

## Longitudinal Population Studies: A Funder Perspective

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# UK Research and Innovation (UKRI)

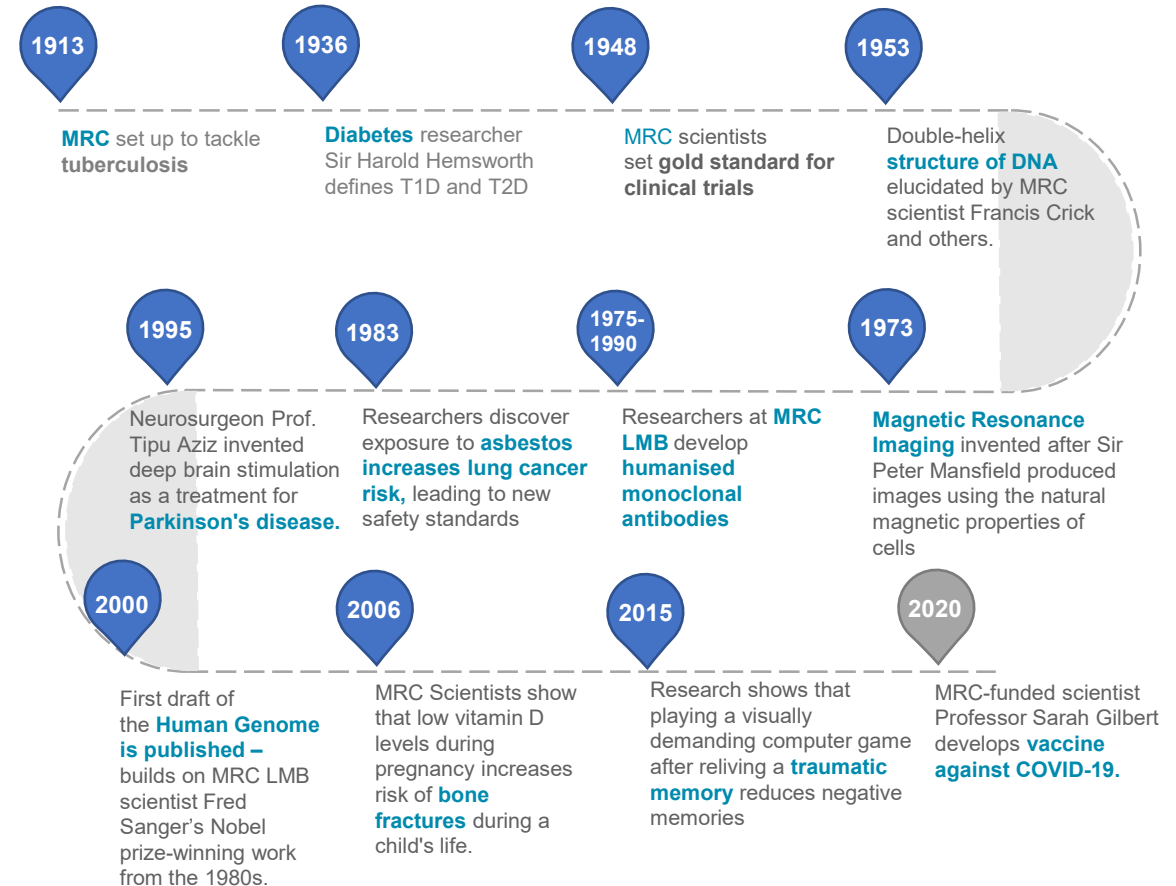
- Launched in 2018
- Sponsored by Department for Science, Innovation and Technology (DSIT)
- Largest single public funder of R&I in UK
  - 2022-2023 – UKRI budget approx. £9bn
- 9 constituent organisations
  - 7 disciplinary research councils
  - Innovate UK
  - Research England



