# An Introduction to the 1970 British Birth Cohort (BCS70)

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**Brian Dodgeon**

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# Brief Overview of BCS70

Began as British Births Survey
Data collected about births and families of
just over 17,000 babies born in England,
Wales, Scotland and Northern Ireland in one
week in 1970
N.Ireland members not followed up after
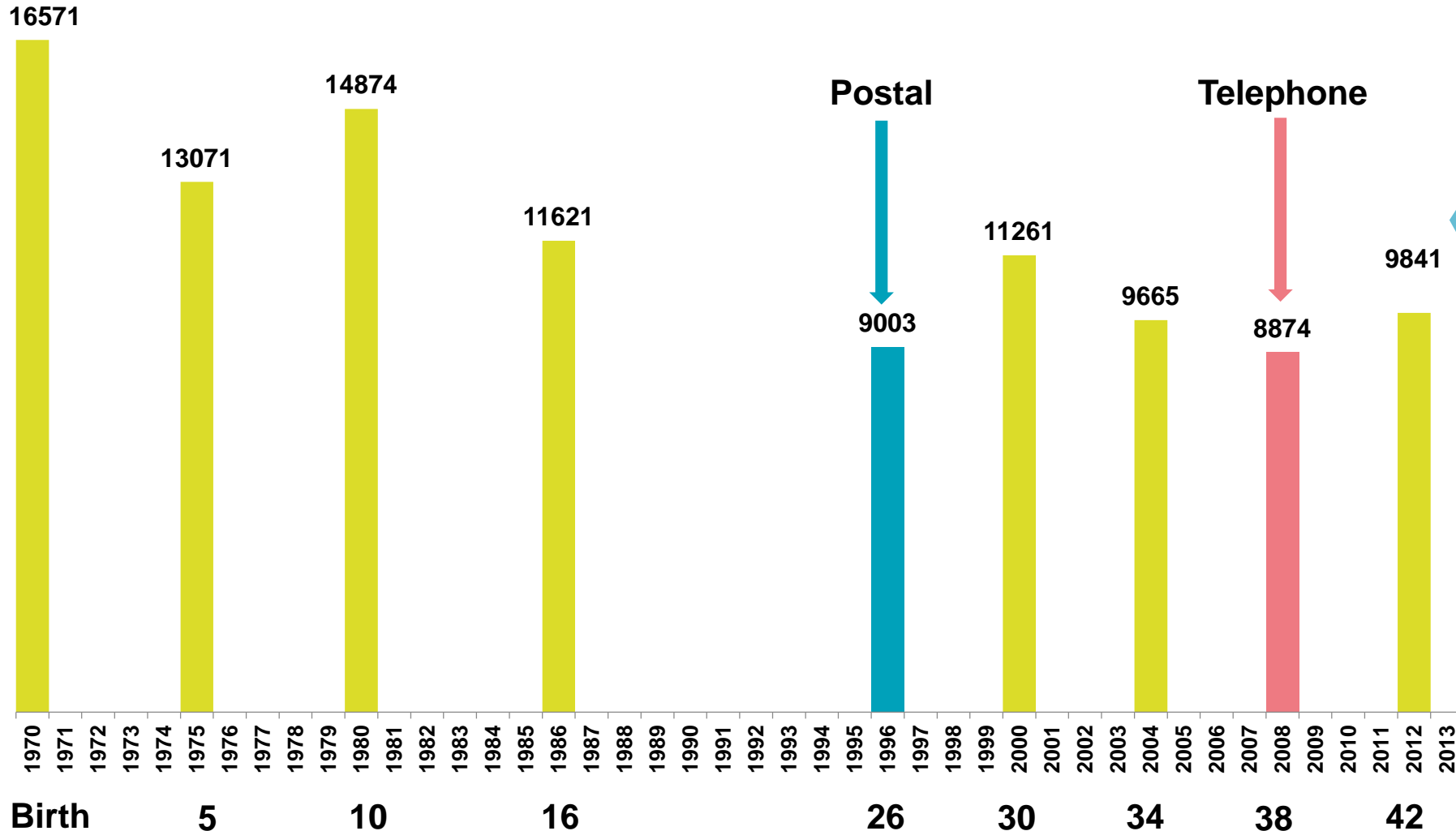birth survey (unless they moved to GB)
Early focus was medical but with each
sweep the scope has broadened:
- Childhood sweeps: educational and
physical development
- Transitions into adult life: Family
formation, employment etc.
- Formation and maintenance of adult
identity.

