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Report: **Infant and perinatal mortality 2006: health areas, England and Wales.**

Delays in receiving some 2006 stillbirths data from registrars meant that ONS was not able to produce this report in time for the print deadline for publication in *Health Statistics Quarterly* **35**.

ONS apologises for any inconvenience caused.

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Report:

Infant and perinatal mortality 2006: health areas, England and Wales

Introduction

This report gives provisional statistics on infant deaths registered in 2006, and live births and stillbirths occurring in 2006, in England and Wales, for each Government Office Region and Strategic Health Authority in England and Local Health Board in Wales.

Perinatal and infant mortality

There were 3,602 stillbirths and 1,761 deaths at ages under seven days registered in England and Wales in 2006. The stillbirth rate remained at 5.4 per thousand live births, from 2005 to 2006. The perinatal rate also remained unchanged at 8.0 per thousand live births and stillbirths. (Table 1).

Table 1 Live births, stillbirths and infant deaths, 1976–2006

England and Wales

Year	Live births	Stillbirths ¹	Number of deaths ²				Stillbirth ³ rate	Mortality rates			
			Under 1 week	Under 4 weeks	4 weeks–1 year	Under 1 year		Perinatal ³	Neonatal ⁴	Postneonatal ⁴	Infant ⁴
Numbers											
1976	584,270	5,709	4,761	5,663	2,671	8,334	9.7	17.7	9.7	4.6	14.3
1981	634,492	4,207	3,356	4,226	2,795	7,021	6.6	11.8	6.7	4.4	11.1
1986	661,018	3,549	2,823	3,489	2,824	6,313	5.3	9.6	5.3	4.3	9.6
1991	699,217	3,254	2,396	3,052	2,106	5,158	4.6	8.0	4.4	3.0	7.4
1993	673,467	3,855	2,178	2,796	1,446	4,242	5.7	8.9	4.2	2.1	6.3
1994	664,726	3,813	2,142	2,749	1,371	4,120	5.7	8.9	4.1	2.1	6.2
1995	648,138	3,600	2,104	2,698	1,284	3,982	5.5	8.7	4.2	2.0	6.1
1996	649,489	3,539	2,066	2,645	1,314	3,959	5.4	8.6	4.1	2.0	6.1
1997	643,095	3,439	1,941	2,517	1,282	3,799	5.3	8.3	3.9	2.0	5.9
1998	635,901	3,417	1,844	2,418	1,207	3,625	5.3	8.2	3.8	1.9	5.7
1999	621,872	3,305	1,833	2,435	1,186	3,621	5.3	8.2	3.9	1.9	5.8
2000	604,441	3,203	1,753	2,335	1,042	3,377	5.3	8.2	3.9	1.7	5.6
2001	594,634	3,159	1,598	2,137	1,103	3,240	5.3	8.0	3.6	1.9	5.4
2002	596,122	3,372	1,620	2,126	1,001	3,127	5.6	8.3	3.6	1.7	5.2
2003 ⁵	621,469	3,612	1,749	2,264	1,042	3,306	5.8	8.6	3.6	1.7	5.3
2004 ⁵	639,721	3,686	1,699	2,209	1,009	3,218	5.7	8.4	3.5	1.6	5.0
2005	645,835	3,483	1,697	2,227	1,032	3,259	5.4	8.0	3.4	1.6	5.0
2006 ⁶	669,601	3,602	1,761	2,345	1,023	3,368	5.4	8.0	3.5	1.5	5.0

1 See the background note 'Legal definition of stillbirths'.

2 Numbers of deaths shown are based on annual occurrences for years 1993 to 2005, and on annual registrations for all other years.

