

Note from ISIDA's Scientific Advisory Committee

The Register's fifth Report highlights a number of factors which appear to be important in Sudden Infant Death Syndrome. However, when reading this report it is important to bear in mind that in the light of current information available, no one factor on its own can be directly linked to the death of an individual infant. Furthermore, it is ill advised to interpret data which is based on small numbers.

Summary of Main Findings

1. The infant mortality rate for 1996 (5.5 v 6.3 / 1,000 live births) is lower than the 1995 rate.
2. The SIDS rate for 1996 was 10% higher than the rate in 1995 (0.75 v 0.68 / 1,000 live births). The rate from 1988 to 1996 represents a 67% drop (2.30 v 0.8 / 1,000). However, the 1997 rate (provisional) of 1.4 / 1,000 live births is the highest rate since 1992.

For four years of the five year period 1992 - 1996, the Eastern Health Board area reported a SIDS rate higher than the national rate.

3. SIDS remains a leading cause of death in babies aged four weeks to one year. Based on the Central Statistics Office (CSO) infant mortality figures for 1996, over a quarter (26%) of all deaths in this age group were due to SIDS.
4. The change in the seasonal characteristic of SIDS (absence of winter peak) noted in 1995, 1994 and 1993 is upheld in 1996.
5. For five consecutive years (1992 - 1996), parental smoking, unemployment and medical card status were evident in greater proportions among SIDS families than national average figures.
6. The rising trend in the proportion of preterm and low birthweight babies among SIDS cases requires further investigation. Furthermore, the proportion of miscarriages in mothers of SIDS cases in the past three years is rising.
7. Collection of national case control data commenced in 1994, continued in 1996 and is on-going.

National Sudden Infant Death Register

Report for the fifth Year, 1st January 1996 to 31st December 1996.

1. Background

- 1.1 The infant mortality rate in the Republic of Ireland has continued to decline from a rate of 8 per 1,000 live births in 1991 to a record low of 5.5 per 1,000 live births in 1996. Ireland now boasts one of the lowest infant mortality rates among the developed countries and ranks third lowest among EU countries. This dramatic decline is primarily attributed to a drop in the post-neonatal (deaths in infants over 28 days and under one year of age) mortality rate. The infant mortality rate in 1996 fell by 13% from 6.3 in 1995 to 5.5 per 1,000 live births in 1996.
- 1.2 To continue the work of the Register, phase two National Lottery funding was made available by the Department of Health to the Irish Sudden Infant Death Association (ISIDA). In November 1992, ISIDA's Scientific Advisory Committee recommended strengthening the data collected by the Register through the implementation of a Case Control study. Application was made to the Department of Health for funding support. Agreement was reached to implement a two-phased Case Control study. Phase One comprising of a two centred study, was conducted during 1993 in the Eastern and Western Health Board areas. Phase Two, a two year nation-wide Case Control study, commenced in January 1994 and was completed in December 1995. Application for phase three National Lottery funding was submitted to the Department of Health and agreement given to fund the Register's Research work, including the nation-wide Case Control study, for a further two year period.
- 1.3 In 1996, the aims of the Register were to:
 - (a) identify and categorise all deaths in children from birth to 2 years of age in the Republic of Ireland;
 - (b) establish the incidence of mortality from birth to 2 years of age in the Republic of Ireland;
 - (c) provide a National Register of all sudden, unexpected deaths for which a cause of death is not immediately identifiable, in the paediatric population;
 - (d) collect comprehensive epidemiological data on all cases of sudden unexpected deaths (SUD) for which a cause of death is not immediately identifiable, in the paediatric population;
 - (e) continue the nation-wide Case Control study on all sudden, unexpected deaths for which a cause of death is not immediately identifiable, in the paediatric population in the Republic of Ireland.;
 - (f) carry out comprehensive analysis of the two year nation-wide SID Case Control study (1994 & 1995).

Part One of this report will describe information pertaining to aims (a), (b), (c) (d) and (e) above. Part Two of this report outlines provisional epidemiological data for 1997. A separate report (to be published later) will outline the findings of the two year nation-wide SID Case Control study.

