

Numbers of previous live and stillbirths – collection in Scotland when all births (and stillbirths) are registered - first year's results

1. Until the end of 2012, when a birth (or a stillbirth) was registered in Scotland, the mother's numbers of previous births and stillbirths were collected only if the mother was married to the father of the child. From the start of 2013, following the amendment of the relevant legislation, this information (and some other data) has been collected in Scotland when all births (and stillbirths) are registered.
2. This note reports on the main points from the first year's results of collecting from all mothers, when (live) births are registered, their numbers of previous live births. It also covers briefly mothers' previous numbers of stillbirths, and the equivalent numbers collected when all stillbirths are registered. The tables and chart appear below; the Annex provides some background about the change that was made at the start of 2013.

How the number of previous live births varies with the 'registration type'

3. **Table 1** shows how the number of previous live births varies with the 'registration type', which indicates whether the parents are married, living together, living apart, or the birth was registered only in the mother's name. It will be seen that the percentage of mothers with no previous live births is as follows:
 - 41% for births where the mother was married to the father of the child;
 - 62% for births to parents living at the same address but not married to each other;
 - 64% for births registered jointly by parents who were living at different addresses (and were not married to each other);
 - 68% for births that were registered in the name of the mother alone (who was not married to the father of the child).
4. It is credible that the percentage of mothers with no previous live births is markedly lower for married couples, because it seems likely that (on average) they would have had the longest and most stable relationships, and hence would be the most likely (on average) to have had children before. The pattern for births to unmarried mothers is also credible: slightly higher for couples living together, and slightly lower for single mothers fits in with the assumption that (on average) women who are in more stable relationships are more likely (on average) to have had children before.
5. **Table 1** shows that the percentage of mothers fell as the number of previous live births increased – for example, overall, 52% of births were to mothers with no previous live births, 31% were to mothers with one previous live birth, 11% were to mothers with two previous live births, and small percentages were to mothers with more previous live births. That 'rule' applied for every registration type, although it was almost 'broken' in two cases: first, for births registered to married parents, where the 'one previous live birth' figure (40%) was only slightly lower than the 'no previous live births' one (41%); second, among the small numbers for three or more live births, where some 'four or more previous live births' figures were only slightly lower than 'three previous live births' ones.

Comparison with previous years - cases where the parents were married to each other

6. For births registered in 2013 for which the parents were married to each other:

- 41% were to mothers who had no previous live births;
- 40% were to mothers who had had one previous live birth;
- 13% had had two previous live births;
- 4% had had three previous live births; and
- 2% had had four or more previous live births.

7. The [Chart](#) and [Table 2](#) show that these figures are broadly similar to those seen in previous years. However, compared with 2012, there was a fall of 2.1 %-points in the percentage with no previous live births, and a rise of 1.4 %-points in the percentage with one previous live birth. Part of this will be due to a change in the registration procedures with effect from 2013.

- In 2012 and earlier years, the question was about the number of previous live births (and stillbirths) 'by present and by any former husband'. Therefore, in 2012 and earlier years, the 'number of previous live births' should have excluded any for which the mother had never married the father.
- With effect from the start of 2013, the mother is asked about the number of previous live births (and stillbirths), with no reference to present and former husbands.
- So, when a birth was registered to a married woman who had had just one previous live birth, whose father she had never married, it would have been counted:
 - under 'no previous live births (by present and any former husband)' in 2012;
 - under '1 previous live birth' in 2013.

Therefore, the change in the registration procedures led to a slight reduction in the 'no previous live births' percentage, and increased slightly some (or all) of the other percentages.

8. It is not possible to estimate, from the registration data, the extent of the break in the series that was caused by the change in registration procedures. The [Chart](#) and [Table 2](#) show that the 'no previous live births' percentage has risen and fallen in previous years (for example, it rose by 0.9 %-points between 2007 and 2008, and there were changes of a similar magnitude in several other years, with the biggest being a fall of 1.2 %-points between 1995 and 1996, and a rise of 1.1 %-points between 2004 and 2005). So, some of the 2.1 %-point fall between 2012 and 2013 could be due to 'random' year-to-year fluctuations. However, as it is larger than any of the changes which have been seen previously, it is likely that a lot of it was due to the change in registration procedures.