# Sources of information

| | 1970 Birth | 1975 5 | 1980 10 | 1986 16 | 1996 26 | 2000 29/30 | 2004 34 | 2008 38 | 2012 42 | 2018 46 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Respondents** | Parent | Parent | Parent | Parent | | | | | | |
| | | School | School | School | | | | | | |
| | | | | Cohort member | Cohort member | Cohort member | Cohort member | Cohort member | Cohort member | Cohort member |
| | | | | | | | Children (1 in 2) | | | |
| **Instruments** | | Tests | Tests | Tests | | | | | Tests | Tests |
| | Medical | Medical | Medical | Medical | | | | | | Medical |

# Participation/response in BCS70 across life



**Missing data:**
- Reduces power and potentially introduces bias
- Increasingly researchers can address this using data which predicts missingness (eg, early life socioeconomic circumstances)
- eg, multiple imputation, FIML, inverse probability weighting

# Topics covered by life stage

| Birth | School years | Adult |
|---|---|---|
| Family | Family | Family (partners, children) |
| Parental employment | Parental employment | Employment |
| Obstetric history | Financial circumstances | Income |
| Smoking in pregnancy | Housing | Housing |
| Pregnancy (problems, antenatal care) | Health | Health |
| Labour (length, pain relief, problems) | Behaviour | Health-related behaviour |
| Birth (problems, sex, weight, length) | School | Courses and qualifications |
| | Views and expectations | Basic skills |
| | Attainment | Cognitive ability |
| | | Views and expectations |

# Childhood Topics 1

| Parents | Birth | General |
|---|---|---|
| Smoking (0, 5, 10, 16) | Smoking in pregnancy | General health |
| Drinking (10, 16) | Pregnancy | Child development |
| Pregnancy history | Labour | Specific conditions |
| Maternal mental health (5, 10, 16) | Birth weight / length etc | Disabilities/ special needs |
| | Problems at birth | Hospital admissions |
| | Breastfeeding | Use of services |
| | | Immunisation |
| | | Medication |
| | | Accidents |
| | | Menstruation |

# Childhood Topics 2

| Childhood physical assessments | Lifestyle | Behavioural and mental |
| --- | --- | --- |
| Height (5,10,16) | Diet (10, 16) | Behavioural problems (5, 10) |
| Weight (5,10) | Eating problems (5; 10; 16) | Mental health (10, 16) |
| Head circumf (5,10,16) | Exercise (10, 16) | Wellbeing (16) |
| Audiometry (10, 16) | Sedentary behaviour (5,10,16) | Personality (10) |
| Laterality | Dental and physical hygiene (16) | Locus of control, self-esteem, social judgement (10) |
| Speech | Sexual activity (16) | Sleeping problems (5,10,16) |
| Co-ordination | Smoking (10, 16) | |
| Blood pressure/ pulse | Drink and Drugs (16) | |
| Vision | | |

# Childhood cognition

| Age 5 | Age 10 | Age 16 |
|---|---|---|
| Copying designs<br>English picture vocabulary<br>Human figure drawing (draw-a-man)<br>Complete a profile<br>Schonell graded reading assessments | Shortened Edinburgh Reading Test<br>Pictorial language comprehension test<br>Friendly maths test<br>Spelling<br>British Ability Scales (BAS) Two verbal subscales (word definitions and word similarities) and two non-verbal subscales (digit recall and matrices). | Arithmetic<br>Vocabulary<br>Spelling<br>*Reading comprehension*<br>*BAS Matrices* |

# See previous data notes for summaries

# Age 42 survey 60 minute 'core' interview  - health

| Repeated content | New |
| --- | --- |
| Self-reported general health | Menopause / gynaecological problems |
| Long-standing illnesses | Fertility intentions |
| Disability | Use of infertility treatments |
| Mental health problems | Sports participation |
| Drinking | Diet – breakfast, ready-meals, convenience foods, take-aways, home-cooked meals |
| Smoking | Sleep |
| Exercise | |
| Height / Weight (Self-reported) | |
| Well-being / depression | |