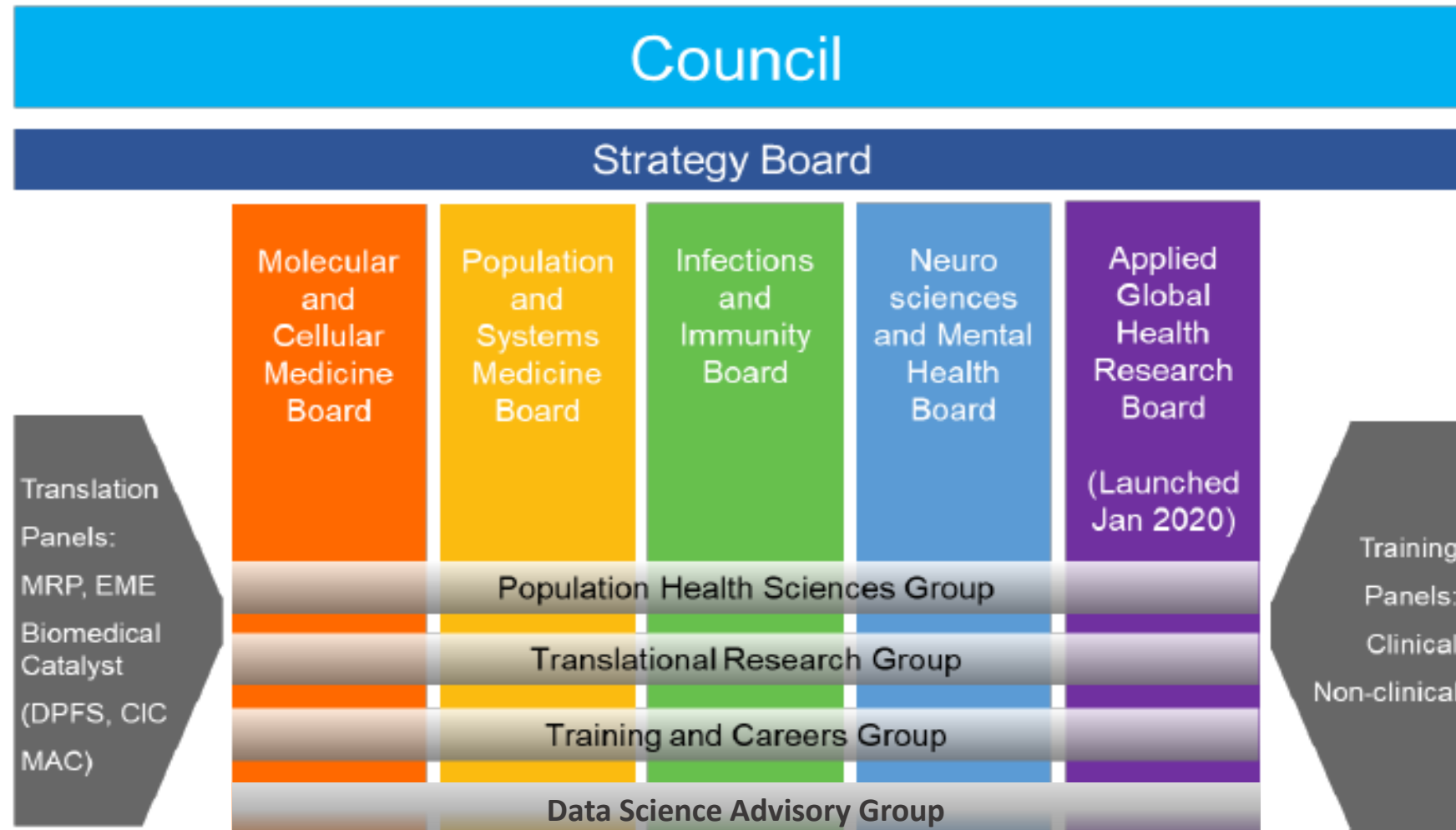
**UK Research  
and Innovation**

## MRC's mission:

- Encourage and support research to improve human health
- Produce skilled researchers
- Advance and disseminate knowledge and technology to improve the quality of life and economic competitiveness of the UK
- Promote dialogue with the public about medical research



# Boards, Panels and Overview Groups



# Why MRC supports Longitudinal Population Studies?

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- They allow monitoring of the same group of people, usually over an extended period of time.
- They allow researchers to study phenomena in real-world settings, in numbers unequalled by clinical trials.
- They are important resources for investigating the factors that influence health and disease.
- They are valuable resources that stimulate collaboration and generate new science

# Some UK Population Research Assets

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- A prospective longitudinal cohort monitoring 500,000 volunteers (recruitment age 45-59)
- an open-science resource > largest genotyping (500k) and largest brain-body imaging study (100k) in the world. Whole genome sequencing underway, imaging enhancements to come

## Our Future Health

- a new 5m population cohort, embedded in the NHS, with sequential sampling and data linkage to enable research in early detection of disease

