two groups and whether this might account for the different immunological reactivities of the two populations.

In conclusion, we believe that in very high risk groups the combined use of in situ hybridisation and gene amplification by polymerase chain reactions is a necessary diagnostic tool for identifying asymptomatic seronegative carriers of HIV-I infection. Furthermore, viral isolation and characterisation will eventually explain whether the lack of immunological recognition in seronegative infected subjects at risk is due to the presence of peculiar viral isolates—for example, defective proviruses—or to a different viral cytotropism, or to both.

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Sudden infant death syndrome and postneonatal mortality in immigrants in England and Wales

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Abstract

To examine ethnic differences in postneonatal mortality and the incidence of sudden infant death in England and Wales during 1982-5 records were analysed, the mother's country of birth being used to determine ethnic group. Postneonatal mortality was highest in infants of mothers born in Pakistan (6.4/1000 live births) followed by infants of mothers born in the Caribbean (4.5) and the United Kingdom and Republic of Ireland (4.1). Crude rates were lower in infants of mothers born in India (3.9/1000), east and west Africa (3.0), and Bangladesh (2.8) than in infants of mothers born in the United Kingdom despite less favourable birth weights. Mortality ratios standardised separately for maternal age, parity, and social class were significantly higher in infants of mothers born in Pakistan and lower in those of mothers born in Bangladesh. The ratio for infants of Caribbean mothers was significantly higher when adjusted for maternal age. Ratios for infants of Indian and east African mothers did not show significant differences after standardisation. An important finding was a low incidence of sudden infant death in infants of Asian origin. This was paralleled by lower mortality from respiratory causes. During 1975-85 postneonatal mortality in all immigrant groups except Pakistanis fell to a similar or lower rate than that in the United Kingdom group; Pakistanis showed a persistent excess. During 1984-5 several immigrant groups (from the Republic of Ireland, India, west Africa, and the Caribbean) recorded an increase in postneonatal mortality.

Surveillance of postneonatal mortality among ethnic communities should be continued, and re-

search is needed to identify the causes underlying the differences.

Introduction

Most of the fall in infant mortality since the 1970s has been due to a steady fall in neonatal mortality rather than postneonatal mortality.¹ During 1985-6 postneonatal mortality in fact increased from 3.9/1000 live births to 4.3/1000, leading to a rise in overall infant mortality.² About 42% of all infant deaths occur in the postneonatal period, with sudden infant death the main cause.³ Concern about the slow fall in postneonatal mortality and the major contribution of sudden infant death prompted a multicentre inquiry by the Department of Health and Social Security into postneonatal deaths during 1976-9 in selected areas of England and Wales.⁴ The study recommended improvements in health care services and emphasised the importance of educating parents in child care. Ethnic differences in postneonatal mortality and the incidence of sudden infant death have not previously been examined in detail nationally. We analysed postneonatal mortality in England and Wales by the mother's country of birth during 1982-5, the years for which detailed tables were available. We also intend to examine data for subsequent years in view of a recent upward trend in postneonatal mortality.²

Subjects and methods

Since 1975 the Office of Population Censuses and Surveys has linked records of births and deaths of infants under 1 year old.⁵ Data from these records were

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aggregated for the years 1982-5 to examine postneonatal mortality in England and Wales by mother's country of birth. Variations in postneonatal mortality by maternal age, parity (defined as the number of previous live births and stillbirths), social class of father, birth weight, and cause of death were examined for mothers born in the United Kingdom, the Republic of Ireland, India, Bangladesh, east and west Africa, the Caribbean, and Pakistan. The social class groups studied were: I, professional and managerial; II, intermediate; IIIN, skilled non-manual; IIIM, skilled manual; IV, partly skilled; and V, unskilled. Because the numbers of deaths were low in some categories the groups were aggregated into non-manual (classes I, II, and IIIN) and manual (classes IIIM, IV, and V).

We could not examine interactions between the maternal variables and their relative contribution to ethnic differences in postneonatal mortality. We therefore computed standardised postneonatal mortality ratios, standardising separately for maternal age (by five year age groups), parity, and social class, with the respective rates (1982-5) for mothers born in the United Kingdom as the standard. We calculated 95% confidence intervals when appropriate. As data relating to parity and social class were confined to births within marriage the ratios standardised for these variables were similarly restricted. Postneonatal mortality among births within marriage and outside marriage was examined separately. We did not try to standardise by birth weight in view of the distinct differences between immigrant groups in distributions of weight. We also examined trends in postneonatal mortality by mother's country of birth during 1975-85 on the basis of three year moving averages. Postneonatal mortality was expressed as deaths of infants aged between 28 days and 1 year per 1000 live births.

