Breakout Group 3

Scientific agenda with short- and long-term goals

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Discussion question 1: What enhancements to existing cohorts would most increase their utility and promote data sharing?

- Collect biological samples in existing cohorts (inc. for change over time) and of new sample types (e.g. microbiome, RNA)
- Develop population-specific genotyping arrays, which may require some WGS to inform array design and imputation
- Standardize and characterize novel –omic assay methods (including data processing, analysis and reporting)
- Support cohort-wide genotyping and other –omic assays in order to avoid wasteful and costly case-control approaches (taking advantage of long-term follow-up in existing cohorts)

Discussion question 1: Continued

- Developing standardized approaches to phenotyping health outcomes using algorithms based on health record systems and other sources (including access to tumour samples)
- Developing novel methods for charactering exposures (e.g imaging; environment/socio-economic data) and outcomes (e.g. mobile technology for cognitive decline, arrhythmias)
- Developing generic data visualization and management systems to support use and sharing of individual cohorts

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Discussion question 2: What are the highest priority scientific questions that could be addressed by a cohort of cohorts?

- Provide support for collaborations between cohorts to address specific scientific questions by combined analyses of the data
- Produce context-specific analyses of the local relevance of risk factors that could better inform GBD and other estimates, and to assess what determines “health” in different settings
- Address questions that are related to conditions for which there are likely to be too few cases or individuals of interest (e.g. young people; ethnic groups) in any individual cohort
- Harmonise what matters (especially with novel –omic assay methods) rather than trying to standardise cohorts entirely

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International Cohorts Summit

Global Genomic Medicine Collaborative

Other comments / discussion points

- Support the development of systems to facilitate long-term follow-up of health outcomes in lower-income populations
- Facilitate access to the widest range of health outcome data for long-term, comprehensive follow-up of all participants

Both issues are likely to require the engagement of research funders with governments (e.g. emphasise relevance of health research to health care; address data protection obstacles)