

UK Biobank Ethics and Governance Council Twenty Third Meeting

Meeting at Wellcome Trust
215 Euston Road, London, NW1 2BE

Monday 7 June 2010 at 10.30am

Agenda

1. **Apologies**
2. **Minutes** of twenty second meeting held on 22 March 2010
3. **Matters arising**
 - (i) Summary of decisions and recommendations from twenty second meeting held on 22 March 2010
 - (ii) Tracking of requests to UK Biobank
 - (iii) Subgroup reporting as necessary
 - (iv) Workshop report
 - (v) Participant re-contact for audit research
4. **EGC review**
5. **Closed discussion on topics to discuss under item 6 – 8**
6. **Update from UK Biobank** (Professor Rory Collins, Chief Executive Officer, UK Biobank)
 - (i) General update on developments and recommendations from EGC22
 - (ii) Biannual report on enquiries and complaints received by UK Biobank
 - (iii) Biocentre
7. **UK Biobank's draft access and intellectual property procedures**
8. **UK Biobank's IT and data management strategy biannual report**
9. **Closed discussion of matters arising under items 6 – 8**
10. **Representation and representativeness**
11. **Communications activities**
 - (i) External speaking opportunities
 - (ii) External enquiries to the EGC
12. **Report on meetings attended**
 - (i) Board of Directors meeting 15/04/10
 - (ii) King's Health Partners conference 21/05/10
 - (iii) Royal College of Physicians 'Update in Medicine' meeting 26/05/10
 - (iv) Tiss.EU workshop 'Biobanking: Ethics, governance and regulation' 3-4/06/10
13. **Any other business**
14. **Date of next meetings**

27 September 2010	- Council meeting, London
6 December 2010	- Council meeting, London

**UK Biobank Ethics and Governance Council
Twenty Third Meeting**

**7 June 2010
Wellcome Trust, London**

Present: Professor Graeme Laurie (Chair), Professor Ian Hughes, Professor Martin Richards, Professor Heather Widdows, Dr Roger Moore, Professor Roger Higgs, Mrs Margaret Shotter, Ms Tracey Phillips, Dr Jonathan Hewitt and Mr Andrew Russell.

In attendance from EGC Secretariat: Ms Adrienne Hunt.

Observers: Ms Katherine Littler (Wellcome Trust) for the whole day and Dr Catherine Elliott (Medical Research Council) for the afternoon only.

Speakers: Professor Rory Collins (Principal Investigator and Chief Executive, UK Biobank) for item 6 - 8 only.

1. Apologies

Apologies were received from Professor Paolo Vineis and Mr Jonathan Sellors.

2. Minutes of twenty second meeting held on 22 March 2010

The Council approved the circulated minutes.

3. Matters arising

Summary of decisions and recommendations from twenty second meeting held on 22 March 2010

The Council approved the circulated summary of decisions and recommendations.

Tracking of requests to UK Biobank

Members agreed a number of questions to raise with UK Biobank later in the day.

Subgroup reporting as necessary

The following was noted:

- *Access and IP (AIP)* – Members noted that UK Biobank had not been in a position to submit the draft procedures to the full Council at the present meeting but that the procedures should be ready for circulation to the subgroup in time for a July meeting with UK Biobank.
- *Information Security* – The Chair clarified that while UK Biobank's funding does not include the costs for conducting an audit of the IT systems and procedures within CTSU that relate to UK Biobank, this matter had been

raised at the Board of Directors meeting and UK Biobank remains committed to commissioning this work.

- *Communications* – Aspects of the EGC’s Communications strategy have been raised in the commissioned stakeholder survey which forms one element of the EGC review. The Communications subgroup will meet once the review has concluded to consider its findings.

