

Annual statistical review

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This is the second in a series of annual reviews of national statistics relating to children. As this is a recent addition to the topics covered by *Archives of Disease in Childhood*, we again invite comments from readers on the suitability of the statistics covered and suggestions as to what additional material should be included.

Demography

The annual number of births in the United Kingdom has been rising since 1982 and 1986 continues this trend with 755 000 births, an increase of over 3000 since the previous year. Within this, the striking feature has been the rise in the number of illegitimate births while the number of legitimate births has fallen. In 1986, 21% of births in the United Kingdom were illegitimate.

Illegitimate births may be subdivided into those registered by one parent and those registered jointly by both parents. The numbers in both groups have risen though the latter shows the greater increase. These trends have obvious implications for infant and childhood mortality and morbidity rates. They are shown in table 1.

Mortality

INFANT MORTALITY

In 1986 there were almost 6000 infant deaths in England, 580 in Scotland, and 350 in Wales. Annual trends in infant mortality rates in Scotland and Wales need to be interpreted with care because random variation within the small number of deaths will produce swings in the mortality rate from year to year. This caveat is even more pertinent when infant mortality is broken down into its component neonatal and postneonatal mortality rates. Table 2 shows the annual trend in neonatal, postneonatal, and infant mortality rates in England, Scotland, and Wales from 1982 to 1986. The feature of this table that must be of some concern is the rise in infant mortality for England in 1986, which exceeds not only the rate for 1985 but also for 1984. This is entirely due to a rise in the postneonatal mortality

from 3.91 to 4.24/1000 live births; neonatal mortality has shown an uninterrupted fall, although the rate of improvement has been slowing down.

The increase in the postneonatal mortality rate in 1986 occurred across all maternal age, parity, social class, and legitimacy/illegitimacy groups. The excess compared with 1985 was largely among male infants. Analysis of the data by quarters of the year show that postneonatal mortality was particularly high in the January-March quarter of 1986 and a suggested explanation was the severe spell of prolonged cold

Table 1 Live birth registration (000s) 1980-6 in England and Wales

Year	Legitimate live births (%)	Illegitimate live births		All live births (%)
		Jointly registered (%)	Solely registered (%)	
1980	578.9 (88.2)	44.2 (6.7)	33.2 (5.1)	656.2 (100)
1981	553.5 (87.2)	47.1 (7.4)	33.9 (5.3)	634.5 (100)
1982	536.1 (85.7)	53.4 (8.5)	36.5 (5.8)	625.9 (100)
1983	529.9 (84.2)	60.8 (9.7)	38.4 (6.1)	629.1 (100)
1984	526.3 (82.6)	69.9 (11.0)	40.6 (6.4)	636.8 (100)
1985	530.2 (80.8)	81.8 (12.5)	44.4 (6.8)	656.4 (100)
1986	519.7 (78.6)	93.5 (14.1)	47.8 (7.2)	661.0 (100)

Source: OPCS Series FM1 No 15.

Table 2 Trends in infant mortality 1982-6

	1982	1983	1984	1985	1986
Neonatal mortality rate					
England	6.2	5.8	5.5	5.3	5.2
Scotland	7.1	5.8	6.4	5.5	5.2
Wales	6.9	6.7	5.7	5.8	5.6
Postneonatal mortality rate					
England	4.6	4.2	3.9	3.9	4.3
Scotland	4.3	4.1	3.9	3.9	3.6
Wales	3.7	4.0	3.1	4.0	3.9
Infant mortality rate					
England	10.8	10.0	9.4	9.2	9.5
Scotland	11.4	9.9	10.3	9.4	8.8
Wales	10.6	10.7	8.8	9.8	9.5

Source: OPCS: Population Trends 50, Winter 1987.

weather that was experienced in that quarter. Data recently available for 1987 indicate that the infant mortality rate has fallen again to 9.2/1000.

Cause specific neonatal and postneonatal mortality rates for England and Wales 1985 are shown in table 3. For neonatal mortality all the major cause of death categories show a decrease compared with previous years. For postneonatal mortality no trend is obvious. This is consistent with the all causes rate being virtually the same in 1985 as it was in 1984. The cause specific rates for 1986 are not yet available.

International comparisons of postneonatal mortality are given in table 4 which is an extension and updating of a similar table given in the previous statistical review. It is apparent that, for most countries shown in the table, there has been a levelling out of the postneonatal mortality rate. Between countries the rates have stabilised at different levels but within countries there tends to be a fluctuation in the annual rate. The increase in postneonatal mortality in England must be viewed against this background.