The analysis by cause of death was based on International Classification of Diseases (ICD) codes and included sudden death from unknown causes (ICD 798); virtually all the infant deaths in this category were classified as ICD 7980, the sudden infant death syndrome.⁶ We therefore interpreted the findings in our analysis on sudden death from unknown causes as referring to the sudden infant death syndrome.

Country of birth is a reasonably good substitute for ethnic origin of women of childbearing age as people of British origin born overseas belong primarily to older generations.⁷ The only notable exceptions are east

African immigrants, most of whom are of Indian ethnic origin.⁸ A problem associated with this method of classification is that second generation immigrant mothers are classified as born in the United Kingdom rather than overseas. Their numbers, however, are as yet too small to affect greatly the results for those born in the United Kingdom.⁹ We believe that classification by mother's country of birth is, for the present, a legitimate means of examining ethnic differences in mortality.

Results

Of the 10 372 postneonatal deaths in England and Wales during 1982-5, 9077 were of infants born to mothers born in the United Kingdom and 1295 of infants born to mothers born overseas. The groups according to country of birth examined in this study accounted for 96% of all postneonatal deaths during 1982-5. Postneonatal mortality per 1000 live births (table I) was highest in infants of mothers born in Pakistan (6.4) followed by infants of mothers born in the Caribbean (4.5), the United Kingdom (4.1), and the Republic of Ireland (4.1). Infants of mothers born in India (3.9), Africa (3.0), and Bangladesh (2.8) had a lower mortality than infants of mothers born in the United Kingdom.

MOTHER'S AGE

Ratios standardised for maternal age (table I) were highest in Pakistani infants (161, 95% confidence interval 145 to 179) and Caribbean infants (123, 101 to 150). The lowest ratios were seen among Bangladeshi infants (68, 51 to 91) and African infants, though only the ratio in the Bangladeshi infants reached statistical significance. Age specific rates for Pakistani infants for all maternal ages were higher than those for other groups of Asian origin (Indians, Bangladeshis, and east Africans), being 1.5-2.3 times greater than those in the United Kingdom group except in mothers under 20 years old.

PARITY

At every parity mortality was highest in infants of mothers born in Pakistan, being higher than that for other infants of Asian origin. The ratio standardised for parity (table I) was significantly higher in Pakistani

TABLE I—Postneonatal mortality by mother's country of birth, England and Wales, 1982-5. (Observed numbers of deaths in parentheses)

Mother's country of birth	Postneonatal mortality (deaths/1000 live births)	Ratios standardised for mother's age*		Ratios standardised for parity†	
		Ratio	95% Confidence interval	Ratio	95% Confidence interval
United Kingdom	4.1 (9077)	100 (9077)		100 (6621)	
Republic of Ireland	4.1 (111)	118 (111)	92 to 134	93 (81)	77 to 112
India	3.9 (181)	101 (181)	87 to 117	103 (180)	89 to 119
Bangladesh	2.8 (44)	68 (44)	51 to 91	62 (43)	46 to 83
East Africa	3.0 (83)	83 (83)	67 to 103	83 (79)	67 to 103
West Africa	3.0 (35)	83 (35)	60 to 116	73 (28)	52 to 102
Caribbean countries	4.5 (95)	123 (95)	101 to 150	95 (40)	78 to 116
Pakistan	6.4 (343)	161 (343)	145 to 179	147 (341)	132 to 163

*Based on all births. †Legitimate births.

TABLE II—Postneonatal mortality by mother's country of birth, England and Wales, 1982-5. (Observed numbers of deaths in parentheses)

Mother's country of birth	Ratios standardised for social class*		Postneonatal mortality (deaths/1000 live births)	
	Ratio	95% Confidence interval	Legitimate births	Illegitimate births
United Kingdom	100 (6621)		3.6 (6621)	6.2 (2456)
Republic of Ireland	107 (81)	89 to 129	3.7 (81)	6.4 (30)
India	106 (180)	92 to 123	4.0 (180)	1.4 (1)
Bangladesh	68 (43)	51 to 91	2.8 (43)	14.5 (1)
East Africa	84 (79)	68 to 104	3.0 (79)	5.3 (4)
West Africa	67 (28)	48 to 93	2.9 (28)	3.5 (7)
Caribbean countries	108 (40)	88 to 132	3.7 (40)	5.2 (55)
Pakistan	158 (341)	142 to 176	6.4 (341)	5.2 (2)

