

# Introduction to the Millennium Cohort Study

29 June 2022  
1pm-2.30pm

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# Plan for today

- About CLS
- Overview of MCS
- Examples of research
- Data, by theme
- Data enhancements and innovations
- Sample design and weights
- Available resources and data access
- Plan for future sweeps
- Q&A to the panel\*

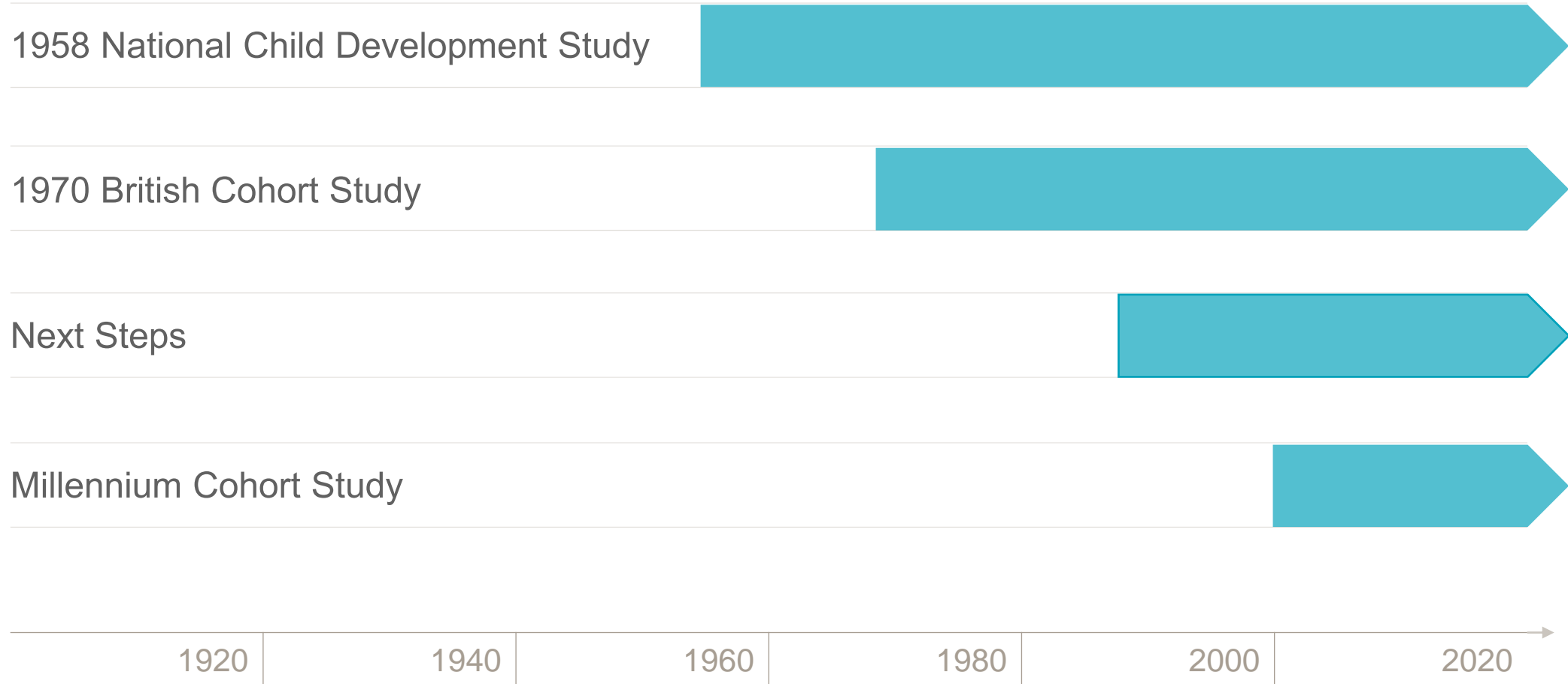
# Introductions

- Vanessa Moulton, Senior Researcher
- Morag Henderson, Associate Professor
- Nicolas Libuy Rios, Research Fellow
- Rachel Rosenberg, Research Data Manager
- Lucy Haselden, Survey Manager

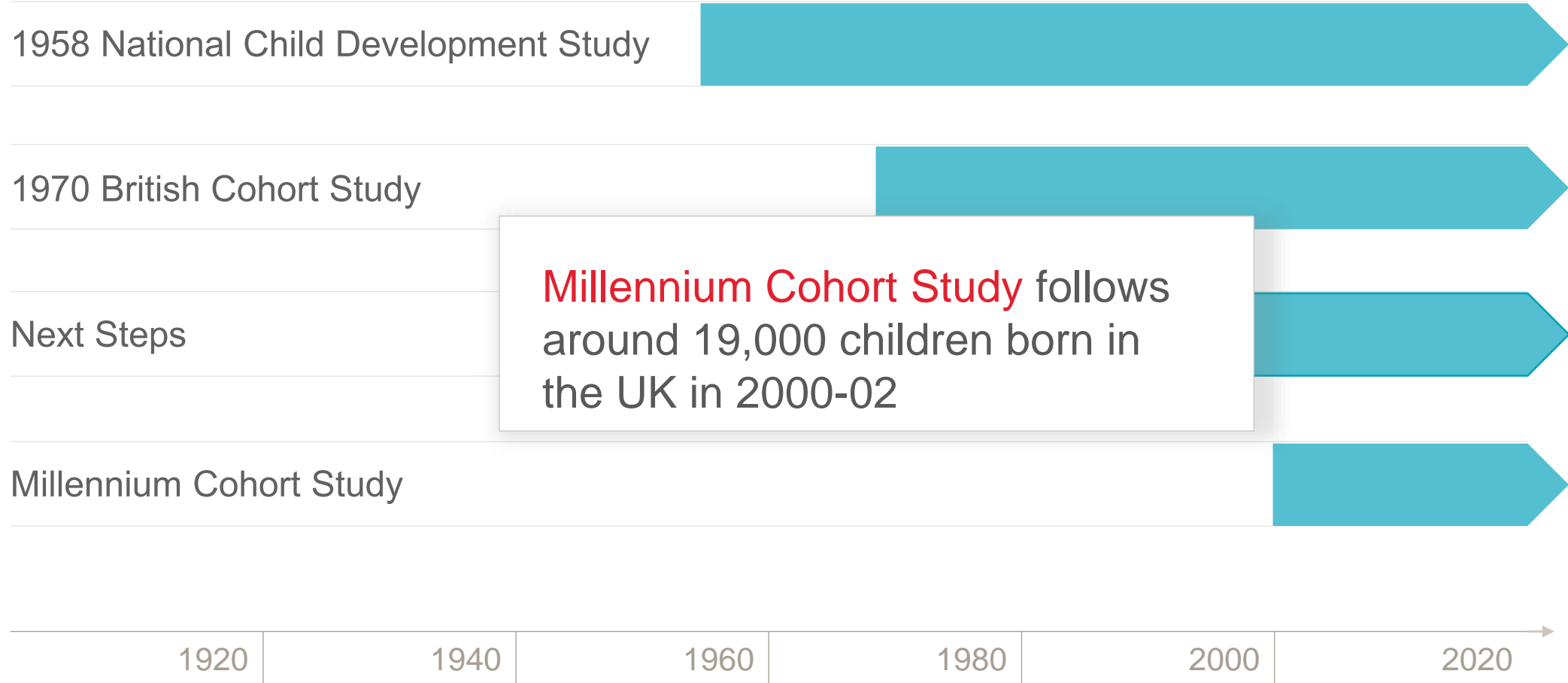
# About CLS

- The [Centre for Longitudinal Studies](#) is home to four\* national longitudinal cohort studies, which follow the lives of tens of thousands of people
- Each of our four studies follows large, nationally representative groups of people born in a given time period (week, year etc)
- By collecting information from the same people over time, as they live their lives, our studies are powerful resources for answering important research questions