Table 3 *Neonatal and postneonatal cause specific mortality rates in England and Wales 1985*

<i>Diagnosis</i>	<i>Rates/1000 live births</i>
Neonatal mortality	
Diseases of the respiratory system (ICD 460-519)	0.07
Congenital anomalies (ICD 740-759)	1.70
Certain conditions originating in the perinatal period (ICD 760-779)	3.21
All causes	5.32
Postneonatal mortality	
Infectious and parasitic diseases (ICD 000-134)	0.12
Diseases of the respiratory system (ICD 460-519)	0.58
Congenital anomalies (ICD 740-759)	0.67
Sudden death cause unknown (ICD 798)	1.67
All causes	3.86

ICD: International Classification of Diseases. Source: OPCS Series DH3 No 19.

Table 4 *Postneonatal mortality in various countries (rates/1000 live births)*

	<i>Category*</i>	<i>1980</i>	<i>1981</i>	<i>1982</i>	<i>1983</i>	<i>1984</i>	<i>1985</i>	<i>1986</i>
Australia	a	0.68	0.67	0.75	0.73	0.62	0.65	
	b	0.29	0.20	0.18	0.23	0.19	0.23	
	c	1.64	1.69	1.78	1.74	2.07	1.96	
	d	3.60	3.50	3.64	3.57	3.76	3.74	
England and Wales	a	0.83	0.90	0.93	0.86	0.82	0.73	0.74
	b	1.04	0.88	0.88	0.71	0.55	0.58	0.47
	c	1.45	1.57	1.76	1.69	1.65	1.71	1.97
	d	4.38	4.41	4.56	4.29	3.92	3.98	4.27
France	a	0.92	0.89	0.84	0.76	0.74	0.67	
	b	0.22	0.18	0.16	0.15	0.13	0.12	
	c	1.23	1.36	1.61	1.74	1.52	1.66	
	d	4.25	4.22	4.20	4.13	3.63	3.72	
West Germany	a	1.16	1.12	1.05	1.03	0.96	0.81	0.76
	b	0.47	0.32	0.25	0.28	0.24	0.21	0.17
	c	1.15	1.34	1.39	1.33	1.39	1.58	1.59
	d	4.76	4.64	4.59	4.39	4.15	3.99	3.76
Japan	a	0.95	0.91	0.87	0.81	0.82	0.76	0.77
	b	0.35	0.32	0.27	0.24	0.23	0.20	0.20
	c	0.10	0.11	0.12	0.13	0.14	0.13	0.16
	d	2.55	2.42	2.34	2.33	2.28	2.09	2.14
The Netherlands	a	0.80	0.76	0.83	0.78	0.87	0.89	
	b	0.19	0.21	0.19	0.11	0.16	0.27	
	c	1.00	0.99	1.06	1.32	1.34	1.13	
	d	2.93	2.86	3.16	3.10	3.25	3.05	
Scotland	a	0.99	0.79	0.82	0.72	0.68	0.53	
	b	0.48	0.48	0.38	0.30	0.40	0.18	0.15
	c	1.83	2.12	1.98	1.80	1.87	2.01	2.19
	d	4.32	4.41	4.24	4.10	3.98	3.90	3.62
United States	a	0.70	0.67	0.63	0.64	0.62		
	b	0.39	0.34	0.31	0.33	0.30		
	c	1.54	1.49	1.46	1.48	1.47		
	d	4.12	3.91	3.82	3.91	3.79		

*Category (ICD 9): a, congenital anomalies; b, diseases of the respiratory system; c, signs symptoms and ill defined conditions; and d, all causes. Source: WHO Annual Statistics, various years.

International differences in postneonatal mortality due to congenital malformations are small. Greater variation is seen in the rates for respiratory diseases and signs, symptoms, and ill defined conditions. This latter category is virtually a synonym for cot death. There are problems in interpreting these trends because, in recent years, there has been a diagnostic transfer from respiratory to cot deaths—that is, the summation of the two causal groups shows little change over time.

The analysis of mortality rates according to maternal age, parity, and social class from the routine data set linking infant death and birth registration documents for 1985 is shown in table 5. Comparison with 1984 shows an improvement in most of the rates relating to each variable recorded in the table. The vulnerability of women in the youngest age group—that is, less than 20 years—for perinatal, neonatal, and postneonatal mortality is evident. In the social class section of the table those classified as 'Others' include the unemployed, students, and members of the armed forces.