Workshop report

ACTION: Members agreed revisions to a final draft workshop report. [AH]

Participant re-contact for audit research

At its last meeting the Council discussed the funder proposal to commission participant focus group consultations to form one strand of evidence for the EGC review. The funders and UK Biobank had agreed that the proposal should be submitted for Board and REC approval, but insufficient time was available prior to the EGC Review Panel meeting to seek such approvals and to properly undertake the consultation work. While this specific piece of work was ultimately not progressed, the funders have since entered into a dialogue with UK Biobank regarding the underlying issues, including the need to seek clarification from the REC as to whether all future proposals of a similar nature will require REC approval.

ACTION: The Council offered to provide the funders with existing evidence of participant’s views of the EGC (e.g. its March public meeting report which includes details of attendees’ questions and comments). The Council will ask UK Biobank if it would be willing for its sixth biannual enquiries and complaints report to be circulated to the Panel. This report provides comment on participants’ views of the EGC and its role in relation to access.

4. EGC review

The EGC Chair, Secretary and Professor Collins have been interviewed by the EGC Review Panel. At its final meeting in June the Review Panel will consider the collected evidence and agree its recommendations to the funders. The recommendations will inform the UK Biobank Review Meeting, to be held in July, and a decision on funding is expected in September.

ACTION: The review outcomes will be discussed at the Council’s next meeting. [All]

5. Closed discussion on topics to discuss under item 6 – 8

Members raised questions to be discussed under the following items.

ACTION: The Council agreed to ask UK Biobank for sight of the International Scientific Advisory Board’s future minutes. [AH]

6. Update from UK Biobank (Professor Rory Collins, Chief Executive Officer, UK Biobank)

The EGC Chair congratulated Professor Collins and his colleagues on UK Biobank's renewal submission, the preparation of which was clearly a significant undertaking.

General update on developments and recommendations from EGC22

Recruitment

UK Biobank expects to meet its target of 500,000 participants in the week of the 5th July after which the majority of assessment centres will close either that or the following week. The Liverpool assessment centre has already closed while additional staff have been added to the remaining centres resulting in increased recruitment rates as follows:

	Recruitment rate (people per day)
Standard centre with normal staffing	100 - 110
Sheffield	160
Hounslow	120
Croydon	200
Birmingham	200

The mobile assessment centre will shortly move from Swansea to Wrexham where recruitment will take place during July and August. In the future, the mobile centre will be used to undertake repeat assessments in 20-25,000 participants every 3/4 years. The purpose of this repeat assessment is to look at variability in the baseline measures, for example, in order to establish a 'usual', that is, long term average measurement. The repeat assessment is not intended as an opportunity to collect new measurements beyond those collected at baseline.

Review

UK Biobank's renewal application was submitted to the funders in April and was circulated to the EGC for information. The UK Biobank Review Committee meets in July and will provide recommendations to the funders. A funding decision is expected in September.

Imaging visit proposal

Two expert consultation meetings have taken place, one to consider the whole body and heart imaging protocols and one the brain imaging protocol. A pre-pilot of the protocols will take place in the imaging facilities of UK Biobank's collaborators in order to test whether the protocols are both acceptable and workable in the allocated time. UK Biobank has consulted with colleagues in America and Europe and found there to be good agreement regarding its proposed approach to the imaging visit.

The protocols will be reviewed by the International Scientific Advisory Board in October, and hopefully sent to the EGC at that time. The full imaging proposal should be finalised and submitted to the funders at the end of 2010.

A member noted that the Googledocs brain imaging discussion page included an argument for early image analysis and asked if this had any implications for the project's incidental findings feedback policy. Professor Collins clarified that some quality control and early processing might take place in order to make the data more readily usable in the future. However, such analysis would not be on an individual and diagnostic basis but would be undertaken using standard computer algorithms.