# Timeline of the studies



# Timeline of the studies



# COVID-19 surveys

Wave	Dates	Context	Mode
Wave 1	May 2020	First national lockdown	Web
Wave 2	Sept/Oct 2020	Eased restrictions	Web
Wave 3	Feb/Mar 2021	Third national lockdown	Web → Telephone

Study	Age in 2020
MCS	19
Next Steps	30
BCS70	50
NCDS	62

# Other CLS-Affiliated Studies

## Early Life Cohort Feasibility Study

- A two-year ESRC funded project which started in April 2021 that will test the feasibility of a new UK-wide birth cohort study

## Children of the 2020s Study

- A new nationally representative birth cohort study of babies in England which has been commissioned by the Department for Education (DfE)
- It will include babies born September - November 2021, and seeks to recruit over 8,500 families in mid 2022

## COVID Social Mobility and Opportunities (COSMO) study

- The study began in 2021 with a representative sample of young people in Year 11 across England
- UKRI funded, led by researchers from the UCL Centre for Education Policy and Equalising Opportunities and the Sutton Trust, in collaboration with CLS



# About the Millennium Cohort Study (MCS)

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# About the UK Millennium Cohort Study

- Millennium Cohort Study (MCS) is a birth cohort study of around 19,000 individuals born in 398 areas of the UK in 2000-2002
- Highly multidisciplinary survey, designed to capture the influence of early family context on child development and outcomes throughout childhood, into adolescence and through adulthood
- Collects information about cohort member's physical, socio-emotional, cognitive and behavioural development, as well as parental health, parents' employment and education, income and poverty; housing; neighbourhood among other topics

Joshi & Fitzsimons (2016). Study profile: The UK Millennium Cohort Study: the making of a multipurpose resource for social science and policy in the UK. *Longitudinal and Life Course Studies*, 7, 409-430.

Connelly & Platt (2014). Cohort Profile: UK Millennium Cohort Study (MCS). *International Journal of Epidemiology*, 43, 1719-1725.

# The MCS population

All children born between

1/09/2000 and 31/8/2001 (England and Wales)

24/11/2000 and 11/1/2002 (Scotland and Northern Ireland)

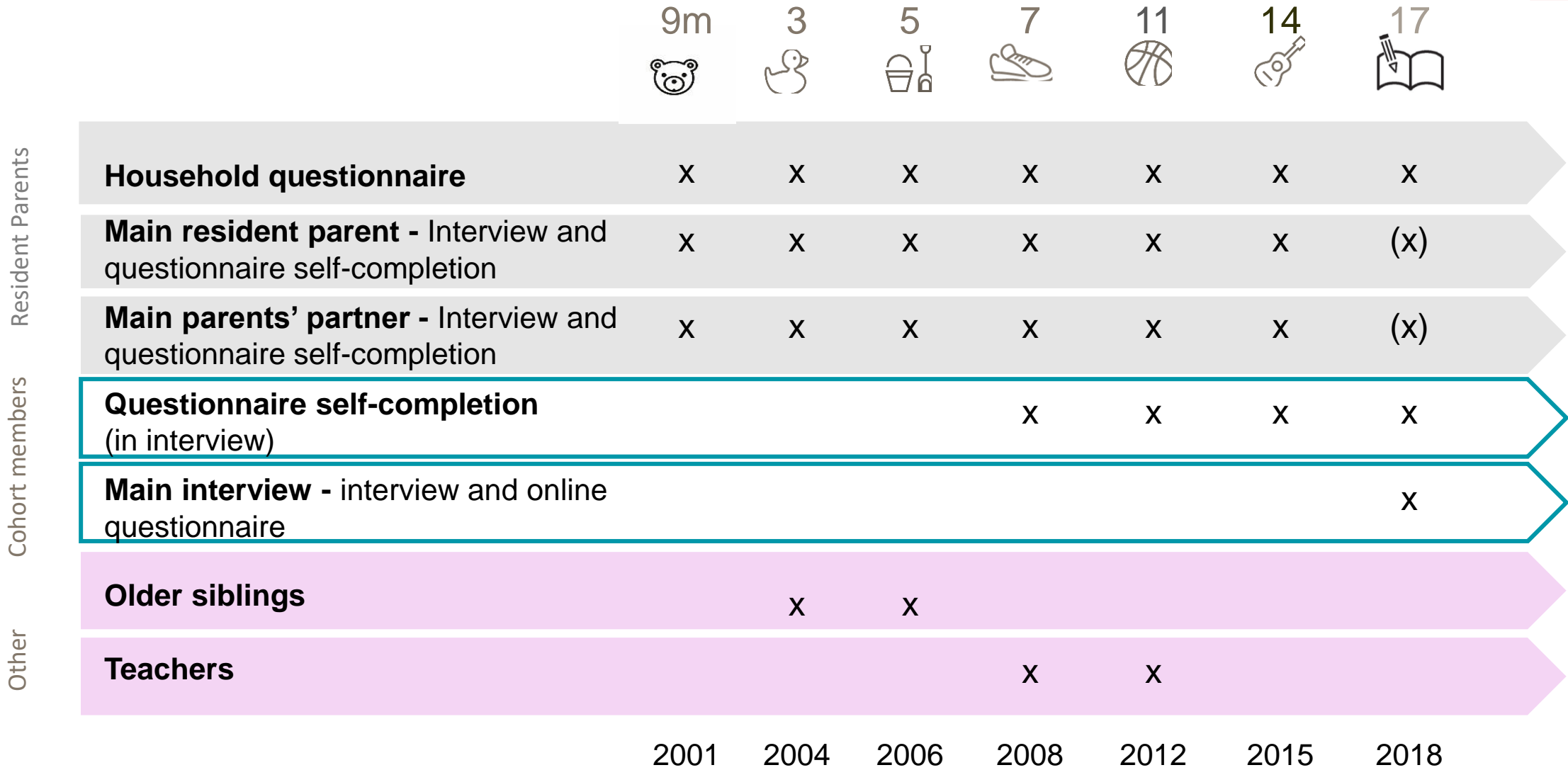
AND

alive and living in the UK at age 9 months, and eligible to receive Child Benefit at that age








Oversamples for:

- Wales, Scotland and Northern Ireland
- areas with high child poverty and,
- in England, areas with higher ethnic minority populations