3 Per 1,000 live births and stillbirths.

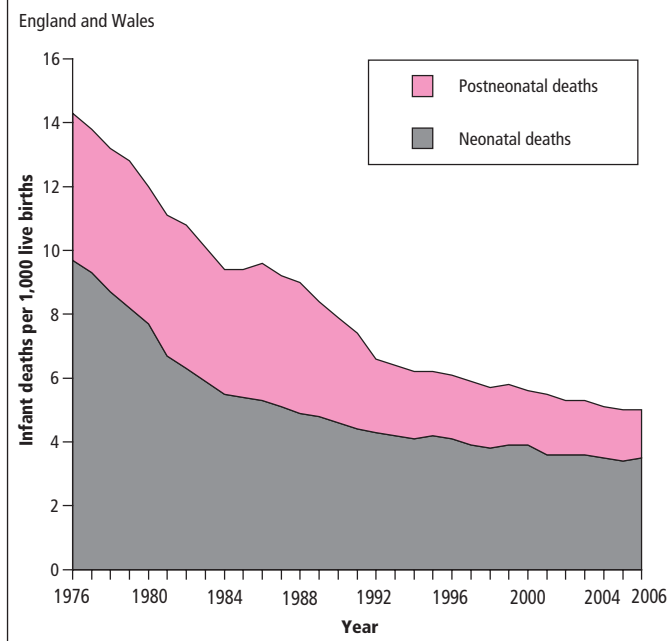
4 Per 1,000 live births.

5 Stillbirth figures and rates for 2003 and 2004 are different from those released previously in DH3 - volumes 36 and 37, and in HSQ - editions 23 and 27. This is due to the late notification of an extra 27 stillbirths for 2003 and 154 stillbirths for 2004. This also affects perinatal rates for 2003 and 2004.

6 The live births figure differs from that released previously on 7 June 2007.

Figure 1

Infant mortality rates, 1976–2006



The neonatal mortality rate (deaths under 28 days) increased slightly to 3.5 per thousand live births in 2006, from 3.4 in 2005. The postneonatal mortality rate (deaths between 28 days and one year) fell to 1.5 per thousand live births, from 1.6 per thousand live births in 2005.

There were 3,368 infant deaths (at ages under one year) registered in England and Wales in 2006, giving an infant mortality rate of 5.0 deaths per thousand live births. This is the same rate as in 2005 and hence remains the lowest rate ever recorded in England and Wales.

The infant mortality rate over the period 1976 to 2006 by age at death in the neonatal and postneonatal period is shown in Figure 1. The infant mortality rate fell by 65 per cent over this period, while the neonatal and postneonatal rates all fell by 64 and 67 per cent respectively. However, these declines were not constant over the period, being mainly concentrated in the earlier years.

Geographical variation in infant mortality

There was considerable variation in the infant mortality rate across the health authorities. In 2006, West Midlands had the highest infant mortality rate among the Strategic Health Authorities in England at 6.4 deaths per thousand live births. South West had the lowest at 4.0 deaths per thousand live births (Table 2). Table 3 shows that the highest infant mortality rate among the Local Health Boards in Wales was 7.2 deaths per thousand live births in Anglesey.

Live Births and birthweight

There were 669,601 live births in England and Wales in 2006, compared with 645,835 in 2005. This is a rise of 3.7 per cent and the fifth successive increase in the annual number of live births.

Table 2 shows the number of births and the proportions of low and very low birthweight babies for England and Wales and Strategic Health Authorities in England in 2006. Of those live births with a stated

birthweight in England and Wales, 7.6 per cent had a low birthweight (under 2,500 grams) and 1.2 per cent had a very low birthweight (under 1,500 grams). The corresponding percentages in 2005 were 7.6 and 1.3 respectively.

Low birthweight is one of the known risk factors for infant deaths¹. Among the Strategic Health Authorities in England, West Midlands had the highest proportions of very low birthweight babies, 1.5 per cent, as well as having the highest infant mortality rate (see above). West Midlands also had the highest proportion of low birthweight babies with 8.4 per cent of babies weighing under 2500g. The Strategic Health Authority with the lowest proportion of low birthweight babies was South West with 6.5, whilst the lowest proportion of very low birthweight babies was in South East Coast with 1.0 per cent.

Among the Local Health Boards of Wales in 2006, the percentage of low birthweight babies was highest in Blaenau Gwent (8.7 per cent) and lowest in Ceredigion (4.8 per cent) (Table 3). The proportion of very low birthweight babies ranged from 0.5 per cent in Ceredigion to 1.9 per cent in Newport.

