

Thank you very much everybody for coming this morning. Clearly, our biggest thanks are to the 500,000 participants in UK Biobank who back in 2006, 2010 agreed to join this experiment by spending a couple of hours with us answering questions, having physical measurements, giving us biological samples and then allowing us to follow them up through their health records. You'll hear more about particularly, the linkage into the health records and the work that's being done on that later in the day. The participants really are participants and they are increasingly wanting to participate. What we're finding is that when we ask them if they're willing to do things, increasingly, they're saying yes, and at the moment, again as you'll hear, we're in the middle of imaging 100,000 of them and just earlier in the week, we completed the imaging of the first 25,000 participants. Where we're doing not only imaging but also, a repeat of the whole of the baseline assessment, so that we can in those 100,000 look at change over time during a period of about a decade. The thanks I also want to give is to all of you and all of the scientific community who have helped to build UK Biobank.

The message I really wanted to get across today was that, our job is to build it as UK Biobank but really, it's your job to tell us what we should build and what we really want people to do here in the hall and others that you work with or who may be watching this on the webcast, is to think, okay, UK Biobank, this is not bad, but how could we make it better? What would make it better? What things should be added to it? There have been a number of different communities that have helped in that way. The genotyping was driven by an expert group from across the UK and beyond who worked out first, what would be the value of it, persuaded the funders to support it and then helped to design the array that many people are now using. They then did the work of imputation and again, made those data available. If we look at imaging, I know nothing about imaging, the imaging has been developed by a working group with expertise in particular areas who then each consulted with their community, be it brain, heart, body, to work out what was the best imaging protocol that we could feasibly do at that kind of scale. It took years of thought, consultation, piloting to come up with the imaging protocol that's moving forward.

They have been really actively engaged throughout the process of tweaking, improving, ensuring the quality and again, like the genotyping, turning the data into even more useful data with the application of algorithms, to pull out derived variables that can be used by researchers. But even beyond that, we've seen some communities that have decided exactly what UK Biobank is, and that is a resource, it's their resource, and for example, if you go on to the internet, you'll find that there's a UK Biobank eye-consortium. It has nothing to do with us at the centre. It's a group of researchers who actually got the idea. It is their resource, they have created a community of eye researchers and they are working on the data in collaboration, getting the data they need, generating the results and getting on with it. So, what we'd like, or what I particularly like out of this meeting is, what could we do better? How could we make this resource even more useful? You'll hear some of the ways in which that's happening with the exome sequencing that's going on, with various omic-assays that will be starting and with plans that John Bell would have spoken about at this moment, but unfortunately, is not able to be here this morning around how UK Biobank is at the centre of the life sciences

strategy and the plan to sequence the whole of the cohort over the next few years.

Indeed, with the support of the Medical Research Council, we're just about to start a vanguard phase of sequencing about 50,000 of the UK Biobank participants over the next year or so, with the intention that through funding from charity, from the government as part of the life sciences strategy, from industry, that sequencing of the cohort would be completed within three to five years. You can imagine the problems that throws at us in terms of dealing with data at a scale that none of us really anticipated would occur so early on in the project. But again, the community, the research community is coming to our aid in helping us to work out how to deal with those data, how to archive it, how to ensure it's good quality and most importantly, how to make it accessible to researchers all around the world. As the scale of the data increases, it becomes increasingly difficult for anyone to get a sense of what data there are in the resource, how can we make those data easier to visualise, easier to use and therefore, easier to generate important findings from?

Again, tell us what we should do. Our job is to crank the handle, but we really do need the support, the guidance of the scientific community to say, how do we make UK Biobank better? How do we squeeze even more funding out of the very generous funding that we've had from the Medical Research Council, the Wellcome Trust, and as new core funders of UK Biobank, CRUK and British Heart Foundation? How can we persuade them that's there even more that can be done to make the resource more valuable? So, thank you very much for coming along. There will be time for questions but maybe that's also an opportunity for you to say, well, why don't you do this? Why don't you do that? We could... [Recording ends abruptly]

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