

Cohort Studies

Health Studies User Conference 2018

CENTRE FOR
LONGITUDINAL
STUDIES



Dr David Bann Lecturer / Co-I of NCDS

What we do at CLS (ESRC funded)

- Run four major national longitudinal studies
 - Follow thousands of people across life
 - Collect extensive & rich data – physical, mental health

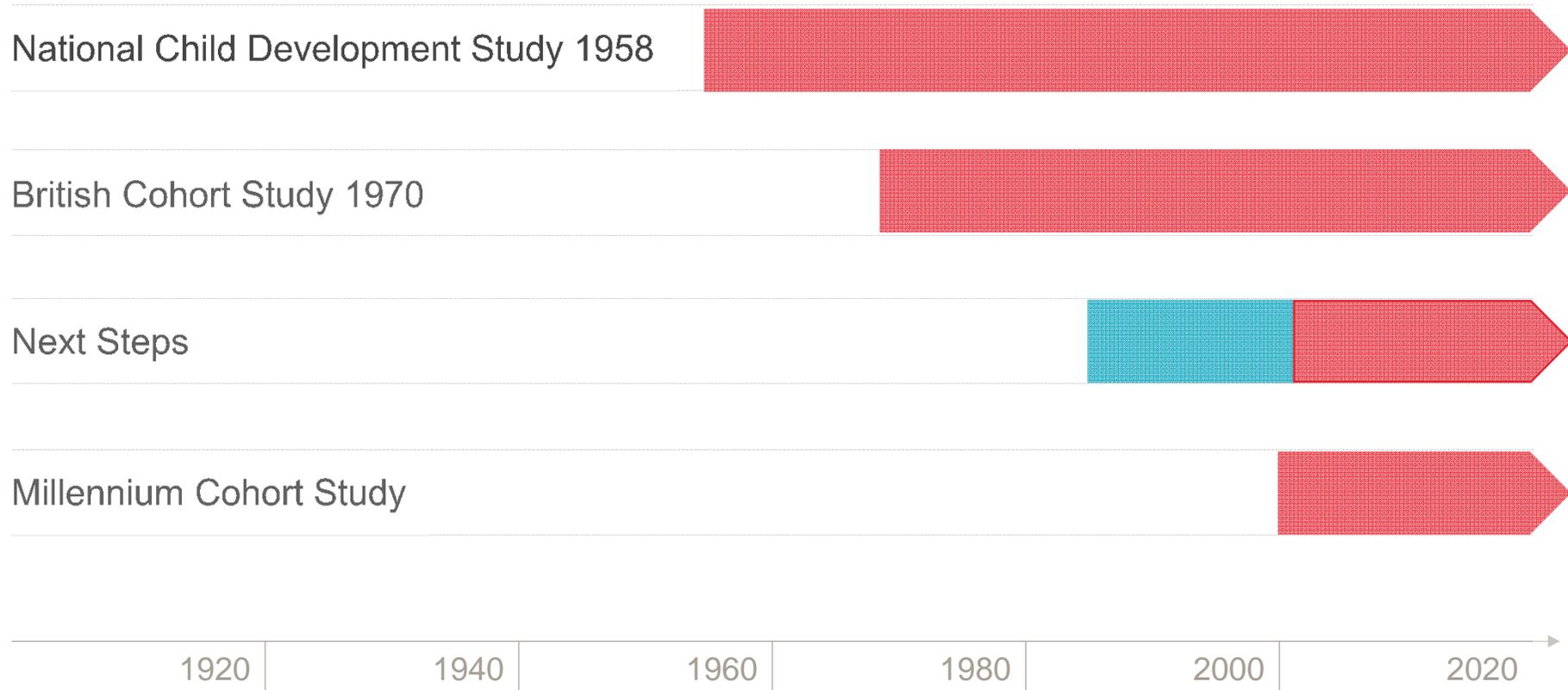
- Provide free data to research community (UK Data Archive)
 - Documentation, guidance & training

- Conduct research
 - Multidisciplinary, substantive & methodological (survey and statistical)

Follow-up across life, N>16,000



+MRC-funded 1946 cohort (N=5362)



