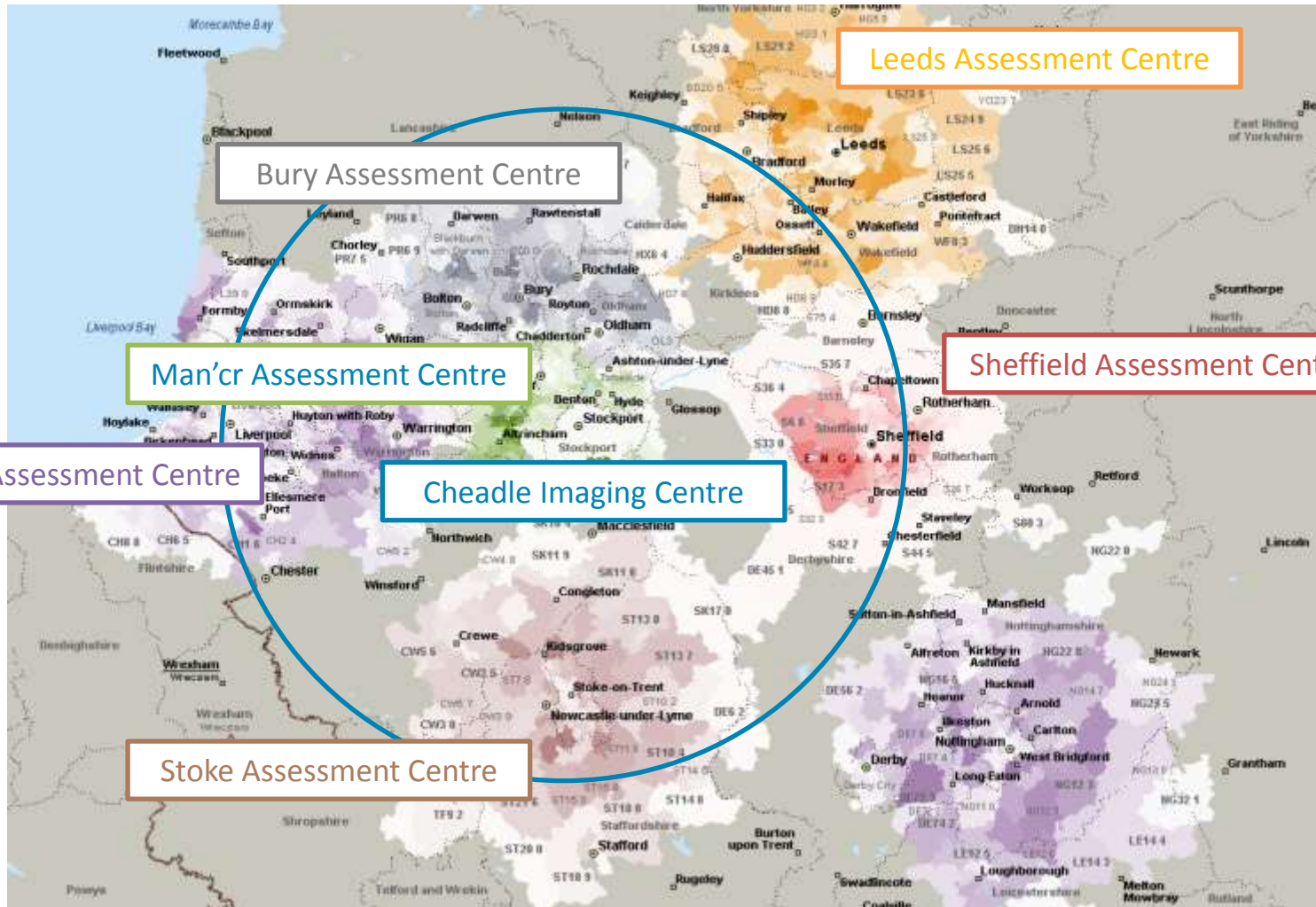
Imaging Progress



The Imaging Centre

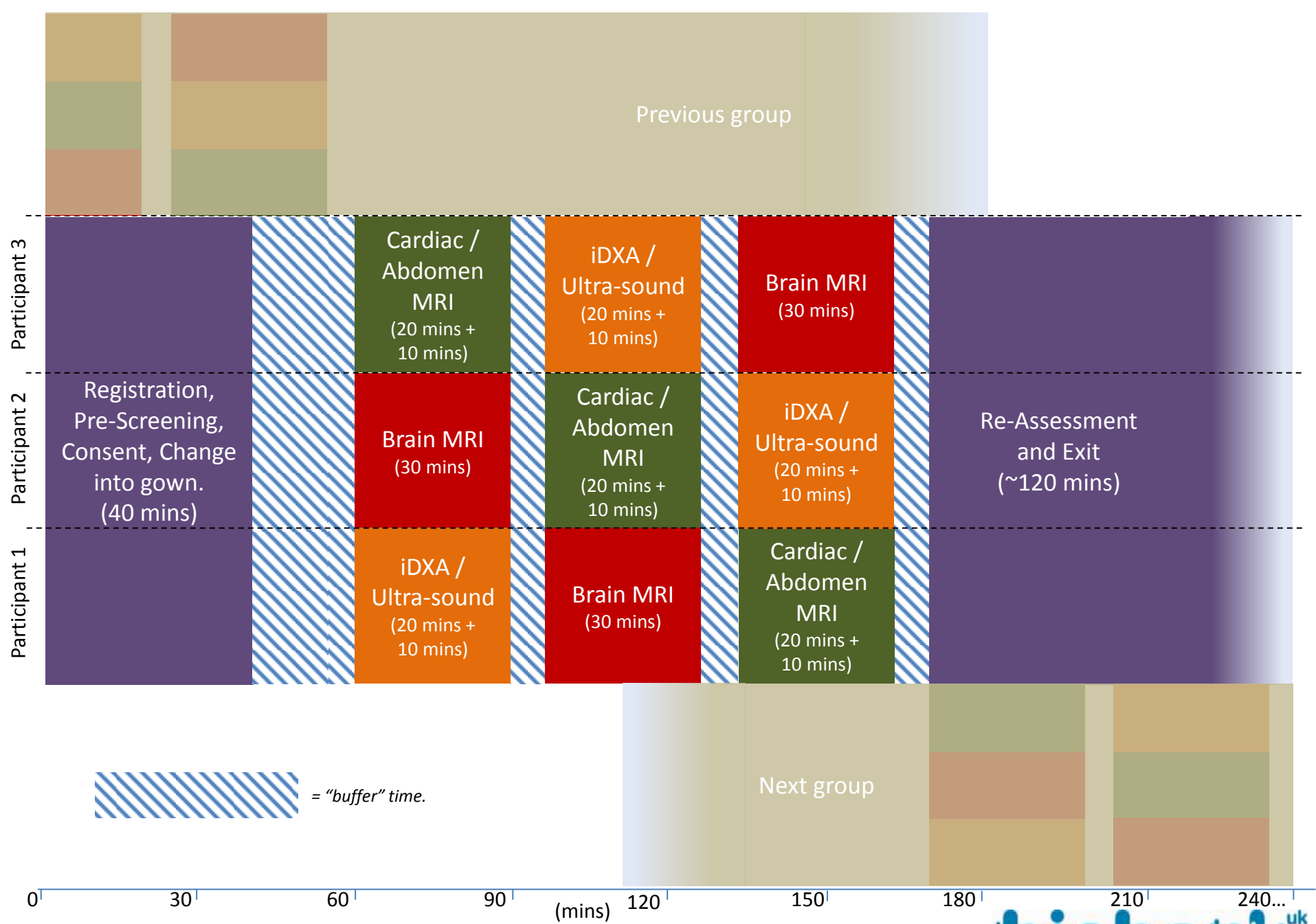


Participant Recruitment



Participant Visit

- 18 participants per day
- Scheduled in groups of three over an operational day running from 8am until 10pm
- Visits will last approximately 4 hours
- Imaging scans plus repeat assessment



Incidental Findings

- Only routinely reviewed by radiographer (not clinicians)
- Incidental Findings then escalated to a radiologist
- Scans are NOT diagnostic
- Notify participant and their GP
- On-going research on impact during the pilot

Imaging Feedback

"I felt very comfortable in the scanner; everything was explained so well and very clearly. I think people should make a little bit of effort and time to do something that will benefit others in the future."

"The brain scan lasted a long time but it was an interesting experience. I found the experience better than I expected."

"A bit boring at times ... but all in a good cause!"

"Very helpful and cheerful staff helped to make it a pleasant and non-threatening experience."

"Staff very kind and reassuring as I was a bit worried about the scan as thought I'd feel claustrophobic."

90% of participants say they would be prepared to attend a repeat of the visit within the next 12 months!

The Imaging Working Group Members

- *Sir Rory Collins*, Principal Investigator and CEO UK Biobank
- *Professor Paul Matthews*, Head of Division of Brain Sciences, Imperial College
- *Professor Steve Smith*, Associate Director, FMRIB, Oxford
- *Dr. Steffen Petersen*, Lead of the Advanced Cardiovascular Imaging Centre at Barts and the London.
- *Professor Stefan Neubauer*, Clinical Director, University of Oxford Centre Clinical Magnetic Resonance Research (OCMR)
- *Professor Jimmy Bell*, head of the Molecular Imaging Group at the MRC Clinical Sciences Centre
- *Dr. Tony Goldstone*, Senior Clinician Scientist in the Molecular Imaging Group, MRC Clinical Sciences Centre
- *Dr. Nick Harvey*, Honorary Consultant Rheumatologist, University of Southampton
- *Dr. Paul Leeson*, Clinical Lead, Oxford Cardiovascular Clinical Research Facility

Questions