2. Structure and Study Methodology

2.1 The Register has a two-fold structure.

Deaths in children under two years of age

Each quarter, the Central Statistics Office (CSO), by special arrangement, issues to the Register details of deaths in children from birth to two years. For each death, a medical certificate of the cause of death and CSO Form 102 are provided. Core data is entered into the computer.

2.2 Sudden Infant Death Syndrome National Epidemiological Survey

A system of notification (appropriate to each Health Board area) ensures that relevant deaths (suspected cases of SIDS in the paediatric population) are reported to the Register by professionals within 48 hours. For each reported case, the Register obtains the following information:

- Birth details;
- Post-mortem report;
- Medical certificate of the cause of death;
- Central Statistics Office Form 102;
- Medical histories (baby's, mother's and related family histories);
- Medical report from the General Practitioner.

Parents are requested to participate in home interviews which provide: socio-demographic data; information relating to the maternity experience; infants' medical history; environmental characteristics; current child care parenting practices and lifestyle practices and details of events in the 48 hours preceding the infant's death and in the immediate period following it.

In 1996, for each SUD case (child who died), similar information on four living babies (controls) born within 72 hours of the case and living in the same community care area was gathered.

Data was entered on a standard questionnaire and completed questionnaires were forwarded to the Register for input to the computer.

2.3 The Register Sub-Committee of ISIDA's Scientific Advisory Committee (see Appendix A for membership) meets regularly to oversee the compilation and operation of the Register.

3. Definitions

3.1 The Register records information on deaths in children occurring in the Republic of Ireland from birth to two years of age and on all sudden, unexpected deaths for which a cause of death is not immediately identifiable, in the paediatric population. Cause of death for Classification of Diseases (ICD) code assigned by the CSO. Cases of suspected SIDS are confirmed by post-mortem report.

3.2 For the purposes of this report, the following definitions are applied:

3.2.1 **Sudden Unexpected Death:** The sudden, unexpected death, for which a cause of death is not immediately identifiable, in the paediatric population.

- 3.2.2 **Sudden Infant Death Syndrome:** The sudden death of an infant or young child which is unexpected by history and in which a thorough post mortem examination fails to demonstrate an adequate cause of death.
- 3.2.3 **Sudden Infant Death Syndrome Rate:** The number of deaths, classified as SIDS, in children in a given period (usually in one year) per 1,000 live births in that period.
- 3.2.4 **Infant Mortality Rate:** The number of deaths in children less than one year of age in a given period (usually in one year) per 1,000 live births in that period.
- 3.2.5 **Neonatal Mortality Rate:** The number of deaths in infants under 28 days of age in a given period (usually in one year) per 1,000 live births in that period.
- 3.2.6 **Post-neonatal Mortality Rate:** The number of deaths in infants aged 28 days and over but under one year of age in a year per 1,000 live births in that period.
- 3.2.7 **Case:** Child whose death was attributed to Sudden Infant Death Syndrome.
- 3.2.8 **Control:** Living children born within 72 hours of the case and living in the same community care area.
- 3.2.9 **Case Control study:** A study which compares data from cases and controls so as to establish the frequency of attributes in each group.

4. Limitations of the Register

- 4.1 Direct early notification by professionals to the Register of sudden, unexpected deaths for which a cause of death is not immediately identifiable, in the paediatric population ensured complete ascertainment of suspected

SIDS deaths in 1996. Infant mortality data, issued on a quarterly basis by the CSO, refers to deaths registered during that period. Due to delays in registration, the figures in some cases may relate to deaths that occurred in the previous year, i.e. 1995.

- 4.2 The information collected by the Register provides comprehensive data on all sudden, unexpected deaths for which a cause of death is not immediately identifiable, in the paediatric population in the Republic of Ireland and therefore enables the trend of SIDS in Ireland to be monitored and compared to data collected in 1992, 1993, 1994 and 1995. Control data was gathered to enhance the research value of the data outlined herein.

4.3 Biases:

Selection bias: Parent(s) participation in the epidemiological survey is voluntary. Self-selection may therefore bias results. However, analysis of socio-demographic data on responders and non-responders did not indicate any major differences.

Recall bias: Data collected from personal interview with parent(s) is subject to recall bias, i.e. how reliable their memory of the event is.