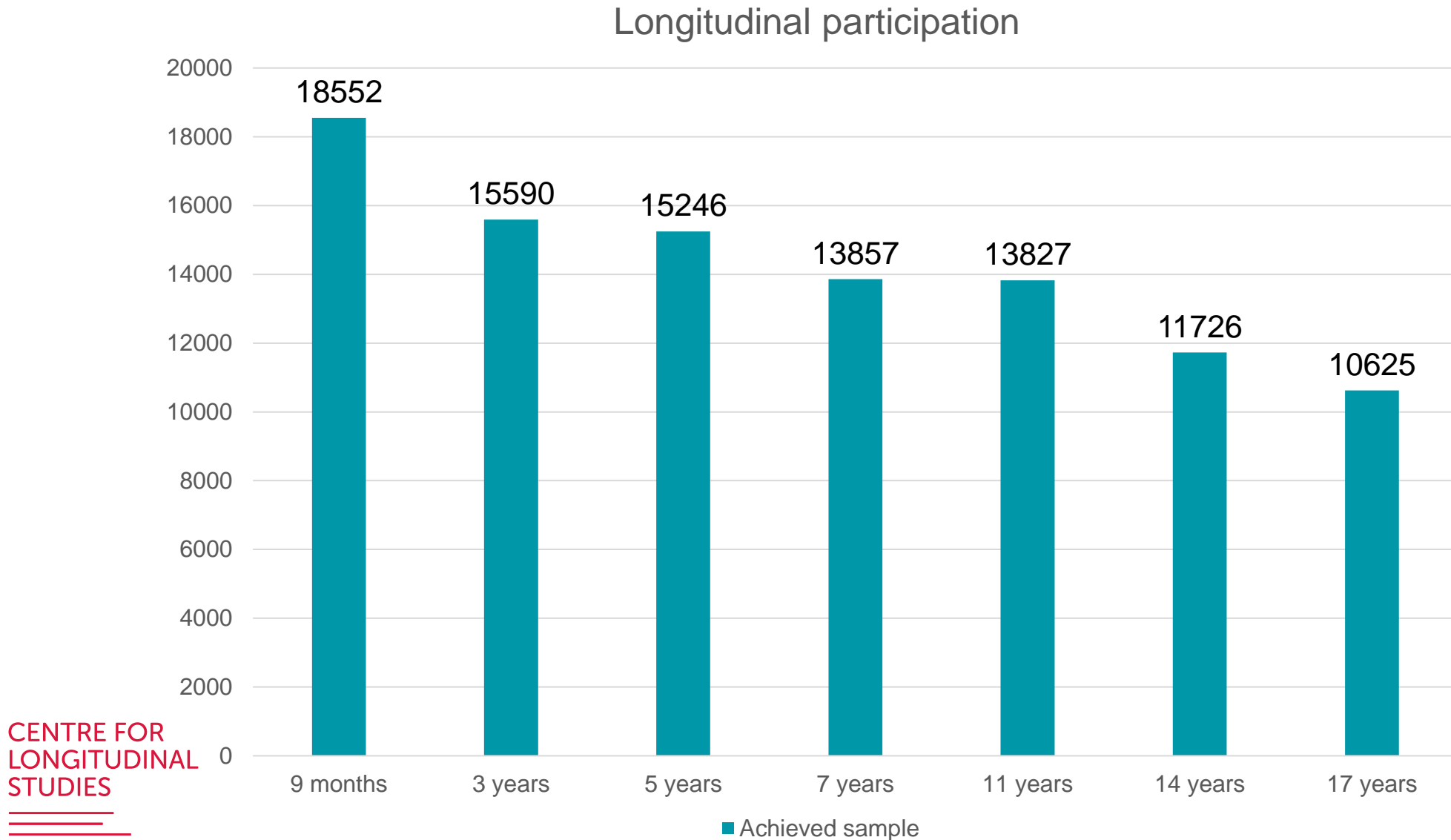
# Overview of MCS timeline and main survey



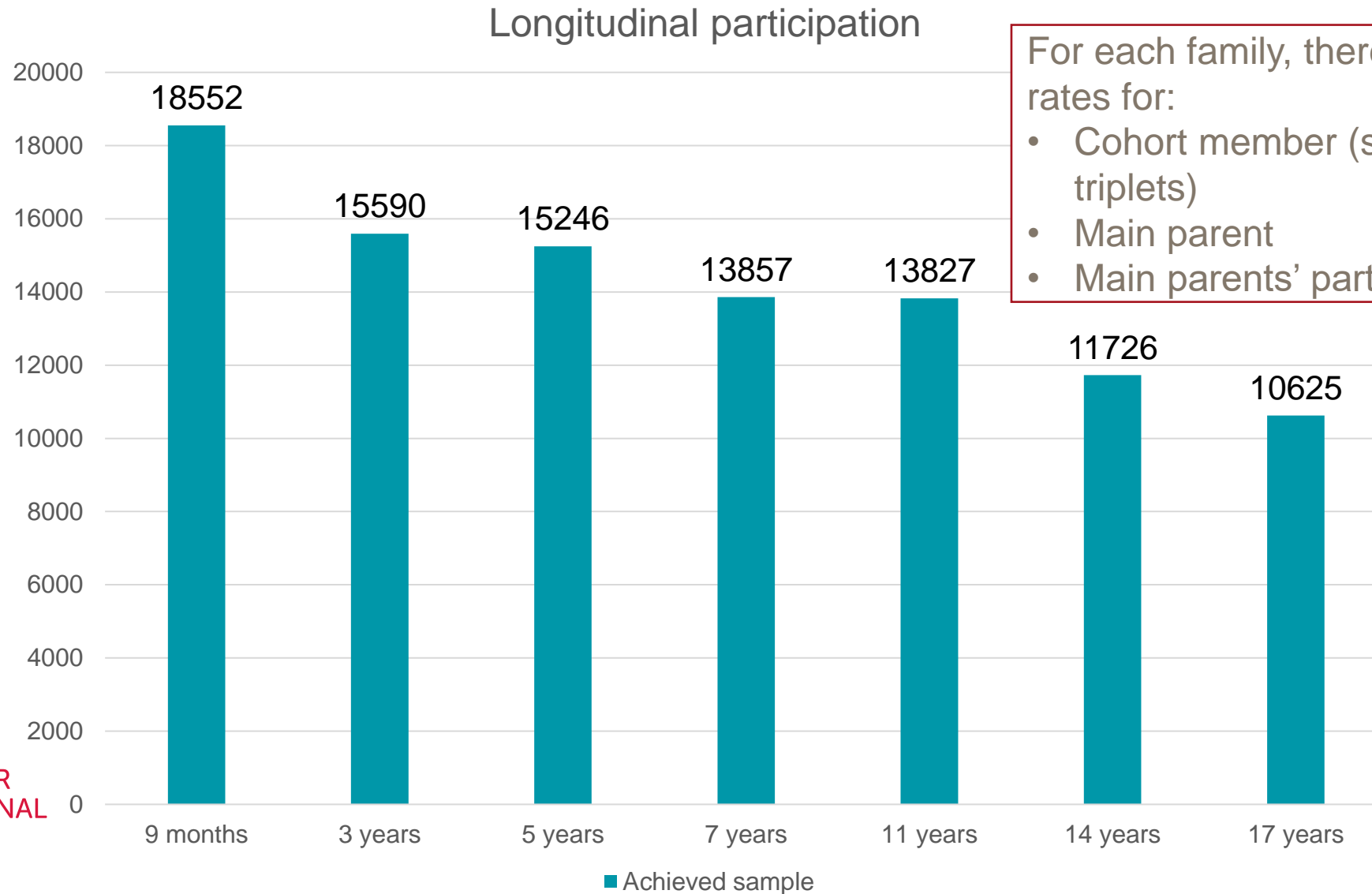
# Overview of MCS cohort members (CM) data

	9m	3	5	7	11	14	17
							
Physical measurements	X	X	X	X	X	X	X
Cognitive assessments		X	X	X	X	X	X
Activity monitor				X		X	
Time use record						X	
Saliva for DNA & genotyping						X	
Consent for linking admin data	health records; education records; parents' and CM's economic records; police and criminal justice						
	2001	2004	2006	2008	2012	2015	2018

# MCS achieved sample (Number of families)



# MCS achieved sample (Number of families)



For each family, there are also response rates for:

- Cohort member (singleton, twin and triplets)
- Main parent
- Main parents' partner

# Examples of research using MCS



## After-school clubs 'boost poorer pupils' results'

By Katherine Sellgren  
Education reporter

🕒 20 April 2016



## Children over seven suffer most from divorce fallout



Fathers leaving the family home after a child is older than three caused a higher rate of emotional problems

GETTY IMAGES

# The Guardian

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## Children living in more costly homes have fewer mental health problems – study

**UCL findings highlight key role that value of family home plays in  
child development**





# The Daily Telegraph

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## More than a third of UK teenagers overweight or obese

One in five young people obese at 17 and one in seven (14%) were overweight, with those from poorest families at greatest risk

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By Patrick Sawyer, SENIOR NEWS REPORTER

17 December 2020 - 12:01am

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# Data, by theme

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# Themes

- Family and relationships
- Education and cognition
- Physical health
- Mental health and well-being
- Behaviours, attitudes and identity

...but there are many more

# Family and Relationships

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# Family and relationships

- Who is in the household
- Relationship to cohort member
- Age/number of siblings
- Biological, step, adoptive parents
- Age of parents when the cohort member was born
- Pregnancy, labour and delivery
- Family context, e.g. marital status and partnership formation / dissolution, language spoken, ethnicity
- Socio-economic context of family e.g. parents' employment, social class, income, housing