## Population Research UK

- newly established partnership with ESRC and Wellcome to develop a national cohort platform to promote simpler data discoverability, access and analysis

## Adolescent health

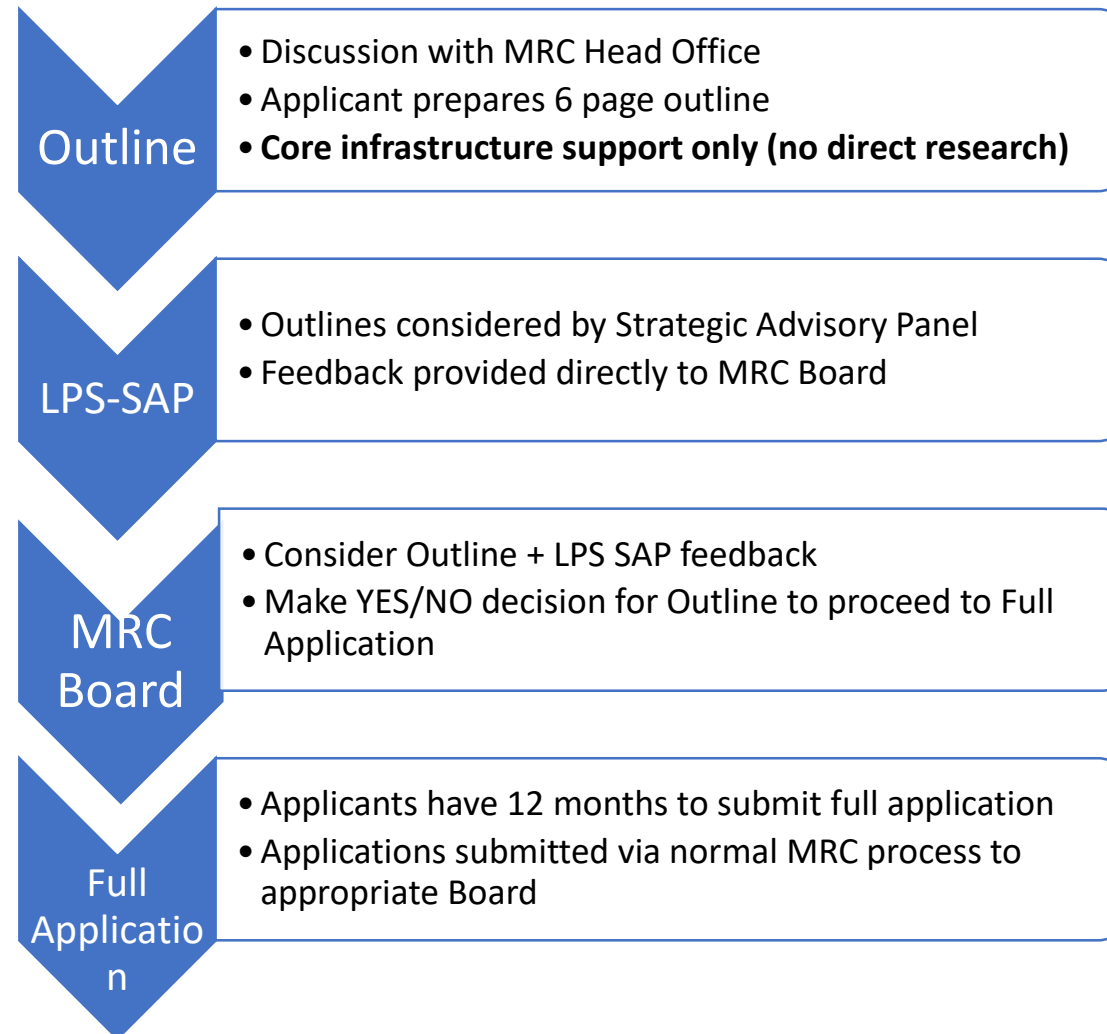
- scoping of new 100k national cohort underway, to understand and improve health during adolescence

# Assessment & Funding LPS 1

## The Challenges:

- Cohorts are a long-term and expensive commitment for funders
- Is the proposal relevant
  - Is there a space in the LPS landscape for the new study
  - Existing studies difficult to stop
- Ownership by the relevant Research Board
- Oranges and apples - difficult to assess against focussed project grant applications
- Financial planning
- Time to decision

# Assessment & Funding LPS 2





# Assessment & Funding LPS 3

## LPS SAP

- Overall strategic need in wider LPS landscape.
- Linkages/collaborations with existing/upcoming studies or data resources
- Data infrastructure and access
- Whether pilot/proof of concept studies are permitted and/or feasible
- Evidence of value to wider community

## Research Boards

### Scientific need

- Could this LPS enable questions of significant **scientific importance** to be addressed?