*Legitimate births.

infants (147, 132 to 163). Ratios were lower in Bangladeshi and African infants, though reaching significance only in Bangladeshi infants (62, 46 to 83). Births outside marriage constituted half of live births to Caribbean mothers. Other groups with a sizable proportion of births outside marriage included mothers from the United Kingdom (18%), the Republic of Ireland (18%), and west Africa (17%). The ratios standardised for parity therefore did not include a substantial proportion of births in these groups.

SOCIAL CLASS

In all ethnic groups postneonatal mortality was higher in the manual than the non-manual social classes. Babies born to mothers from Pakistan showed the highest rates in most social classes. Postneonatal mortality ratios adjusted for social class (table II) were significantly higher in Pakistani infants (158, 142 to 176) and lower in west African (67, 48 to 93) and Bangladeshi (68, 51 to 91) infants. As social class was not available for births outside marriage the ratios adjusted for class did not include a sizable proportion of births to mothers born in the United Kingdom, the Republic of Ireland, west Africa, and the Caribbean. In these groups mortality among infants born outside marriage was 1.2-1.7 times greater than mortality among infants born within marriage. Mortality among infants born outside marriage was lower for mothers born in west Africa or the Caribbean (3.5/1000 and 5.2/1000 respectively) than for mothers from the

United Kingdom (6.2/1000) or the Republic of Ireland (6.4/1000).

BIRTH WEIGHT

Birthweight distributions were similar in the groups from the United Kingdom and the Republic of Ireland but different in the immigrant groups (table III). Mothers born in India, Bangladesh, and east Africa had a higher proportion of babies weighing under 3000 g than other groups. Pakistani infants had higher birth weights than other infants of Asian origin but not than infants born to mothers born in the United Kingdom.

At most birth weights mortality was highest in Pakistani infants, being considerably higher than that in other Asian infants (table IV). Indian, Bangladeshi, and east African infants had a lower mortality than infants of mothers born in the United Kingdom at every birth weight. Differences in mortality between groups were large at lower birth weights (range 9.2-19.6 at <2500 g) and fell with increasing birth weight (range 1.3-3.3 at 3500-3999 g).

CAUSE OF DEATH

Table V shows postneonatal mortality for selected causes of death. Sudden death from unknown causes (ICD 798) was the leading cause of postneonatal death in the United Kingdom, Republic of Ireland, and Caribbean groups, accounting for 42%, 43%, and 32% respectively. In Indians, Bangladeshis, Africans, and Pakistanis congenital anomalies (ICD 740-759) were the main cause of death, responsible for 27-36% of postneonatal deaths.

Infants of Asian and African origin had much lower rates of sudden infant death than infants of mothers born in the United Kingdom or Republic of Ireland. Indian, Bangladeshi, and African infants also had a lower mortality from respiratory diseases (ICD 460-519), which was marginally higher in Pakistani infants than in the United Kingdom group. Infants born of mothers from the Caribbean showed smaller differences from the United Kingdom group in rates of sudden infant death and mortality from respiratory diseases. Differences between the indigenous and

TABLE III—Percentage distribution of birth weight by mother's country of birth, England and Wales, 1982-5

Mother's country of birth	Total No of births	Birth weight (g)				
		<2500	2500-2999	3000-3499	3500-3999	≥4000
United Kingdom	2 238 096	6.8	17.8	38.4	28.0	9.0
Republic of Ireland	26 908	6.4	15.9	36.5	30.0	11.2
India	46 225	11.4	31.5	38.5	15.4	3.3
Bangladesh	15 783	10.4	32.2	39.6	14.6	3.2
East Africa	27 509	13.3	34.6	36.1	13.4	2.6
West Africa	11 725	8.0	19.3	40.0	24.8	7.9
Caribbean countries	21 438	9.9	23.0	39.5	21.6	6.0
Pakistan	54 459	9.7	26.2	39.6	19.4	5.2

TABLE IV—Postneonatal mortality (deaths/1000 live births) by birth weight and mother's country of birth, England and Wales, 1982-5. (Observed numbers of deaths in parentheses)*

