

# Millennium Cohort Study

## **Technical Report on Response**

First Edition

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Edited by

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## **Preface to the First Edition**

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This is the first edition of a report on response in the Millennium Cohort Study as it progresses from sweep two onwards. This edition includes material just for sweep two and covers the evolution of the population and sample after sweep one, information about families who were included in the study for the first time at sweep two, and response rates for sweep two.

Material on the correlates of different types of unit non-response at sweep two, and on instrument, domain and item non-response then, will appear in the second edition together with sampling errors both for cross-sectional measures at sweep two and for measures of change from sweep one to sweep two.

## 1. Introduction

- 1.1 The longitudinal population for the Millennium Cohort Study is defined in Plewis (2004, para. 2.1) as:

‘all children born between 1 September 2000 and 31 August 2001 (for England and Wales), and between 23 November 2000 and 11 January 2002 (for Scotland and Northern Ireland), alive and living in the UK at age nine months, eligible to receive Child Benefit at that age, and for as long as they remain living in the UK at the time of sampling’.

- 1.2 The longitudinal population declines with time to the extent that children die or permanently emigrate from the UK.
- 1.3 The longitudinal target samples for the second and subsequent sweeps of the Millennium Cohort Study (MCS) consist of those children in the 398 selected UK wards who were eligible to be included in MCS1 and who did not die or permanently emigrate between the first and subsequent sweeps of MCS.

## 2. The sample for sweep two (MCS2)

- 2.1 The issued sample at MCS2 differed from the longitudinal target sample because:

- (1) It *excluded* all children who were not issued to the field in MCS1 (see Plewis, 2004, Table 7.1).
- (2) It *included* only those children from the issued sample at MCS1 who were classified as productive then (see Plewis, 2004, Table 7.2).
- (3) It could have *included* children who, by virtue of death or emigration, turned out to be ineligible.

- 2.2 The sample for MCS1 was constructed from Child Benefit records and, in principle, included all eligible children age nine months living in the selected electoral wards. The Child Benefit address records are not, however, up to date partly because, for many parents, Child Benefit is paid directly into a bank account and so the Inland Revenue (who now administer Child Benefit) has no need to contact these parents on a regular basis. Another reason could be the delays in establishing a benefit record for recent immigrants. Thus, some children who had moved into the sampled areas after their initial registration on the Child Benefit system were not picked up for MCS1 at age nine months. Some reduction of this problem was achieved for about half the sweep one sample by carrying out an extra scan of the Child Benefit records (see Plewis, 2004, para. 6.4). These so-called *new mover families* had somewhat different characteristics from the rest of the sample. They were more likely to be on means-tested benefits and had other characteristics that marked them as more disadvantaged than the rest (Plewis, 2004, para. 10.5 and Appendix 3). A

second analysis (para. 10.6) indicated that time at current address was also related to socio-demographic variables.

2.3 The rhythms of the Child Benefit system prevented a full repair of the sample at sweep one; it was clear that those families who had moved out of the sampled areas before the cohort child was nine months old had not been replaced in sufficient numbers by those moving in. Consequently, Inland Revenue were funded to rescan the Child Benefit register to pick up eligible children who, as a result of late notifications to the system, were indeed found to have been living in a sampled ward at age nine months. This repair was, however, restricted to England. The families so found are referred to here as *'new families'*: they are part of the target samples for each sweep but were not part of the issued sample at MCS1.

2.4 Table 2.1 shows how the *'new families'* sample changed from the point at which it was provided to CLS by the Inland Revenue to being issued to the field. Some comparisons are drawn with results from MCS1.