# Family and relationships

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## Early years

Parents relationship (9m)  
Social support (P, 9m,3)  
Father involvement (9m, 3)  
Grandparents (9m, 3)  
Maternal attachment (9m)  
Child-parent relationship – Pianta SF (3)  
Parenting activities (3)  
Parenting values (3)  
Discipline (M, 3)  
Child environment – Home\_Sf (Int., 3)



## Primary school years

Parents relationship (5)  
Parenting activities (5,7,11)  
Discipline (M, 5,7)  
Partners relationship with CM (11)  
Relationship with siblings (5,7)  
Friends (7,11)



## Adolescence

YP Social Provisions Scale (14,17)  
Parenting activities (14)  
Relationship with parents (14,17)  
Friends (14)  
Romantic relationships (14,17)  
Sexual experiences (14,17)

# Education and cognitive measures

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# Educational attainment

- Parental education
- Early education provision (5,7)
- Foundation Stage Profile (and equiv.) (5)
- Teacher assessment (7,11)
  - Abilities, groupings/sets, behaviour, language, SEN etc.
- Key stage 1, 2, and GCSE (National Pupil Database)
  - GCSE or equiv. self-report
- Study intentions (11, 14)
- Higher education
  - Degree subject (17)
  - University type (17)

# MCS Cognitive Assessments/Skills

<u>Developmental milestones</u>	9 months
<u>School readiness (BSRA-R)</u> Colours, letters, numbers, sizes, comparisons, shapes	3
<u>Verbal skills</u> BAS II Naming Vocabulary BAS II Word Reading APU Vocabulary Test	3,5 7 14 (and parents)
<u>Verbal reasoning</u> BAS II Verbal Similarities	11
<u>Non-verbal reasoning</u> BAS II Picture Similarities	5
<u>Mathematics and numeracy</u> NFER Progress in Maths Number Analogies (GL)	7 17
<u>Visual/spatial processing</u> BAS II Pattern Construction	5,7
<u>Decision making (CANTAB)</u> Cambridge Gambling Task	11,14
<u>Memory</u> (spatial working) (CANTAB)	11

# Physical Health

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# Physical Health in MCS – measurements and samples

- Anthropometrics:
  - Height, Weight and BMI (3,5,7,11,14,17)
  - Waste circumference (5,7)
  - Body fat (11,14,17)
- Samples:
  - Saliva sample – DNA extraction and genotyping (14)
  - Oral fluid sample - assays used to detect variety of infections (3)
  - Milk teeth - test for exposure to lead in the environment. (7)
- Activity monitor (7,14)
  - Actigraph – every day for 7 days during waking hours (7)
  - Geneactiv accelerometer – 1 weekday & 1 weekend day measured physical and sedentary activity (14)
    - Activity monitor was paired with time use diary: sample and day selection the same

# Assessment of Physical Health

- Parents health
- Parent/self-assessed of CM's general health (3, 5, 7, 11,14,17)
- Medical conditions/Long standing illness (9m, 3, 5, 7,11,14,17)
- Adolescence:
  - Pubertal Development Scale (adapted) (14)
  - Periods (14,17)
  - Sex, contraception, pregnancy, STIs (17)
- Linked administrative health records:
  - Hospital Episodes Statistics (in Scotland, Wales)

# Health behaviours

- Physical activity (7,11,14,17)
- Diet
  - YP Eating Choices Index (4 item index to measure healthiness of diet) (14,17)
  - Dieting (14,17)
  - Body image (14,17)
- Sleep (14,17)
- Drugs (14,17)
- Smoking (11,14,17)
- Drinking (11, 14, 17)



# Mental health and well-being

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# Mental health and well-being I

Parent	Cohort member
	<u>Strengths and Difficulties Questionnaire (SDQ)</u> Emotional symptoms, conduct, and peer problems, and hyperactivity, prosocial behaviour - parent-report about CM (3,5,7,11,14,17) - teacher report (7,11) - CM report (17)
<u>Kessler 6 (K6)</u> (3,5,7,11,14,17) Depressive and anxiety symptoms	YP <u>Kessler 6 (K6)</u> (17)
	<u>Mood &amp; Feelings Questionnaire (Shortened)</u> (14)
	Diagnosis of depression or anxiety (17)
	<u>Self-harm</u> : 6 questions from the Edinburgh Study of Youth and Transitions incl. attempted suicide (17)

# Mental health and well-being II

Parent	Cohort member
Shortened Rosenberg <u>Self-Esteem</u> Scale (9m)	YP Shortened Rosenberg <u>Self-Esteem</u> Scale, (11,14,17)
	YP Warwick-Edinburgh <u>Mental Wellbeing</u> Scale (WEMWBS) (17)
<u>Life satisfaction</u> (9m,3, 5, 7,11)	<u>Life satisfaction</u> (11)
<u>Happiness</u> (9m, 3, 5, 7,11)	<u>Happiness</u> (11,14)

# Behaviours, attitudes and identity

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# Behaviours

- Temperament (14 items – Carey Infant Temperament Scale) (9m)
- Personality - Big Five personality traits (OCEAN) (M&P 7,14) (CM, 17)
- Self-regulation (3,5,7)
- YP Brief Self-Control Scale (17)
- Risky and antisocial behaviour (11,14,17)
  - Stealing, gambling, criminality, gangs, contact with police
- Risk and time preferences (17)
- Bullying, victimisation (11,14,17)

# Attitudes and identity

- Activities and interests (7, 11, 14, 17)
- Aspirations (7,11,14,17)
- Attitudes: Politics, Employment, Couples with children, Abortion, Race, Religion, The environment
- Sexual, gender, ethnic, religious identity, sexual attraction

# Data enhancements and innovations

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# Access to different types of data

Access to data held by the UK Data Service varies depending on how the data is classified:

**Tier 1:** [End User Licence \(EUL\)](#) for access to data with a low level of sensitivity and disclosivity.

- Most of our data are available under this licence.
- Your application is authorised directly by the UK Data Service, and you can download the data directly from there.

**Tier 2a:** [Special Licence \(SL\)](#) for access to moderately sensitive or disclosive data. Access through the UK Data Service and application approved by CLS before you can download the data.

**Tier 2b:** [Secure Access Licence \(SA\)](#) for access to the most sensitive and/or potentially disclosive data. Access through the UK Data Service and attend a specialised training course.

<https://cls.ucl.ac.uk/data-access-training/data-access/>



# CLS record linkage programme – available data in MCS

Domain	Country	Data set / information	Access
Education	England	<ul style="list-style-type: none"> <li>National Pupil Database (NPD) KS1,KS2</li> <li>National Pupil Database (NPD) (KS1-KS4 including GCSE results, pupil level school census data and absence data)</li> </ul>	via the UKDS (SA) via the UKDS (SA)
	Scotland	<ul style="list-style-type: none"> <li>NPD KS1</li> </ul>	via the UKDS (SA)
	Wales	<ul style="list-style-type: none"> <li>Welsh National Pupil Database (KS1)</li> <li>Welsh National Pupil Database (up to KS4) in SAIL Databank</li> </ul>	Via the UKDS (SA) via SAIL
Health	Scotland	<ul style="list-style-type: none"> <li>Inpatient, Outpatient, Birth Records, Immunisation, Prescribing Information, Child Health Review,</li> </ul>	via the UKDS (SA)
	Wales	<ul style="list-style-type: none"> <li>Up to age 11- Health, Emergency Hospital inpatient (PEDW), Primary Care General Practice, Welsh Demographic Service.</li> <li>Cohort members up to age 14 and parents in SAIL Databank</li> </ul>	via SAIL via SAIL