### Added value

- Likely value for money in terms of research enabled

### Appropriateness of the design of the LPS

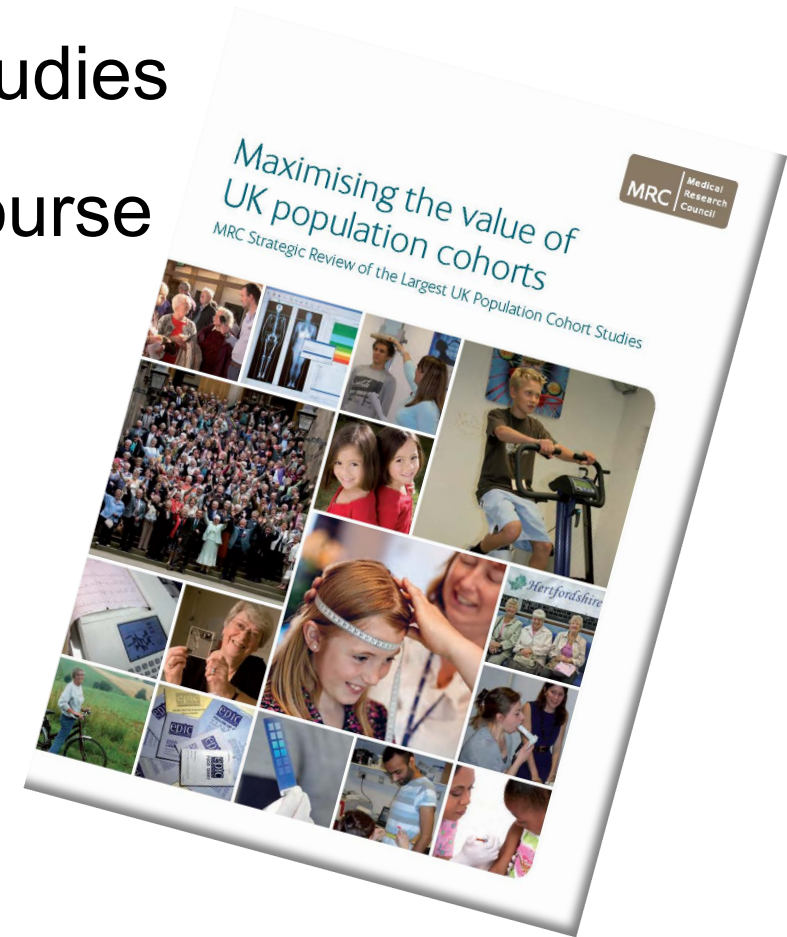
- e.g., sample sizes, sample/data collection methods, length of follow up.