Interviewer bias: The questionnaire was pretested. Interviewers were specifically trained to implement the questionnaire and their pilot interviews were assessed. Each interviewer was issued with a guide to ensure uniformity of application. Validity of recorded responses was checked by comparing responses with record charts.

- 4.4 A complete review of maternity hospital records and general practitioner forms has yet to be carried out. Information relating to perinatal factors and medical histories is therefore limited. It is hoped to complete this important analytical work in the current year and these results will be outlined in a separate report.
- 4.5 Interpretation of data based on small numbers must be treated with caution.

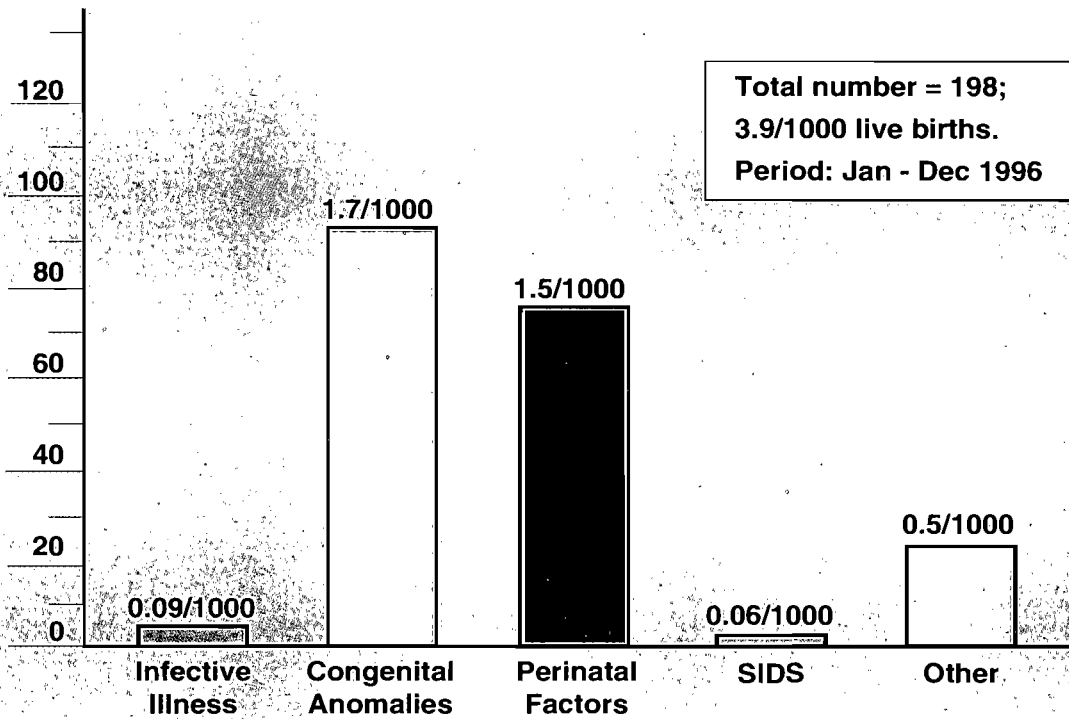
5. Results - Part One

- 5.1.1 The results are presented in a descriptive format. This section of the report describes the cases of Sudden Infant Death Syndrome that occurred in the Republic of Ireland in 1996. As a general rule, in the absence of control data, national rates and percentages are quoted where possible. For some parameters, such as the place where the baby slept, no national figures are available. Furthermore, in examining some parameters, the term occurred refers to events that took place in 1996. CSO mortality figures quoted refer to births and deaths registered in 1996, some of which took place in the previous year.
- 5.1.2 As CSO figures refer only to events registered in that year, it is not possible at the time of this report to determine ascertainment percentages. The number of deaths which actually occurred in each year will be published in later reports. Ascertainment of deaths due to SIDS was 100%. In total, 58% (n=26) of SUDS families participated fully in the epidemiological survey. Birth details (outlining information on the father's occupation, marital status, parity, baby's mode of delivery and type of feeding initiated at birth) were available in 84% of SUDS cases. However, specific information (e.g. type of feeding initiated at birth) was not reported for a number of these cases. Post mortem details were available for 98% (n = 44) of SUDS cases.