Recommendations from EGC22

- *Participant re-contact for audit research:* UK Biobank intends to seek confirmation from the REC as to whether it requires to see all applications for such research in the future.
- *CTSU audit:* The audit will likely be conducted in late June/early July, the details of which are currently being finalised.
- *EGF update:* The EGC has made a number of recommendations for revision to the EGF which UK Biobank will take into account in parallel with the development of the access and IP procedures.
- *Equity report:* UK Biobank found the Report to provide a useful indication of where things could have been done differently to increase participation among groups that, on the available evidence, are less likely to participate. The project has used a variety of strategies for reaching ethnic groups during the recruitment phase (e.g. communicating with local leaders and community groups and advertising on community radio stations). In terms of recruiting people who have disabilities, Professor Collins commented that within the constraints of the measurements and samples to be taken, and the project's budget, UK Biobank has done a reasonable amount to facilitate participation. For the future, UK Biobank's communications will pay particular attention to participants from minority groups. The Council and Professor Collins agreed that it will be important for UK Biobank to convey the limitations of the resource whilst also highlighting how the research findings have the potential to provide broad benefit because they can be generalised to communities of people who have not participated in the project.

Communications strategy

As the project moves into the new access management phase, the focus of its Communications strategy will change from awareness raising to keeping participants informed (e.g. about potential linkages for follow-up and uses of the resource) and promoting discussion on particular issues. UK Biobank's website is currently being revised to reflect this change in focus.

Follow-up of participants

UK Biobank's renewal application outlines the project's plans for follow-up, including linkage to a number of health-related records (e.g. social services, education and environment). Members and Professor Collins agreed that it will be important for the project to communicate its plans to participants and to discuss its plans and

rationales with the EGC. The Council also welcomes discussion on how UK Biobank intends to satisfy itself that any proposed linkage is within the terms of the participants' consent.

Biannual report on enquiries and complaints received by UK Biobank

The Council reviewed UK Biobank's sixth biannual enquiries and complaints report, on which Professor Collins reported no new observations, except the careful monitoring of the assessment centre waiting times since the introduction of the enhancements.

The rate of participant withdrawal from the project remains low but has increased since the last report (a total of 208 withdrawals between November 2009 – April 2010 compared to 120 between May 2009 – October 2009). Approximately a third of the withdrawals occur straight after the visit, possibly because the visit was not as expected or individuals have simply reconsidered their involvement. At present, if a participant indicates why they have chosen to withdraw, this information is logged and used by UK Biobank to review and improve the assessment centre experience. UK Biobank could look at this information more systematically to investigate possible trends but it would not go back to people to ask why they chose to withdraw, if they had not offered this information.

The report states that in terms of people who have questions about commercial access to the resource - following discussion where it is made clear that applications from commercial companies will be allowed - it is estimated that around 30-50% of the people do not participate as they are fundamentally opposed to the commercial use of a "public resource". The Council asked if this finding might have future implications for the project, in particular if participants were not fully aware of the potential for commercial access when they were recruited but if they become aware of this during the access phase. Professor Collins commented that it will be important for UK Biobank to communicate clearly and proactively the potential value of commercial access and, in particular, to explain what can and can not be patented. The Council considers that UK Biobank could usefully undertake a participant engagement exercise based on its access and IP policy. Professor Collins responded that the project hopes to engage people by email, text and through the project's website.

Biocentre

Professor Collins updated the Council on UK Biobank's plans to seek funding to establish a Biocentre to act as a storage and retrieval service for other research initiatives.

7. UK Biobank's draft access and intellectual property (AIP) procedures

The Council discussed UK Biobank's timetable for the development of the AIP procedures and its plan for the resource to be open for some access in Q1/Q2 of 2011. UK Biobank aims to finalise the procedures by December 2010 and initial access would be granted for cross-sectional studies only.

The Council has previously recommended that the procedures be developed sooner rather than later so that sufficient time can be given to the iterative process of engagement ahead of any access being granted (including internal and external stakeholder reviews). The Council asked whether UK Biobank considers the current deadline of December 2010 to be realistic or whether moving this into 2011 would give the project more time to work through the issues. In suggesting this, the Council recognises that UK Biobank is likely to be under pressure from other stakeholders to open the resource for access as early in 2011 as possible. Nevertheless the Council considers it important for UK Biobank to allow itself the necessary time to develop robust and appropriate procedures through a consultative process.