9. Table 2 and the Chart also show that there were slight increases in the percentages with two, three and four or more previous live births, part of which could again be due to the new procedures counting, for the first time, any previous live births that were not by a present or former husband.

How the number of previous live births varies with age

10. [Table 3](#) shows how the number of previous live births varies with the mother's age-group. Part (b) of the table shows that, for births registered in 2013, the percentage of mothers with no previous live births falls as the mother's age increases, as follows:

- 91% for those aged 19 and under;
- 68% for 20-24 year olds;
- 55% for 25-29 year olds;
- 45% for those aged 30-34;
- 37% for 35-39 year olds; and
- 36% for those aged 40 and over.

11. Such a pattern is very credible: the older a mother is, the less likely it is (on average) that she will be having her first child. While the pattern is not followed for the relatively small number of births to mothers aged 45 and over (41% of which were counted under 'no previous live births'), this could just be 'random' variation (with only 136 births to mothers aged 45 and over, the percentage could fluctuate markedly from year to year).

Comparison with England and Wales

12. In England and Wales, the equivalent information has been collected in respect of all births with effect from 28 May 2012, and the Office for National Statistics (ONS) has published the results for the second 'half' of 2012 which are given in part (c) of [Table 3](#). Part (d) shows the differences between the percentages for Scotland (for 2013) and for England & Wales (for the second 'half' of 2012). The difference in the periods covered by the two sets of figures should have little effect on the comparison, given that the chart showed that the percentages (for births to married parents in Scotland) tend not to change much from year to year.

13. As will be seen, the 'no previous births' percentage is much higher in Scotland than in England and Wales, and that is the case for all the age-groups. For example:

- 91% in Scotland vs. 73% in England and Wales, for mothers aged 19 and under;
- 68% in Scotland vs. 48% in England and Wales, for mothers aged 20-24; and
- 52% in Scotland vs. 37% in England and Wales, for mothers of all ages.

14. This seems to be due to England and Wales having higher fertility rates than Scotland - for example, about 16% higher in 2012, when the Total Fertility Rate (TFR) was 1.94 in England and Wales and 1.67 in Scotland. Such a difference in overall fertility rates could lead to a large difference in the 'no previous births' percentage (which can be demonstrated by constructing hypothetical 'steady state' distributions of the numbers of women, by the numbers of children that they have in their lives, that would be consistent with TFRs that differ in such a way). Differences between Scotland and England will also be influenced by other

factors, such as differences in their female age-distributions. So it is credible that there is a large difference between Scotland and England in the 'no previous children' percentage.

Numbers of 'previous' stillbirths reported when (live) births were registered

15. When (live) births were registered in 2013, the numbers of previous stillbirths that were reported were as follows:

- no previous stillbirths – in the case of 55,670 (live) births;
- one previous stillbirth – in the case of 325 births;
- two previous stillbirths – in the case of 18 births; and
- three previous stillbirths – in the case of 1 birth.

In total, therefore, there were 344 live births for which previous stillbirths were reported, spread across the full range of registration types:

- in the case of 177 of these (live) births, the parents were married to each other;
- for 121, the parents were not married but were living together;
- in 31 cases, the parents were living apart; and
- for 15, the live birth was registered only in the mother's name.

Numbers of 'previous live and stillbirths' reported when 'stillbirths' were registered

16. In 2013, there were 234 stillbirths registered in Scotland. In 141 cases the mother had not had any previous live births or stillbirths, in 3 cases she had had one previous stillbirth, and there were no cases where she had had two or more previous stillbirths. In 48 cases, the mother had had one previous live birth; in 24 cases, two previous live births; in 16 cases, three previous live births; and in 2 cases she had had four or more previous live births. The numbers of previous live births and stillbirths were obtained for each type of registration. Because relatively few stillbirths were registered, there is little point in analysing the numbers of previous live and stillbirths by (e.g.) mother's age.