5.2 Infant Mortality Figures

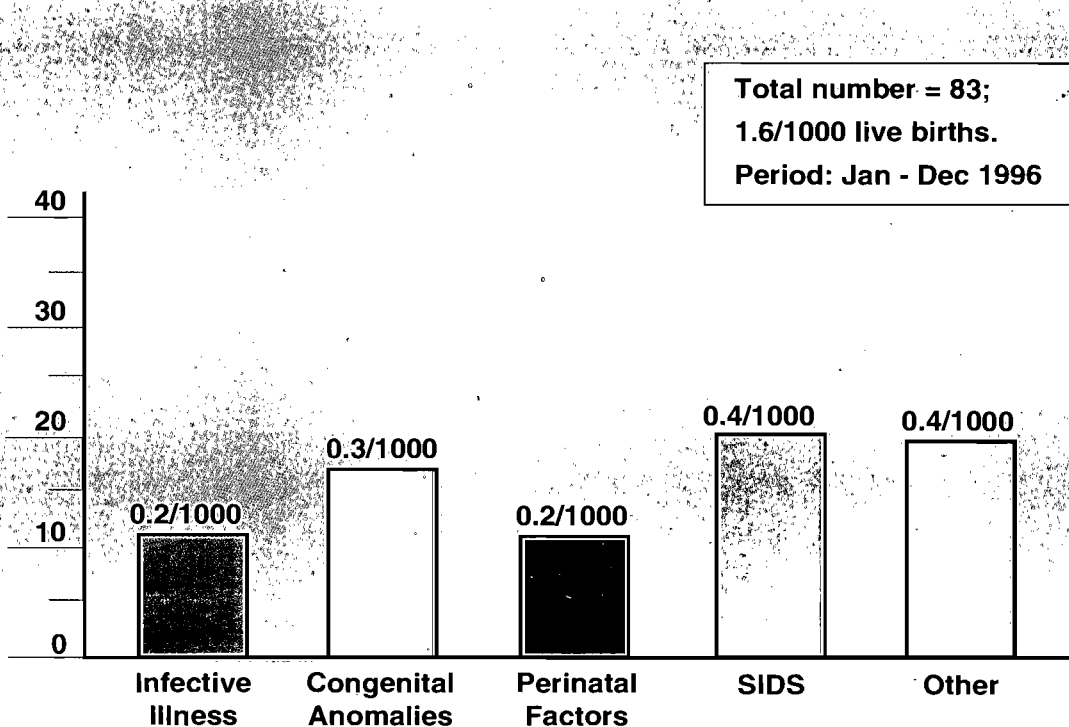
- 5.2.1 There were 50,390 births registered during 1996. During this period, 278 infants (aged between birth and one year) deaths were registered, 198 of which occurred at ages equal to and under 28 days. This gives an infant mortality rate of 5.5 per 1,000 live births, a neonatal mortality rate of 3.9 per 1,000 live births and a post-neonatal mortality rate of 1.6 per 1,000 live births (n = 80).
- 5.2.2 The major categories of neonatal and post-neonatal deaths for 1996 are outlined in Figures 1 & 2. The differences in proportions between the neonatal and post-neonatal figures is due to the large number of babies with congenital anomalies and perinatal problems who die during the first four weeks of life. Comparison of specific causes of all infant deaths for 1988, 1992, 1993, 1994, 1995 and 1996 grouped by ICD coding are given in Table. 1.

FIGURE 1
CATEGORIES OF NEONATAL DEATHS 1996



Source: CSO, 'Vital Statistics 1996'

FIGURE 2
CATEGORIES OF POSTNEONATAL DEATHS 1996



Source: CSO, 'Vital Statistics 1996'