### Action

- Yes/no decision to proceed and any feedback

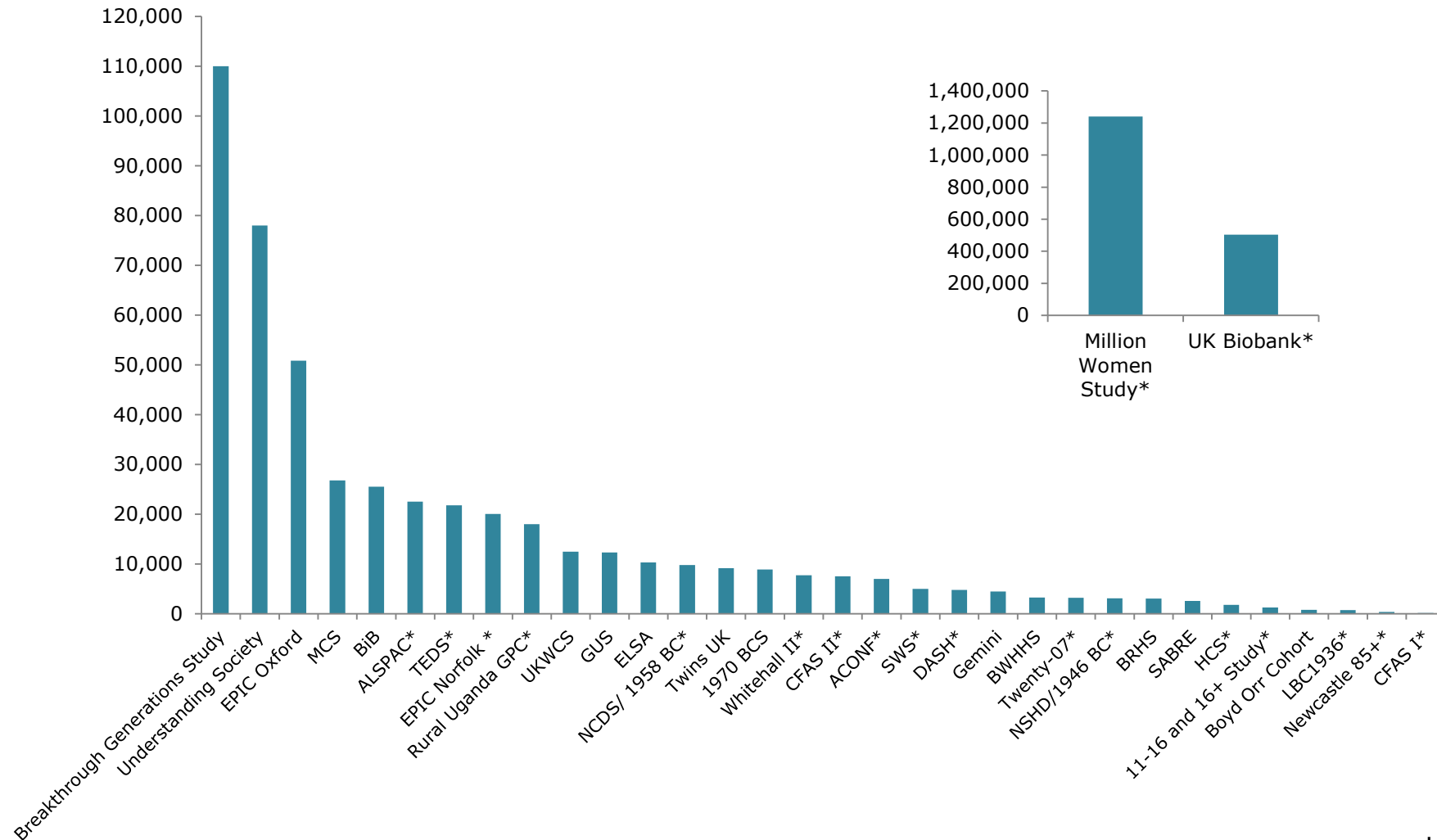
# LPS Landscape\*

- 2.2m people in the UK participate in cohort studies
- Diverse coverage of population: across life course socioeconomic, ethnicity, intergenerational
- 92% females over 45 (62% excluding MWS)
- Most studies relatively small (<25,000)
- Half of cohorts followed >20 years
- Supported by more than 10 funders