**Table 2.1: From Child Benefit Sample to Issued Sample by Stratum (*'new families'*; England only)**

	<b>Ad.</b>	<b>Disad.</b>	<b>Eth.</b>	<b>Total</b>
Child Benefit sample (1)	511	748	516	1775
Exclusions, CLS	48	28	28	104
Child Benefit sample (2)	463	720	488	1671
Exclusions, IR	35 (7.6%)	101 (14%)	70 (14%)	206 (12%)
Opt-outs	20 (4.3%)	38 (5.3%)	18 (3.7%)	76 (4.5%)
<b>Issued sample (to field)</b>	<b>408 (88%)</b>	<b>581 (81%)</b>	<b>400 (82%)</b>	<b>1389 (83%)</b>

Notes on Table 2.1

- 1) *Exclusions, CLS*  
These were mainly concentrated in waves 1 to 3 (n = 35) and in wave 13 (n = 53) and were cases that had already been issued in MCS1. See Plewis (2004, para. 6.4) for a description of *'wave'*.
- 2) *Exclusions, Inland Revenue*  
As in MCS1 (see Table 7.1 in Plewis, 2004) but with an additional group – families already involved in a survey for the national evaluation of Sure Start (n = 76). The exclusion rate for the *'new families'* sample shown in Table 2.1 is much higher than for the MCS1 sample for all strata – not wholly accounted for by the omission of the *'Sure Start'* families - but the opt-out rate is lower.

- 3) There were 245 fewer families issued from waves 8 to 13 than for waves 1 to 7. This was to be expected because MCS1 did include the 'new movers' from wave 8 onwards, 179 of whom were issued in England. The 'new movers' and the 'new families' can reasonably be considered together as a single category in MCS2, at least for England.
- 2.5 There were originally 18553 productive families in MCS1 (Plewis, 2004, Table 7.2) but one case was subsequently withdrawn as it was discovered to have been invalid. The number of 'new families' was reduced from 1671 found by the Inland Revenue to the 1389 families that were issued to the field in MCS2 (see Table 2.1). Therefore, the issued sample for MCS2 was 19941: 18552 were productive families in MCS1 and 1389 were 'new families' (although 71 of the MCS1 productive families were not, in fact, issued to the field for various reasons such as death, emigration and refusal).
- 2.6 Data collection for MCS2 was carried out between September 2003 and April 2005 for England and Wales and between December 2003 and April 2005 for Scotland and Northern Ireland.
- 2.7 Table 2.2 gives the cohort member's age when the interview with the main respondent was carried out. It shows that the interviews were completed when 78% of the cohort members were within the target window of 36 to 39 months old, 11% just before that window opened and a further 11% after it closed, in a few cases quite substantially later.

**Table 2.2: Distribution of cohort member's age at MCS2**

<b>Age (Months)</b>	<b>n</b>	<b>%</b>
31-34	10	0.063
35	1756	11
36	6802	43
37	3294	21
38	1506	9.5
39	731	4.6
40	410	2.6
41	267	1.7
42	179	1.1
43	158	1.0
44	140	0.89
45	149	0.94
46	104	0.66
47	102	0.65
48-54	191	1.2
<b>Total number of children</b>	<b>15799</b>	<b>100</b>

Note

Interview date is missing for 9 cases.



### **3. Response at MCS2**

- 3.1 Table 3.1 shows that 78% (15590/19941) of the issued sample at MCS2 were productive. The refusal rates (REF1) are lower in Wales and Scotland than in England and, notably, than in Northern Ireland. The rates for England are somewhat higher because of the high refusal rates for 'new families' (Table 3.3).
- 3.2 Tables 3.2 and 3.3 have the same layout as Table 3.1 except that they are confined to England; they separate the response for the MCS1 productives from that of the 'new families'. The eligibility rates for 'new families' are lower than for the MCS1 productives but similar to those obtained at MCS1 for England (Plewis, 2004, Table 7.2).