Chart and Tables

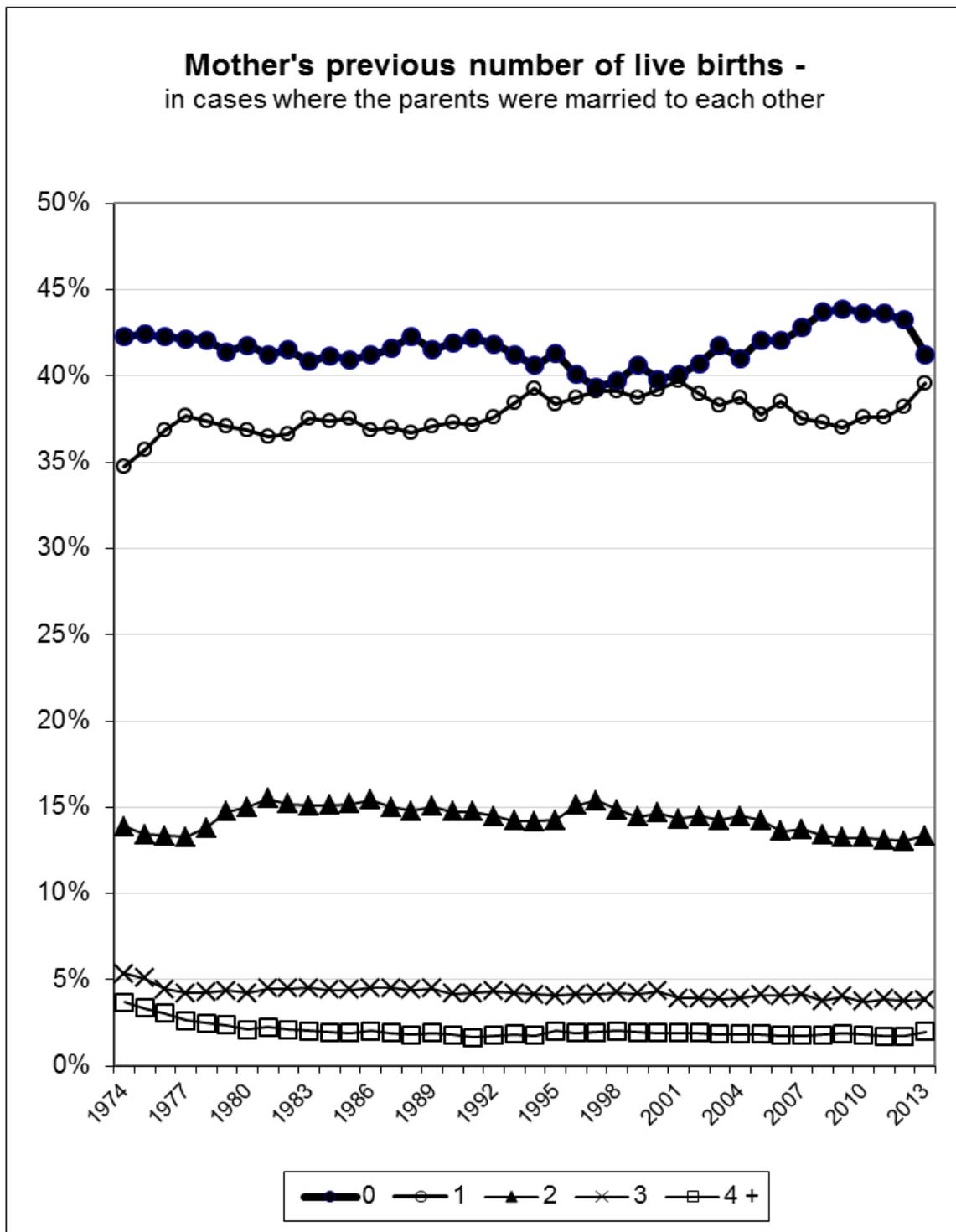


Table 1: Births - registered in Scotland in 2013

Numbers

Registration Type	Mother's number of Previous Live Births					Total
	0	1	2	3	4 or more	
Parents married to each other	11,217	10,769	3,626	1,048	538	27,198
Not married - joint reg, same address	11,992	4,807	1,709	554	268	19,330
Not married - joint reg, different address	4,268	1,510	621	199	103	6,701
Not married - sole registration	1,897	473	218	114	83	2,785
All	29,374	17,559	6,174	1,915	992	56,014

Row percentages

Registration Type	Mother's number of Previous Live Births					Total
	0	1	2	3	4 or more	
Parents married to each other	41%	40%	13%	4%	2%	100%
Not married - joint reg, same address	62%	25%	9%	3%	1%	100%
Not married - joint reg, different address	64%	23%	9%	3%	2%	100%
Not married - sole registration	68%	17%	8%	4%	3%	100%
All	52%	31%	11%	3%	2%	100%