# Age 42 survey - other

| Repeated content | New |
| --- | --- |
| Partnerships | Housing costs / housing equity |
| Housing | Identity – social class / sexuality |
| Children | Cultural consumption – books / newspapers / TV |
| Family – caring for parents, social networks | Beliefs - belief in God / the afterlife |
| Employment / Income | |
| Qualifications | |
| Voting | |
| Values / attitudes | |
| Vocabulary assessment | |

# Policy impact

**Mental health -** Half of those with mental health problems at age 26 developed a psychiatric disorder by age 34. Policy-makers responded to this finding with a commitment to early intervention aimed at promoting better mental health and wellbeing.
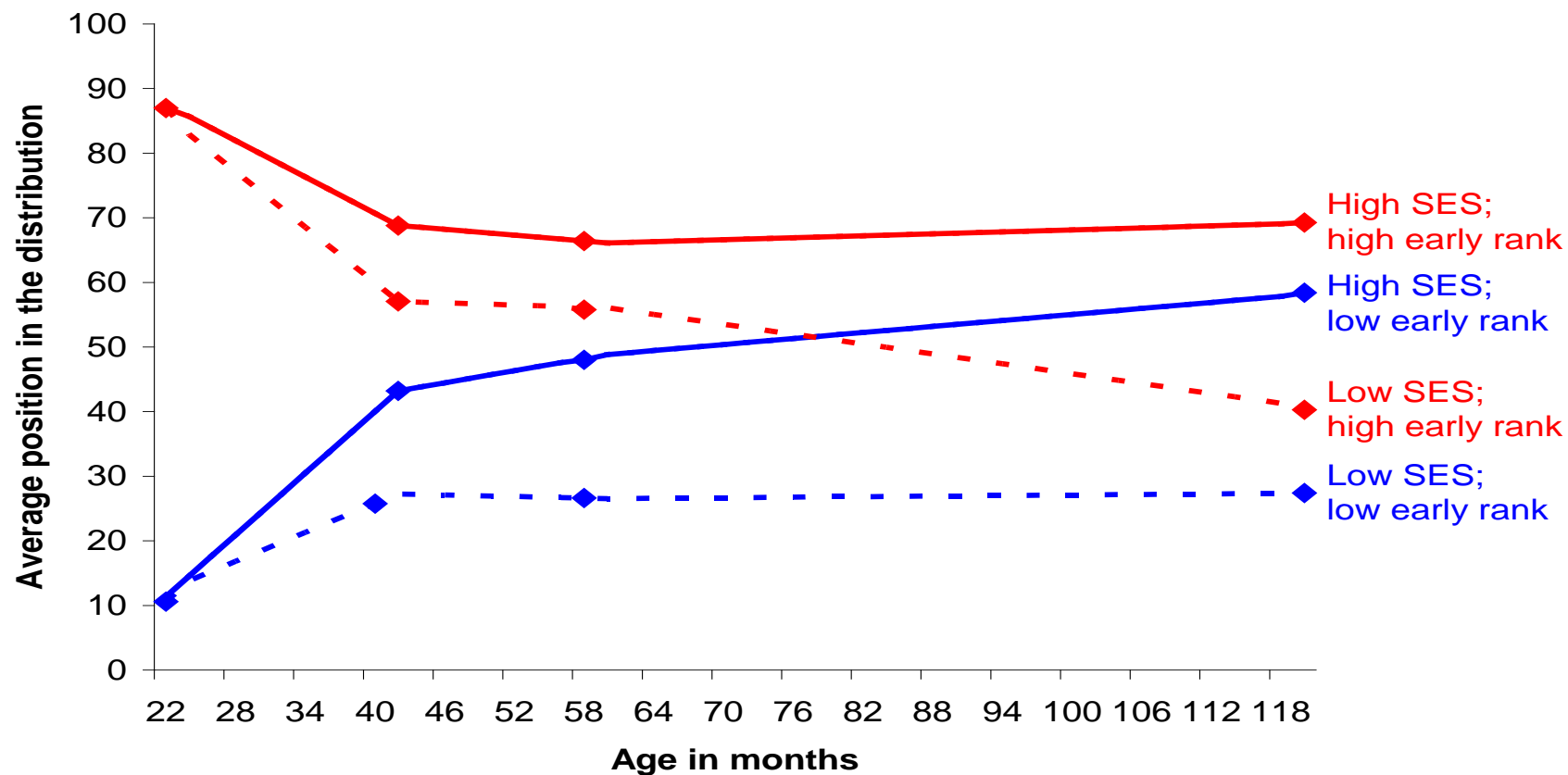
**Careers advice -** Research showing how prolonged periods of being out of education, employment or training after leaving school have long-term negative consequences for employment and mental health featured in 1999 Social Exclusion Unit report, Bridging the Gap, which led to the creation of the Connexions service.