**Table 3.1: From Issued Sample to Final Sample by Stratum and Country: MCS2**

	England				Wales			Scotland			N. Ireland			UK
	Ad.	Disad.	Eth.	Total	Ad.	Disad	Total	Ad.	Disad.	Total	Ad.	Disad.	Total	All
Issued sample	5025	5103	2794	12922	832	1928	2760	1145	1191	2336	723	1200	1923	<b>19941</b>
Ineligible	101	55	39	195	8	8	16	22	11	33	5	6	11	<b>255</b>
ELIG	97.8%	98.8%	98.5%	98.4%	99.0%	99.6%	99.4%	98.0%	99.0%	98.5%	99.3%	99.5%	99.4%	<b>98.6%</b>
Uncertain eligibility	155	295	178	628	19	80	99	28	58	86	11	44	55	<b>868</b>
Unproductive	560	873	616	2049	113	271	384	163	240	403	121	271	392	<b>3228</b>
REF1	8%	10%	13%	10%	9%	8%	8%	9%	8%	9%	14%	17%	16%	<b>10%</b>
<b>Productive</b>	<b>4209</b>	<b>3880</b>	<b>1961</b>	<b>10050</b>	<b>692</b>	<b>1569</b>	<b>2261</b>	<b>932</b>	<b>882</b>	<b>1814</b>	<b>586</b>	<b>879</b>	<b>1465</b>	<b>15590</b>

### Notes on Tables 3.1 to 3.3

#### *Issued sample*

See para. 2.5. For Wales, Scotland and Northern Ireland these are the productive families from MCS1 (Plewis, 2004, Table 7.2).

#### *Ineligible*

Child deaths (n = 16); emigrants (n = 169); failed eligibility (n = 70; 'new families' only).

#### *ELIG*

ELIG is the eligibility rate of the issued sample. This is the ratio of cases known or estimated to be eligible to all issued cases as defined by Lynn et al. (2001). The estimated eligibility rates in Tables 3.2 and 3.3 are used for cases with uncertain eligibility.

#### *Uncertain eligibility*

This includes untraced movers out of the MCS1 productives (who might have died or emigrated) and 'new families' not found in the field.

#### *Unproductive*

This includes three sub-groups of cases with their UK sizes in brackets:

- (i) Non-contact (1070).
- (ii) Refusal (2002).
- (iii) Other non-response (156).

#### *REF1*

REF1 is the refusal rate in the field. This is the ratio of refusals to all issued cases known or estimated to be eligible as defined by Lynn et al. (2001). Estimated eligibility rates are used for cases with uncertain eligibility as explained above.

#### *Productive*

All families with some data (from at least one instrument - Main, partner, proxy, British Ability Scales (BAS), Bracken Basic Concept Scale, height, weight) other than data carried forward from MCS1.

**Table 3.2: From Issued Sample to Final Sample by Stratum: MCS1 productives, England.**

	<b>England</b>			
	<b>Ad.</b>	<b>Disad.</b>	<b>Eth.</b>	<b>Total</b>
Issued sample	4617	4522	2394	11533
Ineligible	62	26	19	107
ELIG	98.6%	99.4%	99.2%	99.0%
Uncertain eligibility	103	221	123	447
Unproductive	454	679	488	1621
REF1	7%	9%	12%	9%
<b>Productive</b>	<b>3998</b>	<b>3596</b>	<b>1764</b>	<b>9358</b>

**Table 3.3: From Issued Sample to Final Sample by Stratum: 'new families', England.**

	<b>England</b>			
	<b>Ad.</b>	<b>Disad.</b>	<b>Eth.</b>	<b>Total</b>
Issued sample	408	581	400	1389
Ineligible	39	29	20	88
ELIG	89%	94%	94%	92%
Uncertain eligibility	52	74	55	181
Unproductive	106	194	128	428
REF1	21%	21%	19%	20%
<b>Productive</b>	<b>211</b>	<b>284</b>	<b>197</b>	<b>692</b>

3.3 Table 3.4 documents the decline from an initial sample of 28927 at MCS1 (including 'new families') to 15590 productive families at MCS2.