BIRTHWEIGHT SPECIFIC MORTALITY AND LOW BIRTH WEIGHT

Interest in birthweight specific mortality rates continues predominantly because of developments in neonatal intensive care. They are being used as outcome measures for determining the effectiveness of special and intensive care units.

One side effect of the development of intensive care facilities has been the rise in the proportion of births that are extremely low (<1000 g) or very low (1001–1500 g) birth weight. Time trends are shown

in the figure. Almost certainly this is, at least in part, an artefact as these infants are now resuscitated and registered as live births whereas in the past they would have been classified as abortions, not registered, and not enumerated. The extent to which this occurs will obviously vary between districts depending on the provision of facilities for intensive care and clinical policy of the unit. Because extremely and very low birthweight infants are at high risk of dying, any proportionate increase in their numbers will have an adverse effect on the overall mortality rate. Ideally standardisation for birth weight should

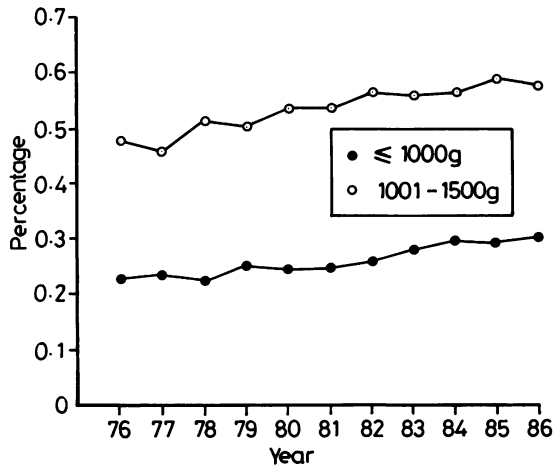


Figure Proportions of live low weight births in England and Wales 1976-86.

Table 5 Perinatal, neonatal, and postneonatal mortality by maternal age, parity, and social class for England and Wales in 1985

	Maternal age					Parity				Social class						
	<20	20-24	25-29	30-34	35+	0	1	2	3+	I	II	III (non-manual)	III (manual)	IV	V	Others
<i>Legitimate births</i>																
Perinatal mortality*	12.5	9.1	8.2	9.7	11.6	10.2	7.7	8.8	12.6	7.7	7.5	8.8	9.2	11.1	12.4	11.7
Neonatal mortality†	8.3	5.2	4.5	4.8	6.2	5.4	4.5	4.8	6.3	4.7	4.2	4.6	4.9	6.1	6.3	7.1
Postneonatal mortality†	6.8	4.2	2.8	2.8	2.9	2.3	3.7	4.4	5.2	2.4	2.8	2.6	3.2	4.0	5.2	6.2
<i>Illegitimate births</i>																
Perinatal mortality*	11.9	11.3	11.9	13.1	18.0	Not applicable				Not applicable						
Neonatal mortality†	6.4	6.2	6.6	6.4	7.5	Not applicable				Not applicable						
Postneonatal mortality†	7.1	6.5	4.7	4.0	3.9	Not applicable				Not applicable						

*Rate/1000 total (live and still) births; †rate/1000 live births. Source: OPCS Series DH3 No 18.

be carried out when mortality comparisons are considered, for example, comparisons between districts or over time.

The 1985 and 1986 birthweight specific mortality rates for England and Wales are shown in table 6. There is no striking feature to report on from this table, there have been marginal decreases or increases in the birthweight specific mortality rates.

Birthweight specific perinatal mortality rates for Denmark, England and Wales, and Scotland are given in table 7. Difficulties occur in compiling such tables because, while rates may be provided, they are not for the same birthweight groups and the numerators and denominators are not published. Other important caveats relate to the very low birthweight and the weight not stated groups. The former is affected by whether or not a very low birthweight baby born dead is registered as a stillbirth or is not registered and therefore not counted because it is classified as an abortion. The infants for whom birth weight is not stated are biased towards very low birth weight and the proportion so classified will affect the comparison.

Morbidity

INFECTIOUS DISEASES

The National Congenital Rubella Surveillance Programme holds data on children classified as cases of confirmed or suspected congenital rubella. Since 1980 a range of ascertainment sources have provided the data and the number of cases of congenital rubella syndrome and congenital rubella infection are shown in table 8. Defects have not so far been recorded in any child after rubella has been proved serologically after the 17th week of pregnancy.¹ In contrast, when infection occurred before the seventh week of pregnancy, no child escaped damage.

In 1986, in Great Britain, immunisation of children

within two years of birth for diphtheria, poliomyelitis, and tetanus remained unchanged from 1985 at 85%. For whooping cough and measles there were slight increases to 66% and 71% respectively.