**Youth policy -** The government's 'Youth Matters' policy, launched in 2005 to improve local facilities for teenagers, was based partly on BCS70 evidence showing that teenagers' involvement in structured leisure activities can have lasting benefits.
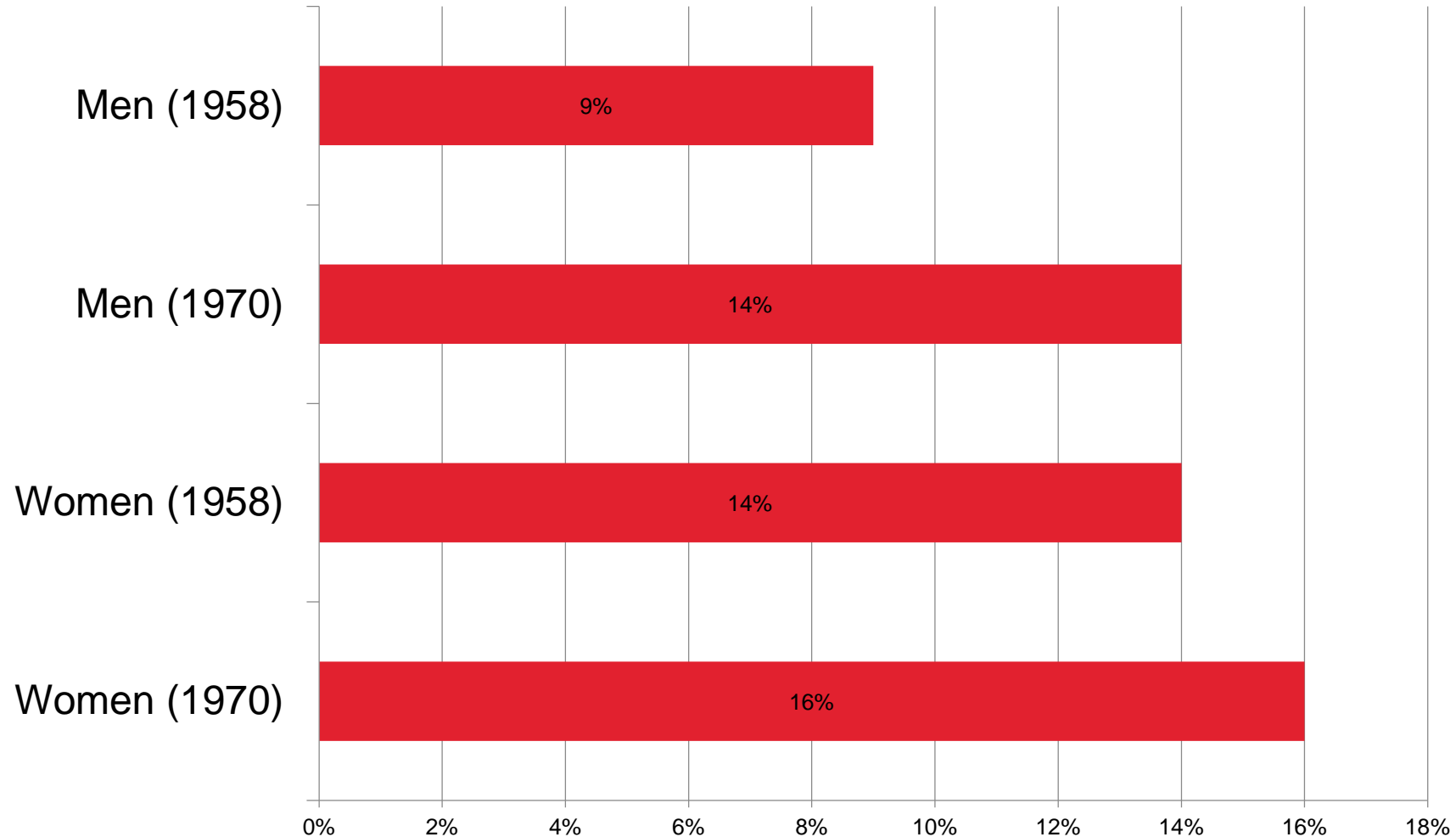
# Early unequal trajectories