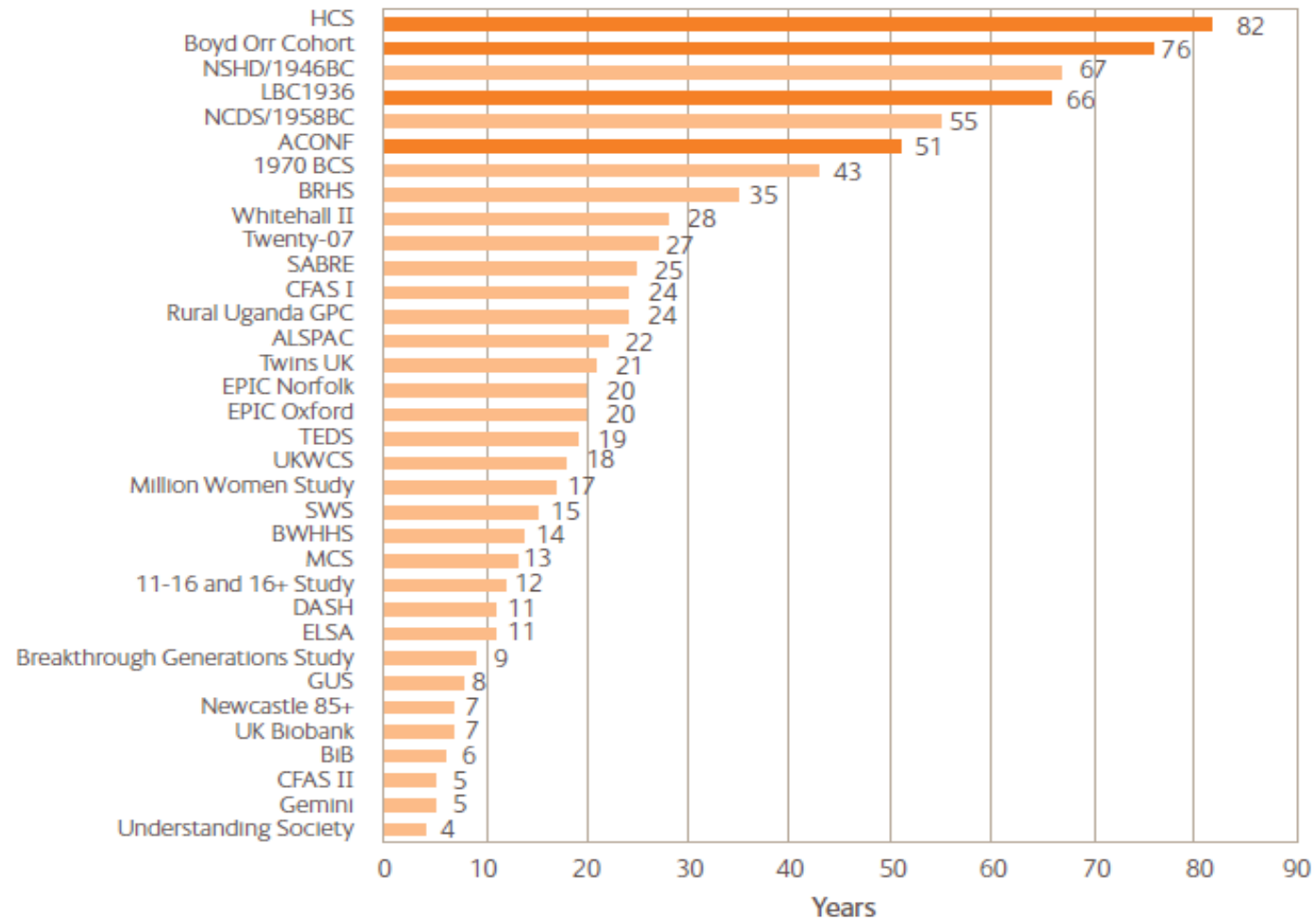
\*Baseline 2014

# Estimated number of cohort participants\*



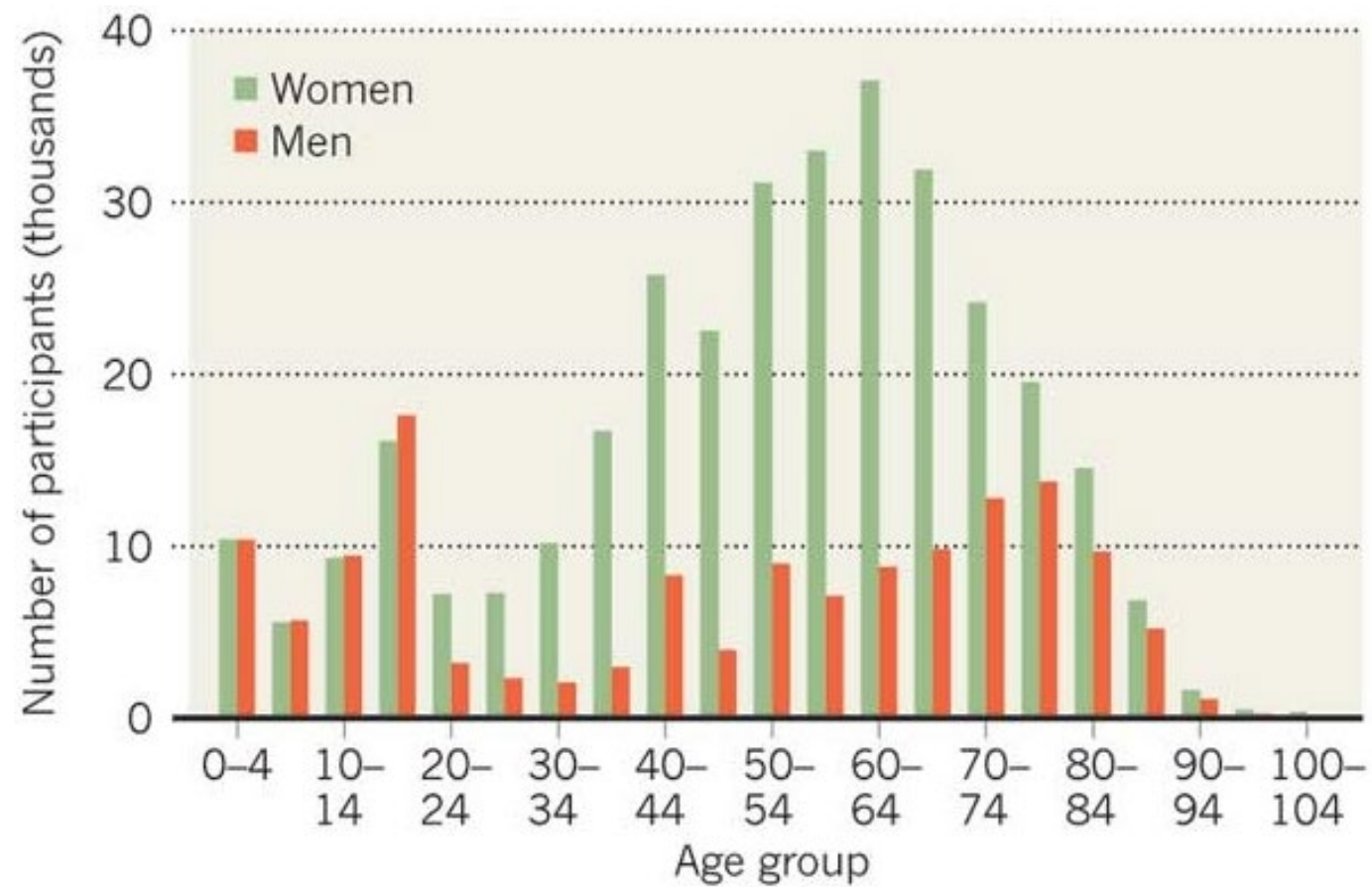
\*Baseline 2014

# Length of cohort follow-up\*



\*Baseline 2014

# Numbers of study participants by age and sex\*



\*Baseline 2014; not including MWS or UKB



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## Cohort directory

The cohort directory is a collection of UK population cohorts. The aim of the directory is to signpost users to individual cohorts to maximise the use and translation of findings of these valuable UK assets.

It has been developed in response to recommendations in the MRC Strategic Review of the Largest UK Population Cohort Studies.

The information included in the cohort directory provides a high level overview of the cohort profile and type of variables and data collected.