The long shadow cast by childhood physical and mental problems on adult life

Alissa Goodman^a, Robert Joyce^a, and James P. Smith^{b,1}

Cigarette Smoking in Pregnancy: Its Influence on Birth Weight and Perinatal Mortality

N. R. BUTLER, H. GOLDSTEIN, E. M. ROSS

Work-family life courses and markers of stress and inflammation in mid-life: evidence from the National Child Development Study

Rebecca E. Lacey,^{1*} Amanda Sacker,¹ Meena Kumari,² Diana Worts,³ Peggy McDonough,³ Cara Booker,² and Anne McMunn¹

Time trends in adolescent mental health

Stephan Collishaw,¹ Barbara Maughan,¹ Robert Goodman,² and Andrew Pickles³

Life course trajectories of alcohol consumption in the United Kingdom using longitudinal data from nine cohort studies

Annie Britton^{1*}, Yoav Ben-Shlomo², Michaela Benzeval^{3,4}, Diana Kuh^{1,5} and Steven Bell¹

Factors associated with childhood cancer in a national cohort study

J. Golding¹, M. Paterson¹ & L.J. Kinlen²

Childhood Risk Factors for Lifetime Anorexia Nervosa by Age 30 Years in a National Birth Cohort

DASHA E. NICHOLLS, M.B.B.S., M.D., AND RUSSELL M. VINER, M.B.B.S., PH.D.

How active are our children? Findings from the Millennium Cohort Study

Lucy J Griffiths,¹ Mario Cortina-Borja,¹ Francesco Sera,¹ Theodora Poulidou,¹ Marco Geraci,¹ Carly Rich,¹ Tim J Cole,¹ Catherine Law,¹ Heather Joshi,² Andrew R Ness,³ Susan A Jebb,⁴ Carol Dezateux¹

Breastfeeding and Hospitalization for Diarrheal and Respiratory Infection in the United Kingdom Millennium Cohort Study

Maria A. Quigley, MSc, Yvonne J. Kelly, PhD, Amanda Sacker, PhD

Risk factors for childhood obesity at age 5: *Analysis of the Millennium Cohort Study*

Sinead Brophy^{1*}, Roxanne Cooksey¹, Michael B Gravenor¹, Rupal Mistry², Non Thomas³, Ronan A Lyons¹ and Rhys Williams¹

CLS data collections at a glance 2015-2020



Future plans involve consultation with academic community

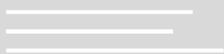
Adult biomedical data collections

Cohort:	Age	Data available
NCDS 1958	44/45y	Currently
	61y	~2021-22
BCS 1970	46y	~2019 (April)

Enormous scientific opportunities (both hypothesised and unforeseen):

- Single cohort analysis (eg, life course determinants of health)
- Cross-cohort analyses (eg, trends in health or health inequality)

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1958 cohort: measures planned for age 61y (fieldwork 2019-)

- Self-report:
 - Health conditions, physical & mental health, mental wellbeing, health behaviours
 - Online diet questionnaire
 - 1/3 life history questionnaire
- Measured:
 - Cognition (memory, verbal fluency, attention/mental speed)
 - Anthropometrics, body composition (TANITA)
 - Physical function (grip, balance, walking speed)
 - Blood pressure (resting & after exercise)
 - Blood (lipids, glucose, stored samples for 'omics, epigenetics etc)

1970 cohort: measures collected at 46y (fieldwork ongoing, with Natcen)

- Self-report:
 - Health conditions, physical & mental health, mental wellbeing, health behaviours, sleep
 - Diet (online diet questionnaire)
- Measured:
 - Cognition
 - Anthropometrics (Height, weight, waist), body fat
 - Blood pressure
 - Physical function (grip, balance)
 - Blood samples (lipids, DNA, storage)
 - Physical activity (activPAL)

Institute of Education



Thank you!

Any Questions?

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ukdataservice.ac.uk

cls.ioe.ac.uk

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Access from...UKDA (UK Data Archive)



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ACCESS DATA

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FIND DATA FAQ

1. Need to create an account
2. State the purpose of the project
3. Find datasets of interest
4. Agree to data security and other policies
5. Download the data and related supporting documents!