Table 1: DEATHS OF INFANTS UNDER 1 YEAR CLASSIFIED BY CAUSE OF DEATH REGISTERED IN 1988, 1992, 1993, 1994, 1995 & 1996

ICD Code	Cause	Neonatal Deaths (from birth to 4 weeks)						Post-neonatal deaths (4 weeks to 1 year)					
		1988 No. (%)	1992 No. (%)	1993 No. (%)	1994 No. (%)	1995 No. (%)	1996 No. (%)	1988 No. (%)	1992 No. (%)	1993 No. (%)	1994 No. (%)	1995 No. (%)	1996 No. (%)
008,009	Enteritis and other diarrhoeal diseases	1 (0.3)	—	1 (0.5)	—	—	—	—	—	2 (2.1)	1 (1.1)	1 (1.2)	—
Rem. (009-139)	Other infective and parasitic diseases	—	2 (0.9)	1 (0.5)	—	—	2 (1.0)	1 (0.5)	7 (5.6)	2 (2.1)	1 (1.1)	2 (2.4)	6 (7.5)
320-322	Meningitis	1 (0.3)	—	—	—	—	1 (0.5)	—	—	1 (1.0)	3 (3.2)	—	2 (2.5)
460-519	Influenza, pneumonia, bronchitis, emphysema, asthma, and other respiratory diseases	3 (1.0)	—	1 (1.0)	2 (1.1)	3 (1.4)	2 (1.0)	10 (5.2)	2 (1.6)	1 (1.0)	5 (5.3)	4 (4.8)	3 (3.7)
520-579	Diseases of the digestive system	—	—	2 (1.0)	—	1 (0.4)	1 (0.5)	1 (0.5)	2 (1.6)	1 (1.0)	1 (1.1)	1 (1.2)	2 (2.5)
740-759	Congenital anomalies	102 (35.0)	104 (47.2)	97 (47.7)	83 (43.6)	78 (34.6)	88 (44.0)	45 (23.3)	29 (23.5)	35 (36.4)	32 (34.0)	30 (36.1)	17 (21.3)
763, 767	Birth injuries	8 (2.8)	—	2 (1.0)	1 (0.5)	3 (1.4)	4 (2.0)	1 (0.5)	0 (0.0)	0 (0.0)	—	—	1 (1.25)
765.1	Immaturity unqualified	15 (5.2)	28 (12.7)	43 (21.1)	51 (26.8)	92 (40.8)	54 (27.0)	6 (3.1)	1 (0.8)	3 (3.1)	3 (3.2)	1 (1.2)	5 (6.25)
768-769, 770, 1,777	Anoxic and hypoxic conditions and N.E.C.	68 (23.4)	34 (15.4)	17 (8.0)	26 (13.7)	25 (11.1)	18 (9.1)	3 (1.5)	2 (1.6)	1 (1.0)	5 (5.3)	3 (3.7)	4 (5.0)
773, 774	Haemolytic disease of newborn	—	1 (0.5)	1 (0.5)	2 (1.1)	2 (0.9)	1 (0.5)	—	—	—	—	—	—
779	Other and ill-defined conditions originating in the perinatal period	—	1 (0.5)	1 (0.5)	—	—	—	—	—	—	—	—	1 (1.25)
798	Sudden death, cause unknown	13 (4.5)	3 (1.3)	4 (2.0)	6 (3.2)	2 (0.9)	3 (1.5)	107 (55.5)	53 (43.0)	36 (37.5)	31 (32.9)	30 (36.1)	21 (26.25)
Rem. (001-999)	Other causes	80 (27.5)	35 (16.0)	29 (13.5)	19 (10.0)	19 (8.4)	24 (12.1)	19 (9.9)	25 (20.3)	14 (14.6)	12 (12.8)	11 (13.3)	18 (22.5)
	TOTALS	291 (60.2)	220 (64.1)	199 (67.4)	190 (66.9)	225 (73.1)	198 (71.2)	193 (39.8)	123 (35.8)	96 (32.1)	94 (33.1)	83 (26.9)	80 (28.8)

Source: CSO, Report on Vital Statistics, 1988
CSO, Yearly Summary, 1992, 1993, 1994, 1995 & 1996.

5.2.3 From 1988 to 1996, the SIDS rate in the first year of life per 1,000 live births (reported by the CSO) fell by 79% (2.3 v 0.5 / 1,000). However, the proportion of infant deaths due to SIDS, in the post-neonatal period, is only 30% less, (56% v 26%) and hence SIDS remains a leading cause of death in infants aged four weeks to one year.