Table 2: Births registered in Scotland to parents who were married to each other

Numbers							Row percentages						
Registration Year	Mother's number of Previous Live Births					All	Registration Year	Mother's number of Previous Live Births					All
	0	1	2	3	4 or more			0	1	2	3	4 +	
1974	26,970	22,169	8,850	3,403	2,351	63,743	1974	42.3%	34.8%	13.9%	5.3%	3.7%	100%
1975	26,160	22,006	8,262	3,141	2,067	61,636	1975	42.4%	35.7%	13.4%	5.1%	3.4%	100%
1976	24,896	21,721	7,847	2,618	1,788	58,870	1976	42.3%	36.9%	13.3%	4.4%	3.0%	100%
1977	23,770	21,267	7,474	2,387	1,476	56,374	1977	42.2%	37.7%	13.3%	4.2%	2.6%	100%
1978	24,412	21,687	7,993	2,458	1,441	57,991	1978	42.1%	37.4%	13.8%	4.2%	2.5%	100%
1979	25,416	22,791	9,048	2,687	1,464	61,406	1979	41.4%	37.1%	14.7%	4.4%	2.4%	100%
1980	25,584	22,550	9,191	2,590	1,297	61,212	1980	41.8%	36.8%	15.0%	4.2%	2.1%	100%
1981	25,007	22,124	9,402	2,711	1,363	60,607	1981	41.3%	36.5%	15.5%	4.5%	2.2%	100%
1982	23,594	20,830	8,627	2,548	1,202	56,801	1982	41.5%	36.7%	15.2%	4.5%	2.1%	100%
1983	22,667	20,833	8,370	2,505	1,122	55,497	1983	40.8%	37.5%	15.1%	4.5%	2.0%	100%
1984	22,424	20,365	8,226	2,394	1,057	54,466	1984	41.2%	37.4%	15.1%	4.4%	1.9%	100%
1985	22,242	20,399	8,242	2,389	1,042	54,314	1985	41.0%	37.6%	15.2%	4.4%	1.9%	100%
1986	21,542	19,253	8,052	2,356	1,062	52,265	1986	41.2%	36.8%	15.4%	4.5%	2.0%	100%
1987	21,253	18,902	7,671	2,309	981	51,116	1987	41.6%	37.0%	15.0%	4.5%	1.9%	100%
1988	21,147	18,342	7,396	2,197	906	49,988	1988	42.3%	36.7%	14.8%	4.4%	1.8%	100%
1989	19,512	17,429	7,066	2,101	896	47,004	1989	41.5%	37.1%	15.0%	4.5%	1.9%	100%
1990	20,166	17,965	7,082	2,012	875	48,100	1990	41.9%	37.3%	14.7%	4.2%	1.8%	100%
1991	20,056	17,657	7,006	2,002	786	47,507	1991	42.2%	37.2%	14.7%	4.2%	1.7%	100%
1992	19,184	17,227	6,639	1,987	802	45,839	1992	41.9%	37.6%	14.5%	4.3%	1.7%	100%
1993	17,934	16,731	6,180	1,835	802	43,482	1993	41.2%	38.5%	14.2%	4.2%	1.8%	100%
1994	17,236	16,678	6,008	1,759	751	42,432	1994	40.6%	39.3%	14.2%	4.1%	1.8%	100%
1995	16,446	15,256	5,672	1,611	800	39,785	1995	41.3%	38.3%	14.3%	4.0%	2.0%	100%
1996	15,201	14,700	5,730	1,576	729	37,936	1996	40.1%	38.7%	15.1%	4.2%	1.9%	100%
1997	14,587	14,484	5,703	1,552	726	37,052	1997	39.4%	39.1%	15.4%	4.2%	2.0%	100%
1998	13,905	13,707	5,196	1,488	704	35,000	1998	39.7%	39.2%	14.8%	4.3%	2.0%	100%
1999	13,186	12,560	4,686	1,361	632	32,425	1999	40.7%	38.7%	14.5%	4.2%	1.9%	100%
2000	12,130	11,943	4,468	1,324	586	30,451	2000	39.8%	39.2%	14.7%	4.3%	1.9%	100%
2001	11,938	11,830	4,264	1,161	574	29,767	2001	40.1%	39.7%	14.3%	3.9%	1.9%	100%
2002	11,705	11,199	4,160	1,123	549	28,736	2002	40.7%	39.0%	14.5%	3.9%	1.9%	100%
2003	11,927	10,932	4,074	1,113	522	28,568	2003	41.7%	38.3%	14.3%	3.9%	1.8%	100%
2004	11,795	11,146	4,158	1,126	530	28,755	2004	41.0%	38.8%	14.5%	3.9%	1.8%	100%
2005	12,103	10,855	4,102	1,182	527	28,769	2005	42.1%	37.7%	14.3%	4.1%	1.8%	100%
2006	12,234	11,213	3,956	1,184	519	29,106	2006	42.0%	38.5%	13.6%	4.1%	1.8%	100%
2007	12,586	11,047	4,033	1,215	523	29,404	2007	42.8%	37.6%	13.7%	4.1%	1.8%	100%
2008	13,104	11,198	4,010	1,133	541	29,986	2008	43.7%	37.3%	13.4%	3.8%	1.8%	100%
2009	12,879	10,850	3,879	1,178	550	29,336	2009	43.9%	37.0%	13.2%	4.0%	1.9%	100%
2010	12,779	11,000	3,871	1,091	522	29,263	2010	43.7%	37.6%	13.2%	3.7%	1.8%	100%
2011	12,523	10,807	3,764	1,113	495	28,702	2011	43.6%	37.7%	13.1%	3.9%	1.7%	100%
2012	12,214	10,784	3,687	1,059	488	28,232	2012	43.3%	38.2%	13.1%	3.8%	1.7%	100%
2013	11,217	10,769	3,626	1,048	538	27,198	2013	41.2%	39.6%	13.3%	3.9%	2.0%	100%