# Geographical data enhancements

Available via the UKDS

Domain	Country	MCS sweep	Data set / information	Access
Neighbourhood	UK	1 to 6	<ul style="list-style-type: none"><li>Geographic identifiers (SA)<ul style="list-style-type: none"><li>For example, electoral wards, Output Areas, Lower and Middle Super Output Areas, Parliamentary Constituency</li></ul></li></ul>	via the UKDS (SA)
	Great Britain	4,5,6	<ul style="list-style-type: none"><li>Ordnance Survey Point of Interest (PoI)<ul style="list-style-type: none"><li>3 levels (3<sup>rd</sup> level 600+ classes e.g. fast food outlets)</li></ul></li><li>Ordnance Survey Integrated Transport Network (ITN)<ul style="list-style-type: none"><li>Topological snapshot of the entire road network to create 400, 800 and 1600 metres network-based buffers.</li></ul></li></ul>	via the UKDS (EUL)
	Great Britain	3,4,5,6 1 to 6	<ul style="list-style-type: none"><li>Banded distances:<ul style="list-style-type: none"><li>Home and school</li><li>Home moves between sweeps</li></ul></li></ul>	via the UKDS (EUL)

# Harmonised data sets (in MCS and across other British cohorts)

Available via the UKDS (EUL)

Domain	MCS sweep	Data set / information
Socio-Economic	5 (age 11)	<ul style="list-style-type: none"><li>• Highest parental social class (RG 1990 version)</li></ul>
Body Mass Index (BMI)	1 to 5	<ul style="list-style-type: none"><li>• Weight</li><li>• Height</li></ul>
Mental health	5 (age 11)	<ul style="list-style-type: none"><li>• Four domains: emotional, peer problems, behavioural and attention / hyperactivity problems</li></ul>

# MCS COVID-19 and serology surveys

Available via the UKDS (EUL)

<https://cls.ucl.ac.uk/covid-19-survey/>

COVID-19 surveys response		
	MCS cohort members	MCS parents
Wave 1	2,645	2,831
Wave 2	3,274	5,707
Wave 3	4,474	5,251

Serology survey response		
	MCS cohort members	MCS Parents
Invited	5,266	7,143
Consented	1,397	3,214
Blood sample returned	1,140	2,266

## Serology Survey:

- Participants who took part in one of three COVID-19 Surveys were invited to provide a finger-prick blood sample
- Two antibody tests conducted - N-assay and S-assay
  - N-assay more likely to identify naturally occurring antibodies through exposure to virus
  - S-assay more likely to identify antibodies occurring following vaccination

# Genetic data

- MCS6 saliva samples were collected from cohort members and resident biological parents for DNA extraction:
  - Approx. 200 twins or triplets
  - Triads (cohort, mother, father) @47%, cohort and one parent @44%
- Now available, genotyped data - single chip ([Infinium Global Screening Array](#))

Cohort member	8,031
Mother	8,181
Father	4,782
<b>Total</b>	<b>20,994</b>

- Working on: polygenic scores for multiple phenotypes

# Genetic data access

- Data access system via CLS Data Access Committee
- Data sharing principles and approval criteria set out on the CLS Data Access Framework
- Complete CLS Data Access Request - which includes:
  - i. Research project description (up to 500 words)
  - ii. Brief methodology description (up to 500 words)
  - iii. Ethico-legal issues including sensitive or controversial social topics (up to 500 words)
- And attaching MCS\_Data\_Dictionary.xlsx with requested variables
- Bespoke survey dataset identified by a specific project ID

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## CLS Data Access Request

**1. CLS Data Access Application Form** DAC REF:

The CLS Data Access Committee (CLS DAC) welcomes applications to access CLS research data not publicly available via the UK Data Service or other data repositories, and biological samples. Please read the [CLS Data Access Guidelines](#) below (p. 9) prior to completing this form.

**1.1. Main data applicant**  
For applications by students, the main data applicant must be the project supervisor.

Name:	
Affiliation and work Address:	
Academic email address:	
Website (e.g., ORCID or institutional website)	
Telephone:	

**1.2. Research team and collaborators**  
Please list the names of all member(s) of your research team who need access to the data and their contact email address.

Name	Affiliation	Email address

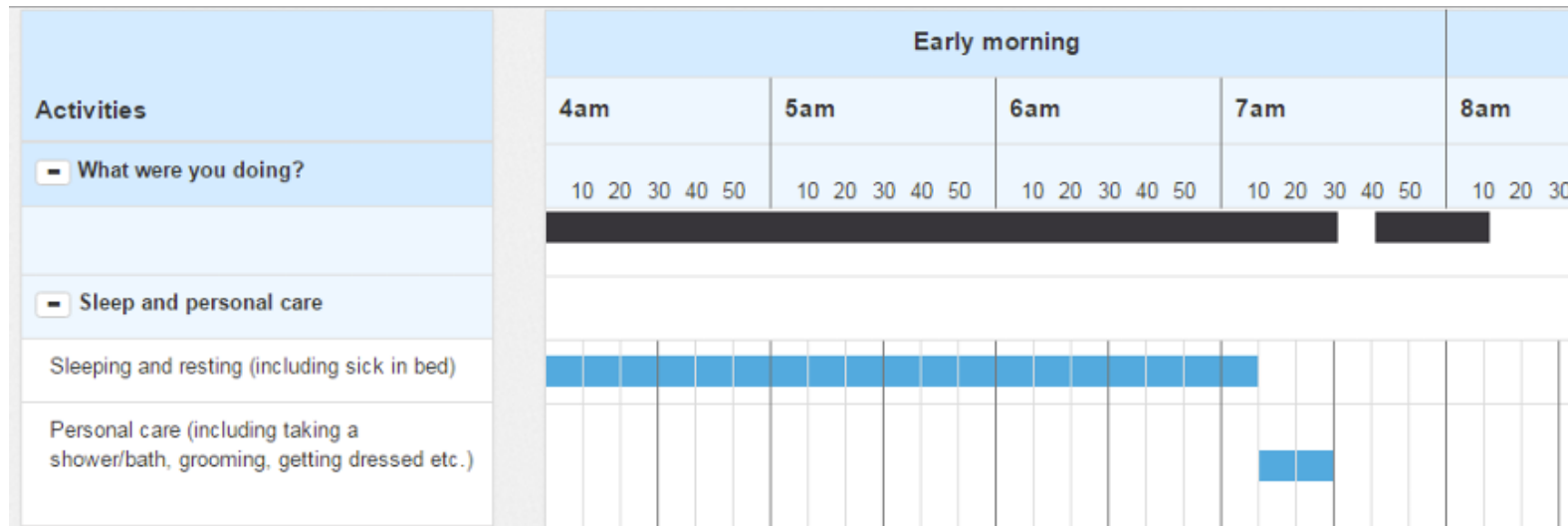
You may add rows for additional users if required.

CLS Application for Data Access

1

# Time use diary (MCS6 - age 14)

- Time use diary was paired with activity monitor: sample and day selection the same
- Full record of activities collected for 2 selected days; also collected information on where they were, who they were with, & how much they liked the activity
  - 4,851 CMs completed day 1 of the time-use record
  - 4,095 CMs completed day 2 of the time-use record
  - 8,946 TOTAL days of information



- Sleep & personal care
- School, homework & education,
- Paid or unpaid work...
- ...Hobbies and other free time activities
- Any other activity

# Sample design and weights



# MCS Sample Design

- Stage 1: Selection of electoral wards (398)
  - Ethnic
  - Disadvantaged
  - Advantaged
- Stage 2: Selection of families (with children alive and living in the UK at age 9 months (27201)
- Sample of children drawn from child benefit records held by DWP

# Stratification

Population stratified by country - England, Wales, Scotland, Northern Ireland.