### 1970 British Cohort Study

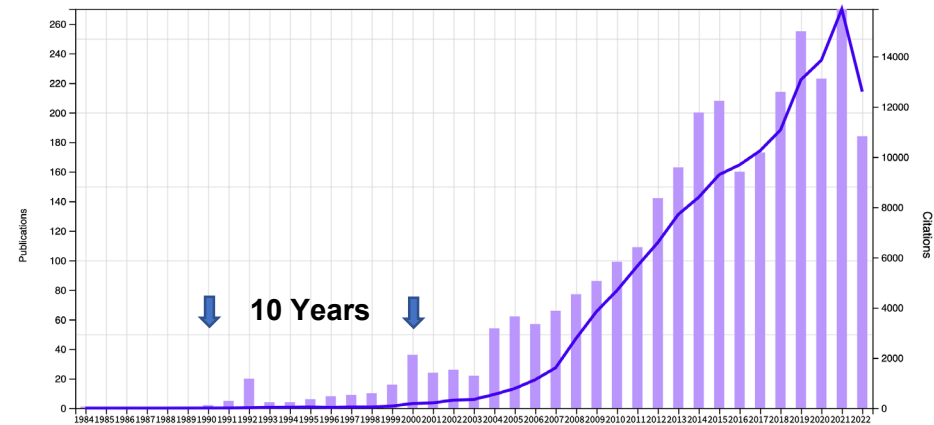
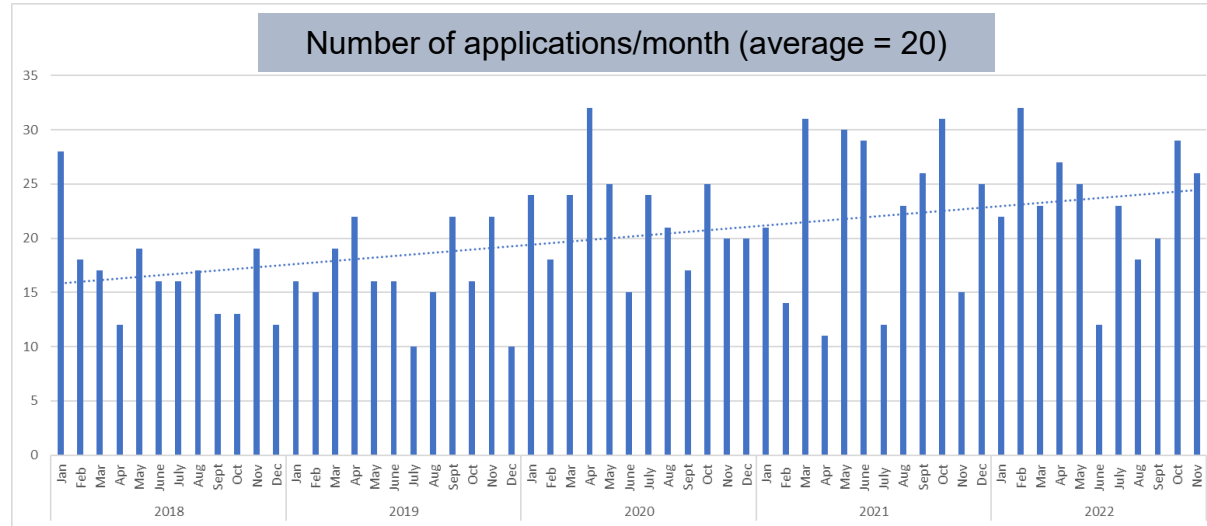
The 1970 British Cohort Study (BCS70) follows the lives of more than 17,000 people born in England, Scotland and Wales in a single week of 1970.



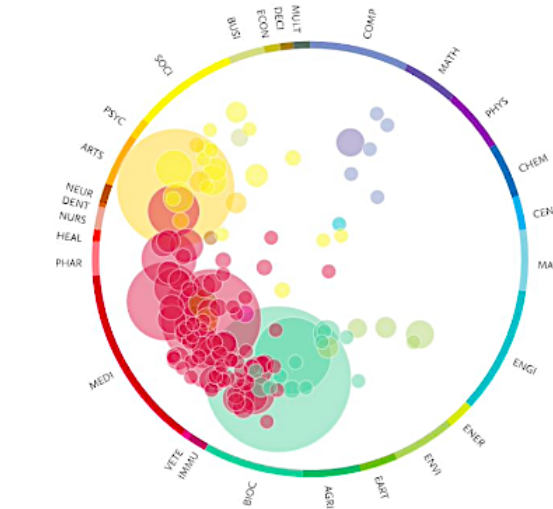
Medical  
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Council

# Renewing LPS Funding

## Access, publications and citations



## Scientific domains



- |      |  |      |  |
|------|--|------|--|
| COMP | Computer Science                             | PHAR | Pharmacology, Toxicology and Pharmaceuticals |
| MATH | Mathematics                                  | HEAL | Health Professions                           |
| PHYS | Physics and Astronomy                        | NURS | Nursing                                      |
| CHEM | Chemistry                                    | DENT | Dentistry                                    |
| CENG | Chemical Engineering                         | NEUR | Neuroscience                                 |
| MATE | Materials Science                            | ARTS | Arts and Humanities                          |
| ENGI | Engineering                                  | PSYC | Psychology                                   |
| ENER | Energy                                       | SOCI | Social Sciences                              |
| ENVI | Environmental Science                        | BUSI | Business, Management and Accounting          |
| EART | Earth and Planetary Sciences                 | ECON | Economics, Econometrics and Finance          |
| AGRI | Agricultural and Biological Sciences         | DECI | Decision Sciences                            |
| BIOC | Biochemistry, Genetics and Molecular Biology | MULT | Multidisciplinary                            |
| IMMU | Immunology and Microbiology                  |      |  |
| VETE | Veterinary                                   |      |  |
| MEDI | Medicine                                     |      |  |

# Transforming Population Health

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**Thank you**