Table 3: Number of previous live births by mother's age

(a) Numbers of Births registered in Scotland in 2013

Previous Live Births	Mother's Age									All
	Age Not Known	19 and under	20 to 24	25 to 29	30 to 34	35 to 39	40 and over	40 to 44	45 and over	
0	16	2,501	6,667	8,403	7,700	3,277	810	754	56	29,374
1	0	240	2,440	4,633	6,132	3,409	705	672	33	17,559
2	1	21	538	1,610	2,178	1,468	358	333	25	6,174
3	0	1	105	400	688	520	201	192	9	1,915
4 or more	0	0	17	182	334	299	160	147	13	992
Total	17	2,763	9,767	15,228	17,032	8,973	2,234	2,098	136	56,014

(b) column percentages

Previous Live Births	Age Not Known	19 and under	20 to 24	25 to 29	30 to 34	35 to 39	40 and over	40 to 44	45 and over	All
0		91%	68%	55%	45%	37%	36%	36%	41%	52%
1		9%	25%	30%	36%	38%	32%	32%	24%	31%
2		1%	6%	11%	13%	16%	16%	16%	18%	11%
3		0%	1%	3%	4%	6%	9%	9%	7%	3%
4 or more		0%	0%	1%	2%	3%	7%	7%	10%	2%
Total		100%	100%	100%	100%	100%	100%	100%	100%	100%

(c) column percentages - England and Wales - second 'half' of 2012

figures for 28 May to 31 December 2012, as published by the Office for National Statistics (ONS) as part of the [Characteristics of Mother 2, England and Wales, 2012](#) release of the ONS website, they exclude cases for which the number of previous liveborn children was not known (0.26%)

Previous Live Births	Under 20	20-24	25-29	30-34	35-39	40 and over	All
0	72.9%	48.3%	38.4%	32.9%	25.0%	23.4%	37.4%
1	24.1%	36.8%	36.5%	38.1%	37.6%	32.4%	36.5%
2	2.7%	11.6%	16.5%	17.7%	21.2%	20.8%	16.3%
3	0.2%	2.7%	5.9%	7.0%	9.2%	11.4%	6.1%
4+	0.0%	0.6%	2.6%	4.3%	7.1%	12.0%	3.7%

(d) Scotland percentage minus E+W percentage: => differences (percentage points)