Revisions to live births

This report introduces the revised live births figures for 2006 in England and Wales. The revision was necessary due to the late receipt at ONS of seventy records relating to live births occurring in 2006. Therefore, the numbers of live births given here do not correspond with those published in the report on live births in Population Trends 128.²

Background Notes

Statistics in the Report

Although the live birth numbers are based on births occurring in 2006, the mortality data here are based on deaths registered in 2006. However, in line with ONS practice in publishing mortality data, final national mortality statistics (including rates) will be based on deaths occurring in the year. It is intended that these statistics will be available in late 2007.

Additionally, in Table 1 numbers of deaths for 1993 to 2005 are based on occurrences in these years, while numbers for years prior to 1993 are based on registrations in each year.

Stillbirth and perinatal mortality figures for 2003 and 2004 have been revised. This is because some register offices in England and Wales failed to notify ONS, in line with regulations, of some stillbirths that occurred in 2003 and 2004. These have now been received by ONS.

Mortality rates in Tables 2 and 3 that are calculated from fewer than 20 deaths are distinguished by italic type as a warning to the user that their reliability may be affected by the small number of events.

Areal statistics in this Report are derived from the usual residence at the time of birth or death. If the usual residence was outside England and Wales, these events are included in the aggregate for 'England and Wales', but excluded from the figures for individual health areas and Government Office Regions.

Recording of birthweight

Since 1975 ONS (formerly OPCS) has obtained the birthweight of a baby from information provided to the registrar of births and deaths by the local health services. In 2006, birthweight was recorded for 99.1 per cent of all live births.

Table 2 Births, perinatal and infant mortality statistics, 2006

England and Wales, and Government Office Regions and Strategic Health Authorities in England

Area	Numbers					Mortality rates				Percentage of live births with a stated birthweight	
	Births		Deaths			Perinatal ¹	Neonatal ²	Post-neonatal ²	Infant ²	Under 1,500g	Under 2,500g
	Live births	Still-births	Under 1 week	Under 4 weeks	Under 1 year						
ENGLAND AND WALES³	669,601	3,602	1,761	2,345	3,368	8.0	3.5	1.5	5.0	1.2	7.6
ENGLAND	635,748	3,418	1,689	2,238	3,192	8.0	3.5	1.5	5.0	1.2	7.6
NORTH EAST	29,184	156	79	111	158	8.0	3.8	1.6	5.4	1.4	8.1
North East	29,184	156	79	111	158	8.0	3.8	1.6	5.4	1.4	8.1
NORTH WEST	84,155	453	246	320	470	8.3	3.8	1.8	5.6	1.2	7.8
North West	84,155	453	246	320	470	8.3	3.8	1.8	5.6	1.2	7.8
YORKSHIRE AND THE HUMBER	62,955	343	193	254	360	8.5	4.0	1.7	5.7	1.2	8.0
Yorkshire and The Humber	62,955	343	193	254	360	8.5	4.0	1.7	5.7	1.2	8.0
EAST MIDLANDS	50,717	290	141	203	276	8.4	4.0	1.4	5.4	1.2	7.7
East Midlands	50,717	290	141	203	276	8.4	4.0	1.4	5.4	1.2	7.7
WEST MIDLANDS	67,688	379	244	311	432	9.2	4.6	1.8	6.4	1.5	8.4
West Midlands	67,688	379	244	311	432	9.2	4.6	1.8	6.4	1.5	8.4
EAST	66,870	307	146	191	273	6.7	2.9	1.2	4.1	1.2	6.9
East of England	66,870	307	146	191	273	6.7	2.9	1.2	4.1	1.2	6.9
LONDON	120,898	762	312	416	593	8.8	3.4	1.5	4.9	1.3	7.9
London	120,898	762	312	416	593	8.8	3.4	1.5	4.9	1.3	7.9
SOUTH EAST	98,566	479	213	272	409	7.0	2.8	1.4	4.1	1.1	6.9
South East Coast	49,163	230	96	133	207	6.6	2.7	1.5	4.2	1.0	6.8
South Central	49,403	249	117	139	202	7.4	2.8	1.3	4.1	1.2	7.0
SOUTH WEST	54,715	249	115	160	221	6.6	2.9	1.1	4.0	1.1	6.5
South West	54,715	249	115	160	221	6.6	2.9	1.1	4.0	1.1	6.5
WALES	33,628	172	61	93	137	6.9	2.8	1.3	4.1	1.1	7.3
Normal residence outside England and Wales	225	12	11	14	39	97.0	62.2	111.1	173.3	9.5	21.3