Further stratification within country:

- 1) **(England only)** '*Ethnic minority*' stratum: children living in wards which, in the 1991 Census, had an ethnic minority indicator of at least 30%, i.e. at least 30% of their total population fell into the two categories 'Black' (Black Caribbean, Black African and Black Other) or 'Asian' (Indian, Pakistani and Bangladeshi)
- 2) '*Disadvantaged*' stratum: children living in wards, other than those in stratum (1), which fell into the upper quartile (poorest 25% of wards) of the ward-based Child Poverty Index (CPI) for England and Wales
- 3) '*Advantaged*' stratum: children living in wards, other than those falling into stratum (1), which were not in the top quartile of the CPI

# Clustering

Primary sampling unit: electoral ward

Within wards, aim to recruit 100% of children born in the eligible period

COUNTRY	Number of Sampled Wards	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
ENGLAND	200	11532	10050	9717	8839	8618	7678	7124
WALES	73	2761	2261	2181	2018	1881	1669	1415
SCOTLAND	62	2336	1814	1814	1628	1480	1263	1105
N IRELAND	62	1923	1465	1534	1372	1308	1116	981
TOTAL UK	398	18552	15590	15246	13857	13287	11726	10625

# Weighting

Analysis should take into account:

- i. stratification and clustering sample design features – otherwise standard errors will likely be underestimated and resulting significance tests invalid
  - **Stratification variable**  
9 different strata - stratum variable is **pttype2**
  - **Clustering variable**  
398 wards were the primary sampling unit - ward variable is **sptn00**
- ii. attrition and non-response

# Attrition and non-response

- Attrition is the discontinued participation of some individuals in a longitudinal survey for reasons that are unknown and/or beyond the control of the researcher
- Unit non-response (attrition) and item non-response (missing data)
- Types of unit non-response:
  - Non-contact
  - Refusal
  - Inability
- Non-response on the increase in all surveys
- Non-response may not be permanent
- Non-response/attrition can have some important implications

# Sampling and attrition weights

- Sampling weights: adjust the sample composition to take account of over-sampling in the first wave.
- Attrition weights: adjust the sample composition to take account of the loss of particular type of respondents.
- Adjustment means giving more importance (weight) to a particular group.
- Overall weights = Sampling Wgt x Attrition Wgt

# Applying survey design in Stata: svy

Example using variables from MCS7:

```
svyset sptn00 [pweight=govwt2], strata(pttype2) fpc(nh2)
```

- **sptn00** : Electoral ward ID.
- **govwt2**: overall weight in MCS7 for whole of UK analysis (you need to choose the correct one)
- **pttype2**: Stratum ID.
- **nh2**: finite population coefficient.

# Choosing the correct weight

- The choice of the weight depends on the analysis you are doing. The weight should correspond to the most recent sweep of data you are using and depending on whether it is a whole of UK or single country analysis.
- If you are using a Stata regression command which does not support 'svy' then you should use the weight option (specifying the correct weight e.g. **govwt2** for MCS7) and use the stratum (**pttype2**) as another control variable in your regression.



# Resources and data access

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<https://cls.ucl.ac.uk/cls-studies/millennium-cohort-study/>

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COVID-19



Our studies



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Publications and resources



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## Millennium Cohort Study

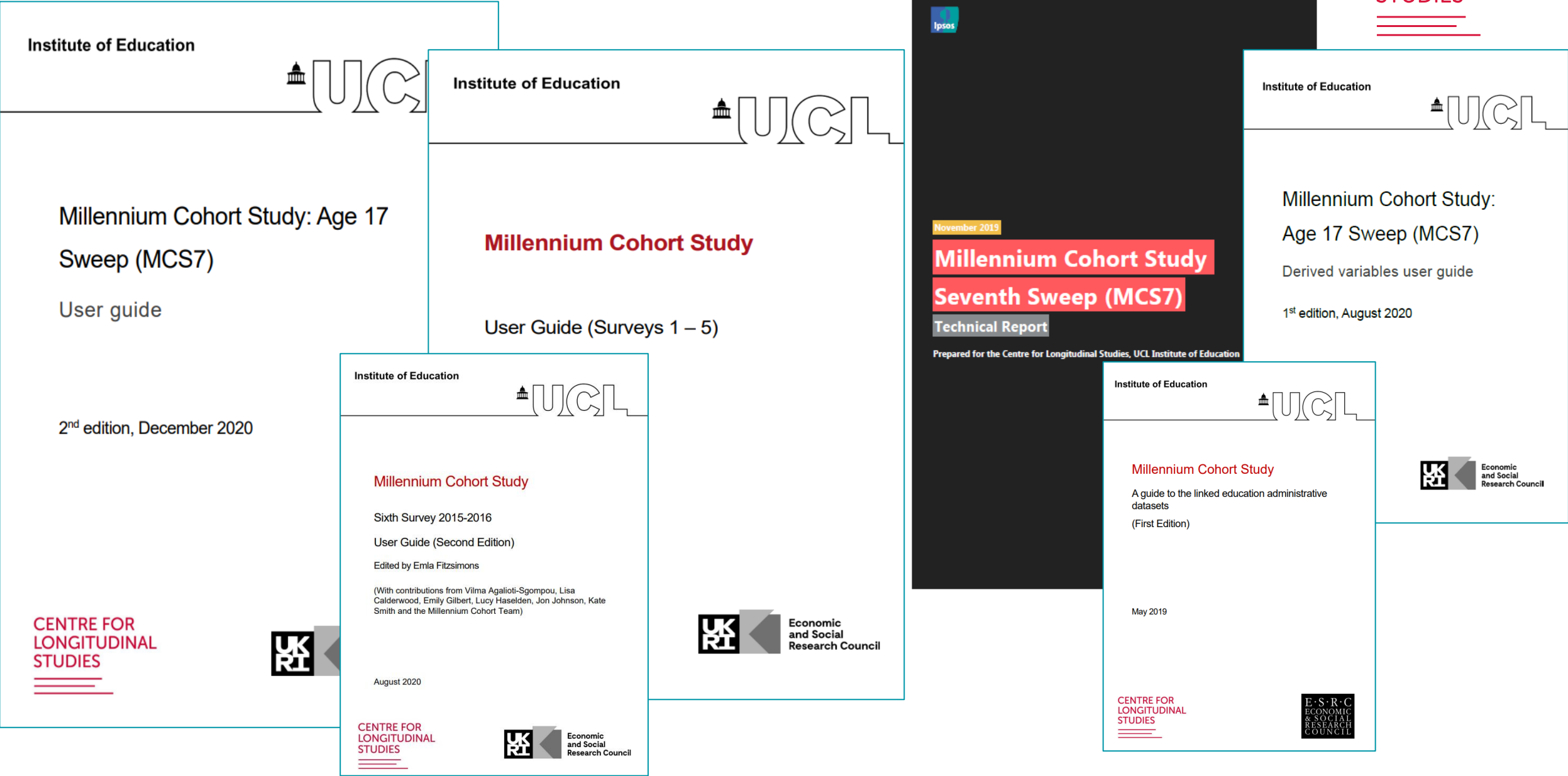
On this page: [Introduction](#) [Sweeps](#) [COVID-19 survey and data](#) [Sub studies](#) [Latest from MCS](#) [Age 17 initial findings](#) [Recent publications](#) [Study features](#) [Popular documentation](#) [Data access](#) [Principal Investigator](#) [More related content](#)



### CHILD OF THE NEW CENTURY

The Millennium Cohort Study (MCS), known as 'Child of the New Century' to cohort members and their families, is following the lives of around 19,000 young people born across England, Scotland, Wales and Northern Ireland in 2000-02. The study began with an original sample of 18,818 cohort members.

[+ more](#)



# Available resources

- User guides
  - Overview of measures; Response and weights
- Questionnaires
  - Exact question wording; Questionnaire routing; Variable names
- Data documentation
  - Data notes; Coding frames; Variables lists, including derived variables
- Technical reports
  - Sample and questionnaire design, development
  - Fieldwork, response, ethics
  - Coding, editing
- Data dictionaries
- Previous journal publications <https://cls.ucl.ac.uk/publications-and-resources/>

# SEARCH Closer Discovery (discovery.closer.ac.uk/)

About

Search

Explore

Lists 0

Item Type

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☒ Variables (-476)

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☒ Questions (-8)

More...