Mother's country of birth	Total	Birth weight (g)				
		<2500	2500-2999	3000-3499	3500-3999	≥4000
United Kingdom	4.1 (9077)	14.4 (2049)	5.2 (2042)	3.3 (2767)	2.5 (1573)	2.2 (442)
Republic of Ireland	4.1 (111)	16.2 (26)	5.5 (23)	3.4 (33)	2.1 (17)	3.4 (10)
India	3.9 (181)	12.6 (63)	3.0 (43)	3.1 (54)	2.4 (17)	0.7 (1)
Bangladesh	2.8 (44)	9.7 (15)	3.4 (17)	0.8 (5)	1.3 (3)	
East Africa	3.0 (83)	9.2 (32)	2.2 (21)	1.9 (19)	2.2 (8)	1.4 (1)
West Africa	3.0 (35)	17.0 (15)	0.5 (1)	2.4 (11)	2.1 (6)	2.2 (2)
Caribbean countries	4.5 (95)	15.8 (32)	3.7 (18)	2.9 (24)	3.3 (15)	0.8 (1)
Pakistan	6.4 (343)	19.6 (96)	6.3 (89)	5.3 (112)	3.3 (34)	3.3 (9)

*Data not available for all births.

TABLE V—Postneonatal mortality (deaths/1000 live births) by cause of death and mother's country of birth, England and Wales, 1982-5. (Observed number of deaths in parentheses)

Mother's country of birth	Total (all causes)	Cause of death					
		Diseases of respiratory system (ICD 460-519)	Congenital anomalies (ICD 740-759)	Perinatal conditions (ICD 760-779)	Sudden death (ICD 798)	Accidents (ICD 800-999)	Other
United Kingdom	4.1 (9077)	0.7 (1529)	0.7 (1664)	0.2 (472)	1.7 (3831)	0.2 (339)	0.6 (1242)
Republic of Ireland	4.1 (111)	0.6 (17)	0.9 (23)	0.3 (8)	1.8 (48)	0.1 (3)	0.4 (12)
India	3.9 (181)	0.3 (16)	1.0 (48)	0.3 (15)	0.8 (38)	0.3 (15)	1.1 (49)
Bangladesh	2.8 (44)	0.4 (7)	1.0 (16)	0.3 (5)	0.3 (4)	0.1 (2)	0.6 (10)
East Africa	3.0 (83)	0.5 (13)	0.9 (25)	0.3 (8)	0.7 (18)	0.2 (5)	0.5 (14)
West Africa	3.0 (35)	0.3 (4)	0.9 (11)	0.3 (4)	0.6 (7)		0.8 (9)
Caribbean countries	4.5 (95)	0.8 (18)	0.8 (18)	0.6 (12)	1.4 (30)	0.2 (4)	0.6 (13)
Pakistan	6.4 (343)	0.8 (45)	2.0 (106)	0.4 (20)	0.9 (47)	0.2 (10)	2.1 (115)

ICD = International Classification of Diseases.

Trends in postneonatal mortality (1975-85) by mother's country of birth (points plotted are three year moving averages)

immigrant groups in the rate of accidental deaths were small. Mortality from congenital anomalies was, however, higher in Asian infants, particularly Pakistanis. Mortality from perinatal conditions (ICD 760-779) was marginally higher in immigrant groups. Postneonatal mortality from other causes was higher in Pakistani and Indian infants; further details of specific causes included in this category were not available.

TRENDS DURING 1975-85

The figure shows trends in postneonatal mortality during 1975-85 based on three year moving averages. For this part of the analysis data on mothers from India and Bangladesh were combined, as were data on mothers from east and west Africa, because data for earlier years were not readily available for these groups separately.

In infants of mothers born in the United Kingdom postneonatal mortality was relatively unchanged from the mid-1970s until 1983, when it fell slightly. The rate in infants of mothers from the Republic of Ireland did not show any consistent trend. Mortality in Indian and Bangladeshi infants fell from about 5.0/1000 live births in 1975 to an average of 3.7/1000 in 1983-5. African infants showed the largest fall of any group, with rates falling from over 5.0/1000 in the mid-1970s to an average of 2.9/1000 for 1983-5. Changes in mortality in Caribbean infants were not consistent, but the overall trend was downwards. The highest mortality throughout was seen in Pakistani infants; their postneonatal rate showed a consistent fall up to the early 1980s but no change in subsequent years. The ratio of mortality in Pakistani to United Kingdom infants thus fell from 2.0 in the mid-1970s to 1.6 in the mid-1980s. During 1976-9 differences in postneonatal mortality among groups other than Pakistanis were fairly small, with most immigrant groups showing a somewhat higher mortality than the United Kingdom group. By 1984 postneonatal mortality in immigrant groups other than Pakistanis was similar to or lower than that for mothers born in the United Kingdom.