(in SPSS or STATA)

METADAC

School of Social & Community Medicine, University of Bristol
Tel: 0117 331 4070 | meta@bristol.ac.uk

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About the 1958 birth cohort

Home • About the 1958 birth cohort

Setup to:
Social Studies and Biomedical Data
Genetic Data
DNA and Biospecimens
Linked Resources

Access to genetic data and biological samples in NCDS via META-DAC

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metadac.ac.uk/1958bc-resource-types/

appendix

1958 cohort: measures obtained at 44/45y



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Approximately 9,000 study members took part at age 44/5 (2002/3)

- Biosamples: blood, saliva
- Blood pressure, pulse
- Standing and sitting height
- Weight, waist and hip circumferences
- Respiratory symptoms, ventilatory function (FEV1 and FVC)
- Visual acuity (near and distant), refractive error
- Hearing thresholds
- Depression and anxiety disorder (CIS-R)
- Chronic widespread pain
- Use of medications
- Alcohol use (AUDIT)
- Food frequency questionnaire, exercise habits

Early & late morning
saliva cortisol

Glycosylated haemoglobin
fibrinogen

Tissue plasminogen
activator

Von Willebrand factor

C-reactive protein

Triglycerides

Total and HDL cholesterol

Total and allergen-specific
immunoglobulin E

Insulin-like growth factor 1

Vitamin D

DNA

Lymphoblastoid cell lines

Genetic data

Epigenetic data
(N=240+300 underway)

Linkage of Health Administrative Records

Cohort	Type of data	Status
NCDS (1958)	Cohort death Hospital Episode Statistics	Available : Special Licence In progress (England and Scotland)
BCS (1970)	Hospital Episode Statistics	In progress (England and Scotland)
MCS (2000/1)	Hospital data	Available: Maternity and birth registration records: standard Hospital of birth: Special Licence
	Cohort members' health records	Consent at age 17
Next Steps (1989/90)	Hospital Episodes Statistics	Consent gained at age 25



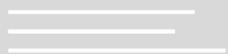
Next Steps Health Measures – Age 25 (self-assessed) (Newly available since end of June)

- General health
- Height and weight (derived BMI)
- Long standing mental or physical health condition and whether it effects
 - Vision; hearing; mobility; dexterity; learning or concentrating; memory; mental health; stamina or breathing or fatigue; socially or behaviourally
- Ability to work is limited for a health or disability reasons
- GHQ-12 Screening tool for symptoms of mental ill health
- Number of hospital admissions/ day surgery in the past 12 months
- Lifestyle:
 - Frequency of exercising over 30 minutes per week
 - How many hours sleep they get each night (on average)
 - Frequency of eating takeaways and drinking fizzy drinks

MCS an example of health content

2000/01	2001/2	2003/4	2005/6	2008/9	2012/13	2015/16
Birth	9 months	3	5	7	11	14

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Overview of health and biomedical data collection: cohort member

Parent-reported ↓	AGE					
	9 mths	3	5	7	11	14
Birth weight and gestational age	✓					
Developmental milestones	✓					
Immunizations	✓	✓	✓	✓	✓	✓
Incidence/number of health problems (e.g. chest, ear infections, skin problems)	✓	✓	✓	✓	✓	✓
Accidents and injuries	✓	✓	✓	✓	✓	✓
Hospital visits/admissions	✓	✓	✓	✓	✓	✓
Long-standing health condition		✓	✓	✓	✓	✓
Pubertal development					✓	
Mental health		✓	✓	✓	✓	✓

Overview of health and biomedical data collection: cohort member (contd.)

	AGE					
	9 mths	3*	5*	7	11	14
Objective measures ↓						
Height and weight		✓	✓	✓	✓	✓
Waist measurement			✓	✓		
Body fat percentage				✓	✓	✓
Cognitive assessments		✓	✓	✓	✓	✓
Physical activity (accelerometers)				✓		✓
CM self-response ↓						
Pubertal development						✓
Well-being and happiness					✓	✓
Smoking and alcohol consumption					✓	✓