1 Per 1,000 live and stillbirths.

2 Per 1,000 live births.

3 Including births and deaths to persons normally resident outside England and Wales.

Table 3 Live births, perinatal and infant mortality statistics, 2006

Local Health Boards in Wales

Area	Numbers				Mortality rates			Percentage of live births with a stated birthweight	
	Live births	Perinatal ¹ deaths	Neonatal ² deaths	Infant ³ deaths	Perinatal ⁴	Neonatal ⁵	Infant ⁵	Under 1,500g	Under 2,500g
WALES	33,628	233	93	137	6.9	2.8	4.1	1.1	7.3
Anglesey	697	6	5	5	8.6	7.2	7.2	1.6	7.3
Gwynedd	1,331	*	3	5	*	2.3	3.8	0.8	5.7
Conwy	1,149	6	2	6	5.2	1.7	5.2	1.2	7.4
Denbighshire	989	*	2	3	*	2.0	3.0	1.8	7.5
Flintshire	1,719	11	8	12	6.4	4.7	7.0	1.0	8.0
Wrexham	1,597	12	1	3	7.5	0.6	1.9	0.9	7.0
Powys Teaching	1,222	10	3	5	8.1	2.5	4.1	0.8	6.1
Ceredigion	590	*	-	1	*	-	1.7	0.5	4.8
Pembrokeshire	1,278	13	7	8	10.1	5.5	6.3	0.6	7.6
Carmarthenshire	1,887	11	7	9	5.8	3.7	4.8	1.1	7.1
Swansea	2,543	20	8	11	7.8	3.1	4.3	1.3	7.7
Neath Port Talbot	1,515	16	5	7	10.5	3.3	4.6	0.8	6.1
Bridgend	1,526	11	4	8	7.2	2.6	5.2	1.0	8.1
Vale of Glamorgan	1,360	*	6	6	*	4.4	4.4	1.0	5.7
Cardiff	4,216	34	10	11	8.0	2.4	2.6	1.0	7.3
Rhondda Cynon Taff Teaching	2,778	17	6	13	6.1	2.2	4.7	1.0	7.6
Merthyr Tydfil	692	*	1	2	*	1.4	2.9	1.3	7.8
Caerphilly Teaching	2,167	20	6	8	9.2	2.8	3.7	1.5	7.1
Blaenau Gwent	770	*	2	3	*	2.6	3.9	0.8	8.7
Torfaen	1,069	11	1	2	10.2	0.9	1.9	1.6	8.1
Monmouthshire	854	*	2	3	*	2.3	3.5	0.9	7.6
Newport	1,679	14	4	6	8.3	2.4	3.6	1.9	8.6

* Note: To protect confidentiality all counts lower than 5, and all rates based on fewer than 5 events, have been suppressed.

1 Stillbirths and deaths at ages under 1 week.

2 Deaths at ages under 4 weeks.

3 Deaths at ages under 1 year.

4 Per 1,000 live and stillbirths.

5 Per 1,000 livebirths.

Legal definition of stillbirths

On 1 October 1992 the legal definition of a stillbirth was changed from a baby born dead after 28 or more weeks completed gestation to one born dead after 24 or more weeks completed gestation. This means that perinatal and stillbirth data for 2006 can be compared with data only from 1993 onwards.

General

More details on the above, and on other aspects of stillbirth and infant mortality data, can be found in the ONS annual reference volume Mortality statistics: childhood, infant and perinatal 2005, series DH3 no 38, published in March 2007.³

References

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