Yearly data for England and Wales showed that postneonatal mortality increased marginally by 0.1/1000 live births during 1984-5. In some immigrant groups the increase was considerably larger: 1.3/1000 in those from the Republic of Ireland, 1.0/1000 in Indians, 1.0/1000 in west Africans, and 2.0/1000 in Caribbeans. Postneonatal mortality fell by 0.3/1000 in Pakistanis. In infants of mothers born in the United Kingdom postneonatal mortality remained constant during 1984-5.

Discussion

Our analysis showed considerable ethnic variations in postneonatal mortality in England and Wales. The patterns of these variations contrast with the patterns reported for the perinatal period (R Balarajan, B Botting, unpublished data). During 1982-5 perinatal mortality in all immigrant groups was higher than that in the groups from the United Kingdom and the Republic of Ireland, being 83% higher in Pakistanis. In contrast, infants of mothers born in India, Bangladesh, and Africa had lower postneonatal mortality than infants of mothers born in the United Kingdom or the Republic of Ireland. Only infants of Pakistani and Caribbean mothers experienced higher postneonatal rates than those of mothers born in the United Kingdom.

The highest postneonatal rates in most categories of age, parity, social class, and birth weight were observed in Pakistani infants. Their rates across these variables were also consistently and notably higher than those for other groups of Asian origin. We could not standardise simultaneously for the maternal variables of age, parity, and social class. Standardisation for each of these variables separately, however, showed consistently and significantly lower mortality in Bangladeshi infants and higher mortality in Pakistani infants compared with the United Kingdom group. Indians and east Africans did not show significant variation. The ratio for Caribbean infants was significantly higher when adjusted for maternal age, the crude rate for this group also being significantly higher than that for the United Kingdom group. Indian, Bangladeshi, and east African infants had lower postneonatal mortality than infants of mothers born in the United Kingdom at every birth weight.

These findings seem paradoxical given that perinatal mortality from most causes was higher in immigrant groups than in the indigenous population (R Balarajan, B Botting, unpublished data). The basis for the divergence of patterns in the postneonatal period became apparent when the causes of death were examined. Sudden death from unknown causes, the main cause of postneonatal death in groups from the United Kingdom and the Republic of Ireland, occurred at half or less than half the rate in infants of Asian origin. This was true also of Pakistanis, who generally experienced much higher mortality from other causes throughout infancy. (The infant mortality in children of mothers born in Pakistan in England and Wales was 16.6/1000 during 1982-5 compared with 9.7 in children of mothers born in the United Kingdom.³) Postneonatal mortality from respiratory diseases was also lower in Indian, Bangladeshi, and African infants; in Pakistani infants the rate was marginally higher than that in the United Kingdom group.

Although there has been much research in the United States on ethnic differences in the incidence of sudden infant death,^{10,11} the subject has received comparatively little attention in Britain. The Oxford record linkage study reported a slightly higher risk of sudden infant death in immigrants from the West Indies and the Indian subcontinent combined.¹⁰ The number of immigrant mothers in the study was, however, small, and rates were not given separately for the different immigrant groups.

Comparisons with the Indian subcontinent are problematical primarily because registration systems are incomplete. Furthermore, sudden infant death has received little attention in these countries given the much heavier burden of mortality from infectious diseases. In our study the incidence of sudden infant death in Caribbean infants was similar to that in the United Kingdom group. Studies in America, on the other hand, consistently show much higher rates of

sudden infant death in infants of Afro-Caribbean origin than in white infants, which are attributed in part to the less favourable birth weights and socioeconomic circumstances.^{10 11}