Refine


Reset

Study

Life Stage

Topic

Help



Explore the content of UK longitudinal studies

UKRI

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mental health

Q

Sort by: Item Type

Item types: Variables, Questions

Query: mental health

Search within: Millennium Cohort Study

Search life stages: Adolescence

Results 1 to 50 of 484 (0.04 seconds)

CW3\_MHNOW

Current mental health self assessment

Mental health and mental processes (CV19)

Study: Millennium Cohort Study / Sweep: Age 20 COVID-19 Survey (2021) Wave 3 / Dataset: MCS Parent COVID-19 Survey in Five National Longitudinal Cohort Studies (2020) Wave 3 Dataset

CW3\_MHNOW

Current mental health self assessment

Mental health and mental processes (CV19)

Study: Millennium Cohort Study / Sweep: Age 20 COVID-19 Survey (2021) Wave 3 / Dataset: MCS Cohort Member COVID-19 Survey in Five National Longitudinal Cohort Studies (2020) Wave 3 Dataset

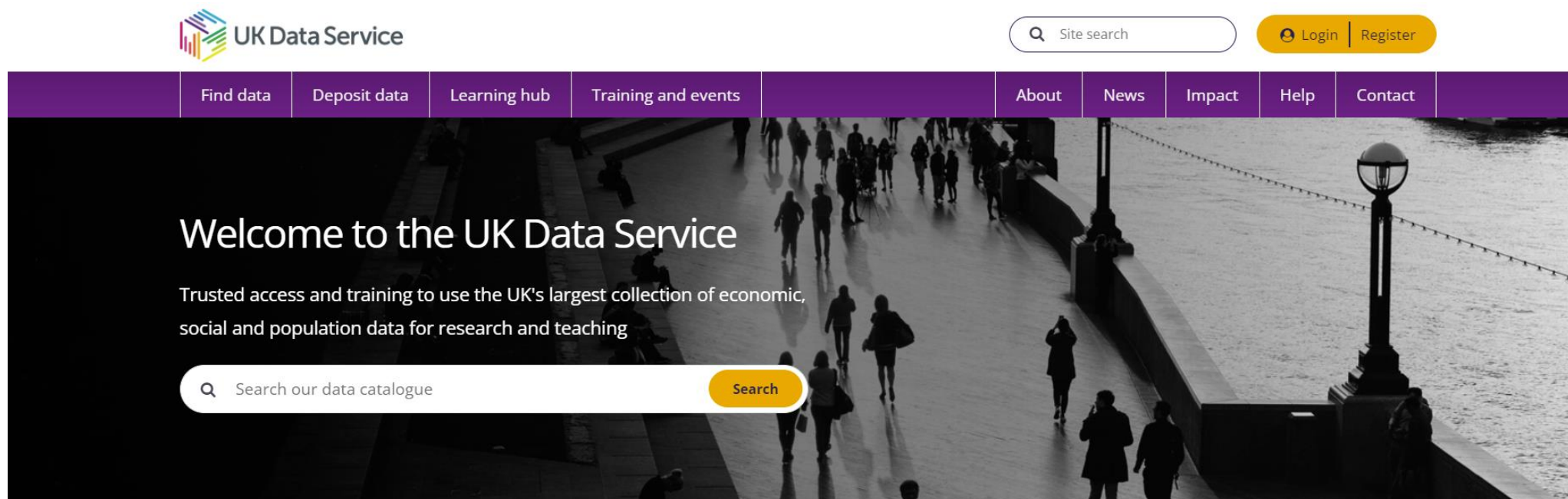
ECQ72X00

How much people risk harming themselves by drinking one or two per day

Mental health and mental processes

Study: Millennium Cohort Study / Sweep: Age 11 Survey (2012) / Dataset: MCS5 Child Paper Self-Completion Dataset

Data freely available to researchers, government analysts and third sector workers: <https://ukdataservice.ac.uk/>



## Key services



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STUDIES

# Available Resources: UK Data Service

[Home](#) > [Data catalogue](#) > [Studies](#) > Study

Millennium Cohort Study: Seventh Survey, 2018

Details

Documentation

Resources

Access data

Documentation

Title	File name	Size (MB)
Information about the MCS Longitudinal Data Dictionary	<a href="#">mcs_longitudinal_data_dictionary_2021-02-03.xlsx</a>	1.35
MCS Data Handling Guide with syntax in R, STATA and SPSS, August 2020	<a href="#">mcs_data_handling_guide_ed1_2020-08-10.pdf</a>	1.2
MCS7 Derived Variables User Guide, 2nd Edition, December 2020	<a href="#">mcs7_dv_user_guide_age17_ed2_2020_12_08.pdf</a>	0.4
MCS7 Parent Online (CAWI) Questionnaire	<a href="#">mcs7-parent-online-cawi-questionnaire.pdf</a>	1.11
MCS7 Technical Report	<a href="#">mcs7_technical_report.pdf</a>	1.65
MCS7 User Guide, 2nd Edition, December 2020	<a href="#">mcs7_user_guide_age17_ed2_2020_12_08.pdf</a>	1.03
MCS7 Young Person Interview	<a href="#">mcs7-young-person-interview.pdf</a>	1.18
MCS7 Young Person Online (CAWI) Questionnaire	<a href="#">mcs7-young-person-online-cawi-questionnaire.pdf</a>	0.93
MCS7 Young Person Self-completion Questionnaire	<a href="#">mcs7-young-person-self-completion-questionnaire.pdf</a>	0.95
UK Data Archive Citation File for Study 8682	<a href="#">UKDA_Study_8682_Information.htm</a>	0
UK Data Archive Data Dictionaries	<a href="#">ukda_data_dictionaries.zip</a>	0.1
UK Data Archive ReadMe File for Study 8682	<a href="#">read8682.htm</a>	0

Millennium Cohort Study: Longitudinal Family File, 2001-2018

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Documentation

Title	File name	Size (MB)
MCS Data Handling Guide with Syntax in R, STATA and SPSS, August 2020	<a href="#">mcs_data_handling_guide_ed1_2020-08-10.pdf</a>	1.22
MCS Longitudinal Family File, August 2020, Edition 2	<a href="#">mcs_longitudinal_family_file_ed2_2020_08_07.pdf</a>	0.17
UK Data Archive Citation File for Study 8172	<a href="#">UKDA_Study_8172_Information.htm</a>	0
UK Data Archive Data Dictionaries	<a href="#">ukda_data_dictionaries.zip</a>	0
UK Data Archive ReadMe File for Study 8172	<a href="#">read8172.htm</a>	0



<http://discover.ukdataservice.ac.uk/series/?sn=2000031>

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Studies

Series

beta.ukdataservice.ac.uk/datacatalogue/series/series?id=2000031

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Millennium Cohort Study

Abstract

FAQ's

Resources

Access data

Access data

GN 33359

Millennium Cohort Study – Survey and Biomeasures Data

▼

GN 33445

Millennium Cohort Study - Linked Administrative Data

▼

GN 33530

CLOSER Work Package 1: Harmonised Height, Weight and BMI in Five Longitudinal Cohort Studies

▼

GN 33536

CLOSER Work Package 2: Harmonised Socio-Economic Measures in Four Longitudinal Cohort Studies

▼

GN 33557

Millennium Cohort Study - Geographical Data

▼

GN 33559

COVID-19 Survey in Five National Longitudinal Cohort Studies

▼

GN 33572

CLOSER Work Package 20: Harmonised Mental Health Measures at Age 10/11 in Selected British Cohorts

▼

Click on a series name or an arrow to see the datasets.