Overview of health and biomedical data collection: parents

Self-reported ↓	AGE					
	9 mths	3	5	7	11	14
Fertility treatment, antenatal care, health problems during pregnancy	✓					
Mode of delivery, pain relief, complications	✓					
Breastfeeding	✓					
Mother's smoking/alcohol consumption before/during/after pregnancy	✓					
Parental health	✓	✓	✓	✓	✓	✓
Parental longstanding illness and disability	✓	✓	✓	✓	✓	✓
Parental mental health	✓	✓	✓	✓	✓	✓
Parental height/weight	✓	✓	✓	✓	✓	✓
Parental smoking/alcohol consumption		✓	✓	✓	✓	✓

Saliva (DNA) and teeth

	AGE					
	9 mths	3	5	7	11	14
Oral fluid (CM)		✓				
Shed milk teeth (CM)				✓		
Saliva sample (CM + natural parents)						✓

Saliva sample

- First time a triad of DNA samples collected from 2 biological parents and child in a large scale study
- Samples collected using Oragene DNA kit
- Number of saliva samples: 9364 (CM) 9197 (MP) 4938 (2nd P) **TOTAL 23,499**
- University of Bristol is collaborating with MCS team in storing the samples and extracting the DNA
- DNA extractions will be genotyped in order to allow for analysis of different genes and their relationship with areas such as health and wellbeing, growth and behaviour
- Plans for genotyping underway; process likely to take 1-2 years; access in due course will be via a special Access Committee

The age 17 survey of the MCS (2018)

The [Millennium Cohort Study \(MCS\)](#) is renowned for the evidence it provides on the experience of growing up in the United Kingdom in the 21st century. CLS is currently carrying out the age 17 survey, which is in field throughout 2018. This period of transition to adulthood marks a pivotal stage in their development, as the paths of cohort members will diverge in a way that will greatly influence their future well-being.

Previously, schooling will have been the main activity common to the majority of cohort members. However, by age 17, cohort members will have taken important decisions in relation to schooling, further education, training, work, and living at home. Capturing these transitions well will be critical, alongside the contemporary factors underlying them.

To this end, building up a picture of daily life will be important, including factors such as:

- relationships with parents
- family and peers
- risky behaviours
- social media engagement
- effort on activities such as education/school

Additional factors affecting decisions at this age include attitudes and preferences, such as preferences for education, attitudes to risk, willingness to trade off resources at different points in time, and expectations about future life events. Measuring social and emotional development, mental health and cognitive development and using well-validated instruments, will also remain a critical component of the survey.

Data from the age 17 survey will be available from UKDS at the end of 2019.

[http://www.cls.ioe.ac.uk/page.aspx?&sitesectionid=2371&sitesectiontitle=The+age+17+survey+of+the+MCS+\(2018\)](http://www.cls.ioe.ac.uk/page.aspx?&sitesectionid=2371&sitesectiontitle=The+age+17+survey+of+the+MCS+(2018))

Welcome to Next Steps (LSYPE)

Principal Investigator: [Dr Lisa Calderwood](#)

Next Steps, previously known as the Longitudinal Study of Young People in England (LSYPE), follows the lives of around 16,000 people born in 1989-90. The study began in 2004, when the cohort members were aged 13-14, and has collected information about their education and employment, economic circumstances, family life, physical and emotional health and wellbeing, social participation and attitudes. The Next Steps data has also been linked to National Pupil Database (NPD) records, which include the cohort members' individual scores at Key Stage 2, 3 and 4.

Next Steps is managed by [CLS](#) and funded by the [Economic and Social Research Council](#). The study was previously managed and funded by the [Department for Education](#) (2004-2012).

The surveys

The initial Next Steps survey was in 2004 and included all young people in Year 9 who attended state and independent schools in England. Following the initial survey at age 13-14, the cohort members were visited every year until 2010, when they were age 19-20. The most recent survey took place in 2015/16, when the cohort members were 25 years old.

Accessing the data

The data for all Next Steps waves are available from the [UK Data Service](#). Users seeking access to controlled data must do so via [UK Data Service Secure Access](#). This includes the National Pupil Database (NPD) Reduced file.

Data for the eighth wave of Next Steps at age 25 is now available from the [UK Data Service](#). You can find out more in this [article](#).

Contact us

For queries and data support for Next Steps, please contact clsfeedback@ioe.ac.uk.