Evidence from BCS70 showing that many bright children from poor families were overtaken by less able children from affluent backgrounds by age 6 was included in the Every Child Matters Green Paper in 2003 and helped to underpin the case for greater investment in pre-school provision.

High mental distress (Malaise) – 1958 and 1970 cohorts at 42

# Some recent findings



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**The Telegraph**

Premature babies are less wealthy in adulthood, study shows

Premature babies are more likely to be manual workers or unemployed, a study has found

Premature babies are less likely to be affluent in adulthood   Photo: Corbis

**BBC NEWS**

Education | School Report

## Inactive children 'become middle-aged couch potatoes'

By Judith Burns
Education reporter

16 March 2015 | Education & Family

The researchers urge families to replace TV time with an evening walk or an active computer game

Children who lead inactive lives are likely to grow up to become middle-aged couch potatoes, a study suggests.

**theguardian**

## Reading for fun improves children's brains, study confirms

A study of 17,000 people from birth indicates that reading for pleasure improves not just literacy, but maths ability too. And we will soon know whether the effects continue into adult life

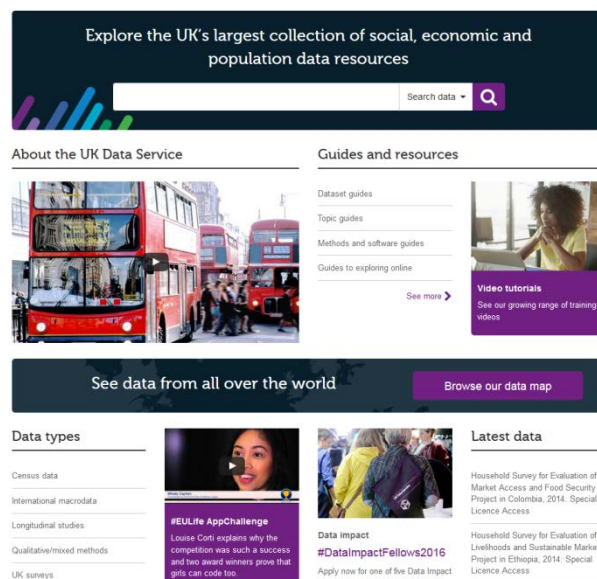# A mid-life biomedical sweep at 46 years (MRC/ESRC funded)

- Fieldwork ongoing, data deposit TBC (2018-2019)

- Themes
  - Understanding health inequalities
  - Causes and consequences of overweight and obesity
  - Activity, sedentary behaviour and fitness
  - Wellbeing, sleep and mental health

# Key measures

- Demographic, family, and socioeconomic data

- Blood for analytes and DNA (cholesterol and hba1c with initial deposit)

- Blood pressure, resting heart rate

- Online dietary diary

- Cognition

- Grip strength, standing balance

- Height, weight, body fat, waist measurements

- Health (General health/Disability/Physical health conditions/Mental health conditions/Well-being/Medication/Hospitalisation/Dental health/Menopause)

- Lifestyle factors, sleep

- Physical activity/sedentary behaviour (activPAL accelerometer)

# Thank you
Any questions?

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# Appendix

## Main BCS70 Datasets available for download:

- Birth dataset      1970
- Age 5 dataset      1975
- Age 10           1980
- Age 16           1986
- Age 26           1996
- Age 30           1999/2000
- Age 34           2004
- Age 38           2008
- Age 42           2012

Childhood health – 3 cohorts