Professor Collins confirmed that the procedures are now a priority for UK Biobank and that the current deadline provides a useful focus. UK Biobank is fully aware of the need for the procedures to be robust and access will only be granted once the procedures have been finalised. A basic IT system and database will be in place by 2011 which will allow access for some cross-sectional research. During 2011 – 2013 the IT systems and database will be further developed to include NHS and other health-related data and to facilitate access for case-control studies.

8. UK Biobank's IT and data management strategy biannual report

The Council reviewed UK Biobank's renewal application which details the project's IT requirements for the next 5 year period. For example, it describes that the repeat assessments in 20-25,000 participants every 3/4 years will require some modification to three existing systems: the system that controls assessment centre flow and captures and stores assessment centre data, the system that manages the invitation and scheduling of the participant appointment and the Laboratory Information Management System.

UK Biobank currently has a central database containing the data gathered at the assessment centre visit. In a relatively straightforward manner the laboratory data could be added to this database and access permitted for cross-sectional research. In time, a more sophisticated central database will be developed and will include follow-up data from participants' health and health-related records. This database will support access requests for nested case-control studies.

A data interrogation and extraction tool will be developed to allow potential users to determine what data are available in the resource prior to them making a formal request for access. Tabulations will be provided, for example, detailing how many participants have a particular type of disease. This tool will interface with the access management tool, which will also be developed in the next few years.

Another aspect of the IT system is the health outcomes adjudication which involves the confirmation or modification of diagnoses obtained from the record linkages, including possible sub-classification. This aspect of the IT system will be developed separately to the systems involved in record linkages although the two systems will need to be closely related.

UK Biobank has received ISO 27001 accreditation, the scope of which relates to the Information Security Management of those systems held at the UK Biobank coordinating centre only. The Council and Professor Collins agreed that this speaks to the importance of carrying out the independent audit of those CTSU systems that relate to UK Biobank. The Council hopes to review and discuss the outcomes of the planned audit in due course and is interested to learn more about the relationship between the various IT systems being developed at CTSU and how the security of the systems, and the linkages between them, is tested. Members requested sight of the revised CTSU audit terms of reference, which Professor Collins agreed to provide.

In the future UK Biobank will receive data from a large number of organisations as part of its strategy to link to participants' health and health-related records. A member asked if such linkages could pose a data security threat to the project. UK Biobank provides a record system controller with participants' identifying information (e.g. NHS number, name etc) and the controller subsequently provides data back to UK Biobank linked to the identifying information and/or the Participant Identifying Number. The transfer of any data always presents a challenge in security terms and this can be addressed through two possible protections. First, the record system controller could provide data back to UK Biobank with reference to the Participant Identifying Number only. This effectively pseudo-anonymises the data to anyone except UK Biobank and the controller as the identifying data has been removed. Alternatively, the data, including identifying information, could be sent in an encrypted form. In practice, the transfer strategy is largely determined by the organisation that holds the data. A tension can arise in terms of the need for secure transfer (e.g. by pseudo-anonymisation) and the need to check the integrity of the returned data. The advantage of encryption is that the returned data includes identifying information which can be checked against UK Biobank's records, unlike the pseudo-anonymised data, and this is useful in terms of quality control of the data held. Once the health record data has been transferred it falls to the internal security standards of CTSU.

9. Closed discussion of matters arising under items 6 – 8

Revision of the EGF

ACTION: The Council agreed to request that UK Biobank bring a revised EGF to the 6 December EGC meeting for discussion. [AH]

UK Biobank's Communications

ACTION: Mr Andrew Trehearne will be invited to the 27 September Council meeting to present an update on UK Biobank's Communications strategy and to reflect on the conclusions of the EGC's workshop report. [AH]

IT systems and data flows

The Council agreed to return to the subject of data flows to and between UK Biobank's IT systems once the CTSU audit has reported.