Previous Live Births	Under 20	20-24	25-29	30-34	35-39	40 and over	All
0	18	20	17	12	11	13	15
1	-15	-12	-6	-2	0	-1	-5
2	-2	-6	-6	-5	-5	-5	-5
3	0	-2	-3	-3	-3	-2	-3
4 or more	0	0	-1	-2	-4	-5	-2

Annex: Background to the change - the Population (Statistics) Act 1938 Modifications (Scotland) Order 2012

What was collected up to the end of 2012

- A1. The Population (Statistics) Act 1938 ('the 1938 Act') required that the following details be provided, when a birth or stillbirth was registered, 'except where the birth is of an illegitimate child':
- the date of the parents' marriage;
 - whether the mother had been married before her marriage to the father of the child; and
 - the number of children of the mother by her present husband and any former husband, and how many of them were born alive or were still-born.
- A2. Therefore, until the end of 2012, certain details (including the mother's numbers of previous live and stillbirths) were obtained only if the mother was married to the father of the child. At the time of the 1938 Act, only about 5% of births were to unmarried parents, so the specified information was collected in respect of around 95% of all births and stillbirths, a level of coverage which would have been considered sufficient for the purposes for which the information was required. Since then, the number of births to unmarried parents increased greatly, to just over half of all births registered in each year from 2008. As a result, the information that was collected when births to married parents were registered could not be considered representative.

What has been collected since the start of 2013

- A3. The Population (Statistics) Act 1938 Modifications (Scotland) Order 2012 ('the Order') extended the collection of (i) some of those items of information to include cases where the mother is in a civil partnership, and (ii) the remainder of those items of information to include every registration of a birth or stillbirth (i.e. whatever the parents' marital status).
- A4. The Order amended the 1938 Act to require the following information to be provided when any birth or stillbirth is registered, from the start of 2013:
- the number of previous children born to the mother, and how many of them were:
 - born alive; and
 - still-born.
- A5. The Order also amended the 1938 Act to require the following information to be provided if the parents are married to, or in a civil partnership with, each other:
- the date of their marriage or the formation of their civil partnership; and
 - whether the mother had been married or in a civil partnership before that date.

It should be noted that there is no need to require this information when the parents are not married to, or in a civil partnership with, each other because, in such cases: (a) there is no date of marriage or civil partnership; and (b) the

registrar will already know, from the answer to an earlier question about her present marital status, whether the mother had previously been married or in a civil partnership.

- A6. As is the case for the details which were collected previously for births which were registered by married couples, such information is treated as confidential, and is not shown in the entry in the register of births or stillbirths, nor in any extract from those registers (such as what is commonly known as a 'birth certificate'): it is used only by National Records of Scotland (NRS) staff to prepare statistics.

Consultation on the proposal to make an Order to change the data that are required when a birth is registered

- A7. On 21 February 2012, the Registrar General for Scotland wrote to various potentially-interested parties, seeking their views on his proposal to ask Ministers to make an Order on these matters. Those consulted included (but were not limited to): the Chief Executives of Local Authorities and NHS Boards; NHS Board Medical Directors and Directors of Public Health; the Royal Colleges of General Practitioners, Midwives, Nursing and Physicians; Birth Choice UK, the Mothers' Union, the National Childbirth Trust, One Parent Families Scotland, and the Scottish Women's Rural Institute; and some of the users of NRS's statistics on births, in Scottish Government, the Information Services Division of NHS National Services Scotland, and the universities of Edinburgh and St Andrews. The letter was also sent to Chief / Senior Registrars and some other people who are involved in the process of registering births.
- A8. Twenty Eight responses were received by the closing date (30 April 2012), or slightly later. Half were from local authorities (who are responsible for the registration services). There were no objections to the proposal: indeed, 25 respondents stated that they supported it, without expressing any reservations. Two respondents questioned the need for some of the information that is collected: one was concerned regarding asking about previous children who were stillborn, or who died after birth; both queried the need for information about whether the mother was previously married or in a civil partnership. When it becomes available in respect of all births, such information could be used (e.g.) by public health researchers to see whether having had a stillbirth increases the risk of later problems for mothers and subsequent babies, and by demographers to determine whether there is a difference in fertility between women who were previously married and those who were not. Respondents also asked a number of other questions, or made suggestions or points: in all cases, NRS provided answers in its report on the results of the consultation (Registration of Births and Stillbirths, which is available within the [Consultation](#) section of the NRS website).