**Table 3.4: From Initial Sample, MCS1 to Final Sample, MCS2 by Stratum and Country**

	England				Wales			Scotland			NI			UK
	Ad.	Disad.	Eth.	Total	Ad.	Disad.	Total	Ad.	Disad.	Total	Ad.	Disad.	Total	All
Initial Sample, MCS1	6859	7406	4400	18665	1076	2787	3863	1581	1750	3331	1109	1959	3068	<b>28927</b>
Ineligible	288	248	142	678	27	85	112	80	75	155	24	46	70	<b>1015</b>
Uncertain Eligibility	545	1048	695	2288	72	307	379	115	203	318	134	328	462	<b>3447</b>
Unproductive	1817	2230	1602	5649	285	826	1111	454	590	1044	365	706	1071	<b>8875</b>
<b>Productive, MCS2</b>	<b>4209</b>	<b>3880</b>	<b>1961</b>	<b>10050</b>	<b>692</b>	<b>1569</b>	<b>2261</b>	<b>932</b>	<b>882</b>	<b>1814</b>	<b>586</b>	<b>879</b>	<b>1465</b>	<b>15590</b>

### Notes on Table 3.4

#### *Initial sample*

The sum of the initial sample from Table 7.3 in Plewis (2004) plus, for England, the Child Benefit sample(2) from Table 2.1.

#### *Ineligible*

From Table 7.3 (Plewis, 2004) and Table 3.1.

#### *Uncertain eligibility*

From Table 7.3 (Plewis, 2004), Table 3.1 and the exclusions (Table 3.3) from the 'new families' sample.

#### *Unproductive*

From Table 7.3 (Plewis, 2004), Table 3.1 and the opt-outs (Table 3.3) from the 'new families' sample.

#### *Productive*

As in Table 3.1.

- 3.4 Table 3.5 gives a series of response rates like those in Table 7.4 in Plewis (2004). It shows that the overall response rate across the two sweeps (RR1) is 58% for the UK as a whole, ranging from 48% in the English minority ethnic wards and the disadvantaged wards in Northern Ireland to 67% in the advantaged wards in Wales.
- 3.5 The response rates (RR2) and contact rates (CON) for MCS2 were slightly lower than those achieved in MCS1 but the cooperation rates (COOP) were higher.

**Table 3.5: Response Rates (%) by Stratum and Country**

	England				Wales			Scotland			NI			UK
	Ad.	Disad.	Eth.	Total	Ad.	Disad.	Total	Ad.	Disad.	Total	Ad.	Disad.	Total	All
RR1	65	56	48	58	67	60	62	63	54	59	56	48	51	<b>58</b>
RR2	86	77	71	79	84	82	82	83	75	79	82	74	77	<b>79</b>
RR2 (W)	86	77	71	81	84	82	83	83	75	80	82	74	79	<b>81</b>
CON	94	87	85	90	93	90	91	93	87	90	97	92	94	<b>90</b>
COOP	91	88	84	<b>88</b>	90	90	<b>90</b>	89	86	<b>87</b>	84	80	<b>82</b>	<b>88</b>



### Notes on Table 3.5

- RR1* This is the *overall* response rate to the study at MCS2 defined as the ratio of productive cases to all cases in the initial sample for the study known or estimated to be eligible (Lynn et al., 2001). An overall eligibility rate of 74% was used.
- RR2* This is the response rate in the field for MCS2, based on Tables 3.1 to 3.3 and defined as the ratio of productive cases to all cases known or estimated to be eligible in the issued sample (Lynn et al., 2001). This rate describes the success of the field operations.
- RR2W* This is the weighted version of RR2, allowing for varying selection probabilities across strata (see Table 5.5). It differs from RR2 only for the four countries and the UK as a whole.
- CON* This is the contact rate – the proportion of all cases in which a household member was reached by the interviewer with whom there was contact in person.
- COOP* This is the cooperation rate – the number of productive cases as a proportion of cases who were contacted during the fieldwork period.

## References

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