Although the potential for examining the incidence of the sudden infant death syndrome through death registration data is limited, we think that the patterns in this analysis of national statistics are worth noting. As the diagnosis of sudden infant death is based on a process of elimination rather than positive identification it depends on the amount and quality of information available. The Department of Health and Social Security's multicentre study of postneonatal mortality reported discrepancies between entries on death certificates about cause of death and the detailed pathological evidence available from necropsies.⁴ These difficulties could apply to the national data used in this study. There is, however, no obvious reason to suppose that there is an ethnic bias in certifying sudden infant deaths, and we believe that our comparisons are not seriously invalidated by the general diagnostic difficulties relating to sudden infant death. Moreover, sudden infant death is strongly associated with respiratory malfunction.^{12 13} Before sudden death was classified as a special entity in the 8th revision of the International Classification of Diseases in 1970 most such deaths were recorded under respiratory diseases.⁴ In the Department of Health and Social Security's study necropsies showed that most of the deaths inappropriately classified as sudden infant death were due to respiratory causes.⁴ The lower incidence in Asian infants of both the sudden infant death syndrome and deaths from respiratory diseases suggests that this is not a bias in certification, as respiratory disease is the main category used to certify sudden infant deaths when this label is not applied.

An interesting finding was that in the perinatal period mortality from the respiratory distress syndrome occurred at a lower rate in Asian infants, despite significantly higher mortality from other causes (R Balarajan, B Botting, unpublished data). This was true also for Pakistani infants, in whom perinatal mortality was 83% higher than that in the United Kingdom group during 1982-5. Deficiency and abnormality of surfactant in the lungs of victims of the sudden infant death syndrome is reported to be similar to that in children who die of the respiratory distress syndrome.¹²

Arguably, the generally higher mortality in Asian infants, particularly perinatally, could have claimed the lives of infants who would otherwise be at high postneonatal risk of sudden infant death. Our finding of lower mortality from respiratory causes in Asian infants throughout infancy confounds this argument.

In their review of international epidemiological findings on the sudden infant death syndrome Golding *et al* listed the risk factors associated with the condition.¹⁰ Asian women have fewer illegitimate births and fewer births at a young age and few of them smoke, variables associated with a lower risk of sudden infant death. On the other hand, they have a higher incidence of congenital anomalies and more of them are in social classes IV and V, variables associated with an increased risk. Sudden infant death is also associated with high parity and short intervals between births, which are both common in Pakistanis. A raised incidence of sudden infant death in low birthweight infants has been recorded in many parts of the world. Asian babies born in the United Kingdom are on average lighter than English babies but survive better at low birth weights. Gestational age, which is also correlated with sudden infant death, is lower in Asian than English babies.¹⁴ Irrespective of these factors, the incidence of sudden infant death is low in Asian infants. These findings, against the background of higher overall infant mortality in Asians, could suggest further

investigations of the aetiology of the sudden infant death syndrome.

Deaths from congenital anomalies were more common in all the Asian groups, particularly Pakistanis, in whom they were responsible for almost one third of all postneonatal deaths. The Asian groups generally, but Pakistanis in particular, showed an even higher mortality from congenital anomalies in the perinatal period (R Balarajan, B Botting, unpublished data). A detailed analysis of national data on ethnic differences in stillbirths and infant mortality from congenital malformations noted that the rate in Pakistani infants was 2.4 times greater than the average for England and Wales (R Balarajan, V S Raleigh, B Botting, unpublished data). The high rate of genetic disorders observed in Pakistani infants in Britain is attributed largely to consanguinity in Pakistani marriages.¹⁵ A study of seven cities in Pakistan reported the significant contribution of consanguinity to infant and childhood mortality.¹⁶

Trends during 1975-85 show that in immigrant groups other than Pakistanis the excess postneonatal mortality of the mid-1970s has largely been eliminated. Of particular concern is that from 1981 postneonatal mortality in Pakistani infants was stable at well above that in other groups, and even in 1985 it was equal to the rate that had prevailed in England and Wales during the 1960s.

During 1985-6 infant mortality in England and Wales increased from 9.4 to 9.6/1000 live births,² the first increase since 1970. The increase was attributable to a rise in postneonatal mortality (from 3.9/1000 live births to 4.3), whereas neonatal mortality remained constant. This rise put the postneonatal rate in 1986 almost on par with the rate for 1976. An increase in postneonatal mortality had already been recorded in several immigrant groups in the preceding period, 1984-5. Until rates by mother's country of birth become available for 1986 we cannot assess the extent to which immigrant groups shared in the national increase in postneonatal mortality during 1985-6. These results show the need for continued surveillance of postneonatal mortality among the different ethnic communities in this country and for further detailed research into the causes underlying the differences.

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