HOSPITAL STATISTICS

The recognition of the psychological trauma associated with admission of children to hospital has led to decreasing lengths of stay and a trend for treatment as day cases. Associated with this trend is the attendance of ward attenders who are defined as patients attending a ward who do not require the use

Table 7 *International comparisons of birthweight specific perinatal mortality 1985*

Birth weight (g)	Denmark	England and Wales	Scotland
<1000	507.2	577.3	609.1
1000-1499	271.1	229.5	262.6
1500-1999	79.1	93.7	99.3
2000-2499	27.2	28.3	28.1
2500-2999	6.6	7.2	7.1
3000-3499	2.2	2.9	2.4
3500-3999	2.6	1.8	1.9
≥4000	1.9	3.1	2.9

Source: Medicinsk fødselsstatistik 1985; OPCS Series DH3 No 18, 1985; Scottish Stillbirth and Neonatal Death Report, 1987.

Table 8 *Cases of congenital rubella syndrome/infection by year of birth*

	Year of birth							
	1980	1981	1982	1983	1984	1985	1986	1987
Defects	28	12	29	38	25	15	9	2
No defects	6	4	9	25	23	5	7	2
Total	34	16	38	63	48	20	16	4

Source: Communicable Disease Report, Weekly Edition 88/15.

Table 6 *Birthweight specific mortality for England and Wales 1985 and 1986*

		Birth weight (g)							Not stated
		<1500	1500-1999	2000-2499	2500-2999	3000-3499	3500-3999	≥4000	
Stillbirth*	1985	154.5	63.8	18.7	4.8	1.9	1.0	2.0	64.7
	1986	153.3	53.3	18.8	4.4	1.8	1.2	1.7	42.9
Perinatal*	1985	350.1	93.7	28.3	7.2	2.9	1.8	3.1	195.0
	1986	345.5	85.0	27.3	6.6	3.0	2.0	2.7	187.1
Neonatal†	1985	260.4	37.8	12.3	3.4	1.6	1.2	1.5	156.7
	1986	262.3	40.1	10.7	3.0	1.6	1.2	1.3	163.5
Postneonatal†	1985	39.8	17.1	9.1	4.6	3.0	2.4	2.3	10.4
	1986	40.1	20.9	9.0	4.9	3.2	2.7	2.4	17.6
Infant†	1985	302.2	54.8	21.4	8.1	4.5	3.6	3.8	167.1
	1986	302.4	61.1	19.7	8.0	4.8	3.9	3.7	181.1

*Rate/1000 total births; †rate/1000 live births. Source: OPCS Monitor DH3 87/1, 88/1.

Table 9 Percentage of general practitioner consultations for selected ICD chapter by age

	Age (years)	
	0-4	5-14
Infectious and parasitic disease (ICD 001-139)	11.4	12.4
Diseases of the nervous system and sense organs (ICD 320-389)	15.8	14.1
Diseases of the respiratory system (ICD 460-519)	30.1	32.0

ICD: International Classification of Diseases.
Source: OPCS Series MB5 No 1.

of a hospital bed. A survey carried out by the National Association for the Welfare of Children in Hospital found that in the two weeks of the study, ward attenders formed 24% of all patients in the 33 wards for which data were available. Of the ward attenders 34% were for post discharge reviews and 23% for planned procedures.²

GENERAL PRACTICE

The third national study presented morbidity statistics from general practice 1981-2. It showed that 98% of children under 5 and 66% aged 5-14 consulted their general practitioner in the study year. The major reasons for consulting a general practitioner are shown in table 9.

Social habits

Trends in the smoking and drinking habits of children have obvious important implications for their subsequent health.

SMOKING

A survey carried out by the Social Survey Division of the Office of Population Censuses and Surveys (OPCS) found that between 1984 and 1986 there was a pronounced fall in the proportion of boys who smoked cigarettes regularly (that is at least one cigarette a week) in England and Wales from 13% to 7% and in Scotland from 16% to 10%.³ Among girls in Wales and Scotland there was a clear though less pronounced fall in the prevalence of smoking but in England there was no significant change. Smoking among secondary school children in Scotland, England and Wales is more prevalent among girls (12%) than in boys (7%).

ALCOHOL

The OPCS adolescent drinking survey found that among 13 year olds, 29% of boys and 11% of girls drank at least weekly, while at 15, 52% of boys and 37% of girls were drinking weekly.³ The youngest adolescents drink mostly at home or at the homes of relatives or friends. As they grow older they continue to drink at home but also begin to drink in clubs and discos.

References

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