Access and IP

The Council was reassured by Professor Collins' earlier comments regarding the timetable for the development of the AIP procedures. However, having not yet had sight of the latest version of draft procedures, the Council remained concerned that their development presents a significant task for UK Biobank which will likely extend into 2011. For example, sufficient time should be given to the public review of the procedures.¹

ACTION: The Council offered to provide the UK Biobank Review Committee with a paper outlining its reflections on the AIP procedures. Ms Littler will consult with colleagues to establish whether such a paper would be welcome and if so when it should be provided.² [KL]

10. Representation and representativeness

The Council discussed a draft paper, prepared by Professor Vineis, which aims to investigate the concept of 'representativeness' in population studies. Specifically the paper considers the relationship between the scientific and statistical concept of representativeness (which would likely result in a lack of statistical power for the specificities of minority groups to be investigated) and the social science concept of representativeness based on a fair (not necessarily proportional) representation of different subjects and stakeholders. Members agreed that the paper should be developed further and be framed in the context of the purpose and potential uses of UK Biobank, whilst also reflecting on the aim of the resource to be generalisable. The paper will be used as a means of clarifying the EGC's thoughts on the subject and as a way of identifying core research questions. The Council will return to the question of whether a workshop on this topic is desirable.

ACTIONS: The Council agreed to ask UK Biobank for its own working definition of what it means to be 'generalisable' and 'representative'. [AH] Professor Vineis and Ms Phillips will prepare a further draft paper for consideration at the September EGC meeting. [PV and TP]

11. Communications activities

External speaking opportunities

The EGC Chair will present a paper on the current UK legal and regulatory framework for research magnetic resonance imaging at the 'Ethical management of Research Imaging' workshop being organised for the 1 July 2010 by The Royal College of Radiologists and its partners. The Chair will attend a number of other meetings in the Summer which will be reported at the next Council meeting.

¹ Post meeting note: For example, when the Ethics and Governance Framework was put out for consultation in 2003 it was sent to over 100 stakeholders and was available on the funders' websites for comment for a four week period. After this period the comments were collated and their implications considered.

² Post meeting note: Due to the timing of the AIP sub-group meeting, a paper was not submitted to the Review Committee and many issues previously raised by the EGC were dealt with directly during the meeting. A full report will be given at EGC24.

External enquiries to the EGC

There have been no enquiries since the March EGC meeting.

12. Report on meetings attended

Board of Directors meeting 15/04/10

The EGC Chair attended the Board of Directors meeting on the 15/04/10 which focused primarily on UK Biobank's 2010 – 2015 renewal application.

King's Health Partners conference 21/05/10

Professor Richards spoke at the King's Health Partners Information Governance Conference in May, which addressed topics including data management and confidentiality.

Royal College of Physicians 'Update in Medicine' meeting 26/05/10

Dr Hewitt spoke about UK Biobank and the work of the EGC at a recent educational day of the Royal College of Physicians.

Tiss.EU workshop 'Biobanking: Ethics, governance and regulation' 3-4/06/10

The Council Chair presented the main findings of the EGC's workshop report at a recent meeting of the Tiss.EU project. Attendees supported the mixed method approach to engagement and involvement that is proposed by the EGC in the report.

13. Any other business

The Council endorsed a paper that was written by a subgroup of the EGC that draws together the Council's analysis and discussion regarding the ethical implications of MRI imaging in a biobanking context.

The paper recognises that benefits may arise from providing feedback of incidental findings, including the possibility of early detection of an abnormality. However, disbenefits may also arise through the feedback process, for example, a participant may experience anxiety at the knowledge of having an unruptured aneurism. As yet, there is little empirical data available to indicate what proportion of MRI research participants who receive feedback of incidental findings may benefit from this. Given this, it might be useful for UK Biobank's pilot MRI protocol to contain an element of follow-up for people who are given feedback. This data could be used to more accurately assess the balance of benefit and harm associated with feedback. The Council agreed to raise this with UK Biobank at a future meeting.

14. Date of next meetings

27 September and 6 December 2010 - Council meeting, London