Add to account



# MCS 'Survey and Biomeasures Data'

## Millennium Cohort Study

[Abstract](#) [FAQ's](#) [Resources](#)

[Access data](#)

### Access data

GN 33359

Millennium Cohort Study – Survey and Biomeasures Data

SN	Study description	Explore online	Select
8756	<a href="#">Millennium Cohort Study, Sweeps 1-7, 2001-2019: Exact Participation Dates: Secure Access</a>		<input type="checkbox"/>
8755	<a href="#">Millennium Cohort Study, Sweeps 1-7, 2001-2019: Demographics, Language and Religion: Secure Access</a>		<input type="checkbox"/>
8754	<a href="#">Millennium Cohort Study, Sweeps 1-7, 2001-2019: Self-Reported Health, Behaviour and Fertility: Secure Access</a>		<input type="checkbox"/>
8753	<a href="#">Millennium Cohort Study, Sweeps 1-7, 2001-2019: Socio-Economic, Accommodation and Occupational Data: Secure Access</a>		<input type="checkbox"/>
8682	<a href="#">Millennium Cohort Study: Seventh Survey, 2018</a>		<input checked="" type="checkbox"/>
8172	<a href="#">Millennium Cohort Study: Longitudinal Family File, 2001-2018</a>		<input checked="" type="checkbox"/>
8156	<a href="#">Millennium Cohort Study: Sixth Survey, 2015</a>		<input type="checkbox"/>
7464	<a href="#">Millennium Cohort Study: Fifth Survey, 2012</a>		<input type="checkbox"/>
7261	<a href="#">Millennium Cohort Study: First Survey, Health Visitor Survey, 2002-2003</a>		<input type="checkbox"/>
7238	<a href="#">Millennium Cohort Study: Fourth Survey, Physical Activity Data, 2008</a>		<input type="checkbox"/>
6411	<a href="#">Millennium Cohort Study: Fourth Survey, 2008</a>		<input type="checkbox"/>
5795	<a href="#">Millennium Cohort Study: Third Survey, 2006</a>		<input type="checkbox"/>
5559	<a href="#">Millennium Cohort Study: Survey of Mothers who Received Assisted Fertility Treatment, 2003</a>		<input type="checkbox"/>
5350	<a href="#">Millennium Cohort Study: Second Survey, 2003-2005</a>		<input type="checkbox"/>
4683	<a href="#">Millennium Cohort Study: First Survey, 2001-2003</a>		<input type="checkbox"/>

GN 33445

Millennium Cohort Study - Linked Administrative Data

# Accessing the data

- Register and set up an account at the UK Data Service
- Search for the data using the 'find data' tab
  - MCS
- Before downloading the data
  - Click on 'Request Access'
  - Click on 'Complete Actions'
  - Agree to standard 'End User Licence'
  - Read and agree extra conditions
  - Choose data format and download zip file
    - SPSS
    - STATA
    - TAB (tab-delimited file)

# Merging data within and across sweeps

Institute of Education



## Millennium Cohort Study

Data Handling Guide

with syntax in R, STATA and SPSS

August 2020

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## Identify appropriate files

- Establish number of cases in target population

### 1. Check file structure: flat v hierarchical

- Transform if necessary

### 2. Identify merging variables:

a. Unique 'key' cohort ID (member or family)

b. Other ID's depending on merge

- Check the same variable name (case sensitive, changed across sweep etc)
- Create identical variable name if necessary

### 3. Check merged correctly

# Looking ahead

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Economic  
and Social  
Research Council

# Looking ahead

- MCS8, Age 22 survey
  - Consultation complete
  - Piloting and development
  - Data deposit at UKDS ~ 2025
- Linked administrative data
  - Linked Hospital Episodes Statistics ~ Summer 2022
  - Health data beyond 14 (Wales) ~ Autumn 2022
  - University application (England; UCAS) ~ end 2022
  - Police National Computer (PNC) England ~ end of 2022

# Proposed MCS8 content

## Education:

Academic and vocational learning and apprenticeships

Educational experiences

Qualifications

## Employment:

Occupation

Income

Labour market transitions

Asset accumulation

## Physical health and health behaviours

Longstanding

COVID-19

Height/Weight/Body fat

Substance use

Sleep

Diet and exercise

## Cognitive skills and processes:

Short-term memory

Working memory and attention

## Mental health and well-being

Psychological distress

Mental well-being

Life satisfaction

Loneliness

Coping mechanisms

Self-esteem

Positive childhood experiences

Body dysmorphia

## Family and relationships

Support from parents and family members

Social roles and interactions

Partnership formation and fertility

## Risky behaviours

## Activities, attitudes, aspirations

### Also:

Interviewing resident partners

Collecting information on offspring

# We've covered

- A brief overview of CLS and the MCS
- Examples of the types of research
- Data in the MCS by themes
- Enhancements and innovations
- Sample designs and weights
- Resources available and data access
- Q&A to the panel

Q&A to the panel

Please complete the feedback form



# Questions to the panel

## MCS team

- Lucy Haselden, Survey Manager
- Rachel Rosenberg, Research Data Manager
- Nicolas Libuy Rios, Research Fellow
  
- Vanessa Moulton, Senior Researcher
- and Morag Henderson, Associate Professor

IOE.CLS Data User Support

[clsfeedback@ucl.ac.uk](mailto:clsfeedback@ucl.ac.uk)

Thanks!

# Additional slides

# Key identifiers (ID's) - Use these ID's to link datasets

Key identifier	Key cohort member/family identifier format
<b>MCSID</b>	<p>Family identifier</p> <ul style="list-style-type: none"><li>- every family has the same ID across sweeps</li><li>- everyone in the family has the same family ID (Cohort Members, parents, relatives and other people living in the household)</li></ul> <p>7 characters: M followed by 5 digits, and a single character e.g. M10029A</p>
<b>CNUM</b>	Cohort members, 1, 2 (twins) or 3 (triplets)
<b>PNUM</b>	Person number, for everyone else in the family apart from cohort members: parents, siblings, grandparents, etc
<b>ELIG</b>	Eligibility for parent interview: a person selected for <u>Main</u> respondent and a person selected for <u>Partner</u> respondent
<b>RESP</b>	Response outcome for the person eligible for parent interview (ELIG): <u>Main</u> , <u>Partner</u> respondent or No interview (in cases of refusal).

# File structures: Flat v hierarchical

Type of file structure	Format	Examples in the cohorts
Flat	1 record per case	MCS – family files
Hierarchical	1 or more records per case	Household files Activities e.g. employment histories Relationship histories Time use diaries MCS - Person within family

BCSID	Sex	Country	Emp
M56768A	1	1	1
M56768A	1	1	3
M56768A	1	1	3
M46791B	2	1	1
M87955C	2	2	5
M87955C	2	2	2
M27614D	1	1	6
M27614D	1	1	1
M34972E	1	3	3

BCSID	Sex	Country	Emp1	Emp2	Emp3
M56768A	1	1	1	3	3
M46791B	2	1	1		
M87955C	2	2	5	2	
M27614D	1	1	6	1	
M34972E	1	3	3		

# Linked health administrative data in the cohorts

Country	Study	Data set / information	Access
England	NCDS, BCS, Next Steps	<b>Hospital Episodes Statistics (HES)</b> <ul style="list-style-type: none"> <li>Admitted Patient Care (APC)</li> <li>Critical Care (CC) – linked to APC</li> <li>Accident &amp; Emergency (A&amp;E)</li> <li>Outpatient Care (OP)</li> </ul>	Available at UKDS <a href="#">Link</a> via Secure Server
Scotland	BCS, NCDS, MCS	<b>Scottish Medical Records (SMR)</b> <ul style="list-style-type: none"> <li>Inpatient</li> <li>Outpatient</li> <li>Birth and Neonatal Records</li> <li>Prescribing Information</li> </ul>	Available at UKDS via Secure Server
	BCS, NCDS only MCS only	<ul style="list-style-type: none"> <li>Maternity</li> <li>Immunisations (SRS), Child Health Review</li> </ul>	
Wales	MCS	<ul style="list-style-type: none"> <li>Health data assets from SAIL Databank (e.g. emergency department, outpatient, COVID data) up to age 14 and for cohort members' parents</li> </ul>	Available at Secure Anonymised Information Linkage (SAIL) Databank
		<ul style="list-style-type: none"> <li>Hospitalisations &amp; no. of diagnoses from ICD 10 chapter codes up to age 11</li> </ul>	Available at UKDS via Secure Server

## Coming soon:

- HES data from NHS Digital linked to MCS
- HES refresh: new A&E, APC, CC, OP including COVID-19 data
- CLS will refresh the Welsh health dataset linked to MCS (2001-2012) currently available at the [UKDS](#)

More information available [cls.ucl.ac.uk](https://cls.ucl.ac.uk), including HES and SMR user guides and introductory training webinar video