5.3 Sudden Infant Death Figures

In 1996 the National Sudden Infant Death Register was notified of 45 SUDS cases of which 38, following a thorough post mortem examination, were classified as SIDS cases (Table 2). This yields a SIDS rate of 0.75 per 1,000 live births (based on CSO registered birth figures for 1996) compared with 0.68 in 1995, 0.83 in 1994, 0.75 in 1993, 1.14 in 1992 and 1.59 in 1991. The causes of death of children who were not classified as SIDS include, infections, aspirations, and other causes. The total number of SIDS cases in infants under one year of age that occurred (reported to the Register) in 1996 represents 13% (n=35) of all infant deaths registered (CSO figures) during this period. SIDS cases, aged between one month and one year that occurred (reported to the Register) in 1996 accounted for 38% (n=30) of all registered (CSO figures) in that age group. While SIDS continues to be a leading cause of death in infants during the post-neonatal period, accounting for almost four in every ten post-neonatal deaths, the declining SIDS rate is positively contributing to the overall decline in post neonatal mortality.

Table 2. SUDS, SIDS, data collection in 1996

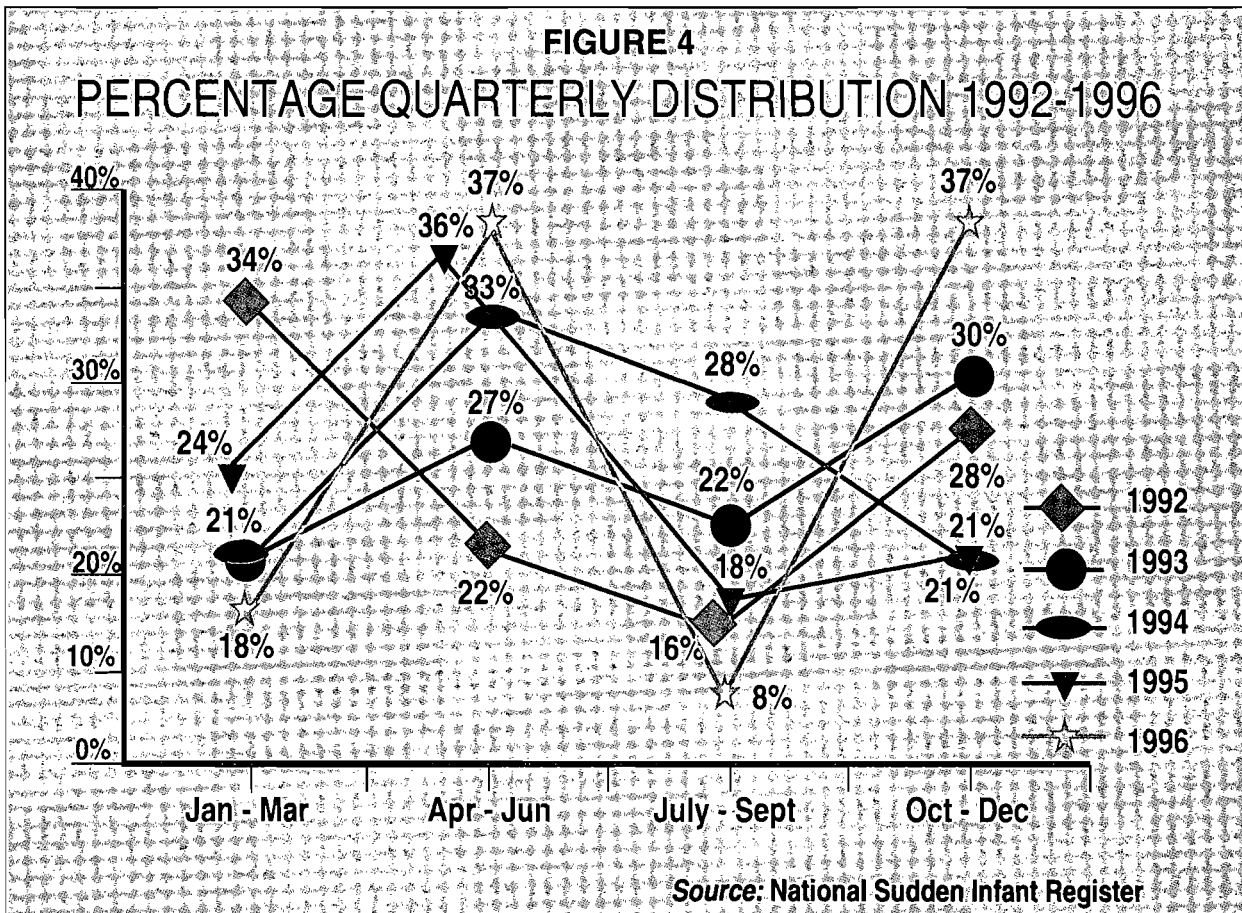
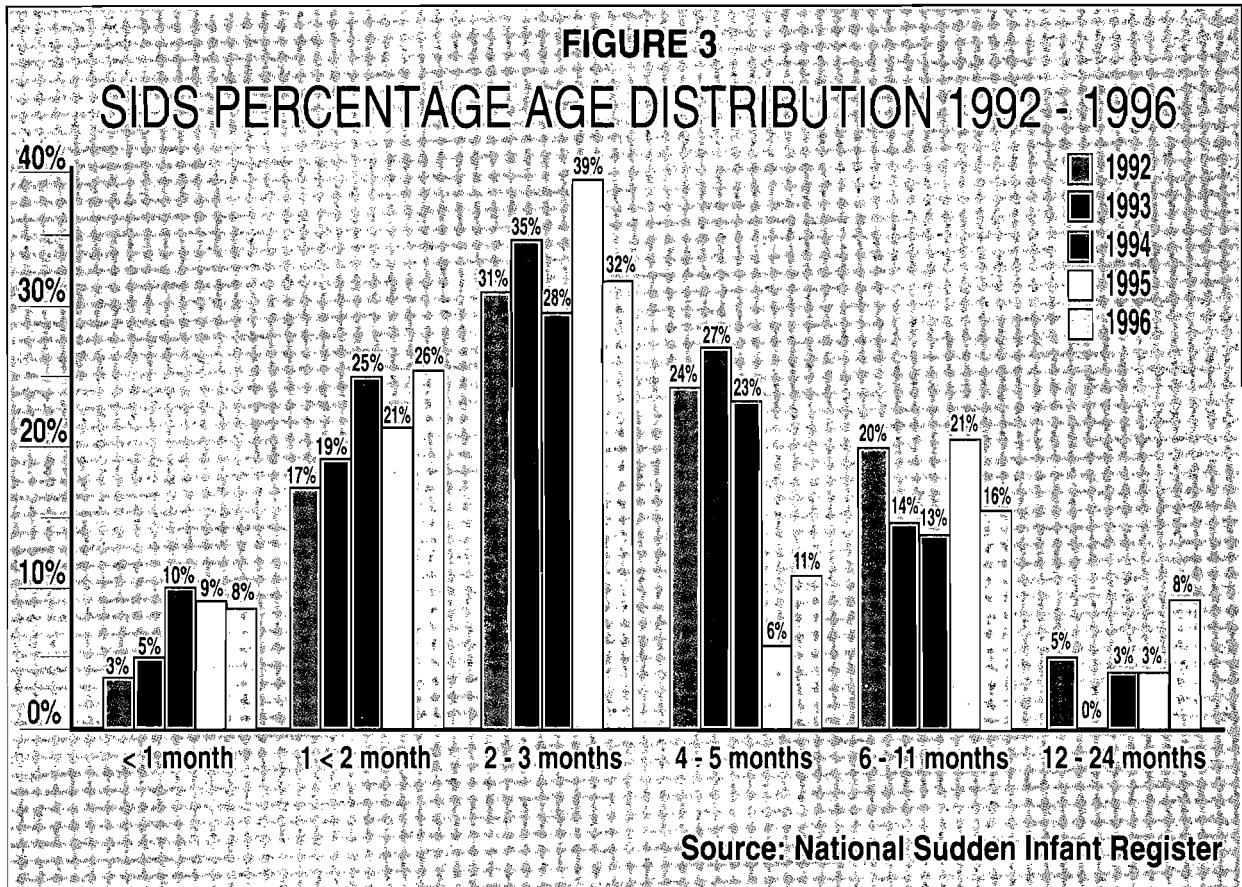
	SUDS	SIDS
Total cases	45	38
Home Interview	26	22
Records Data	38	32

Source: National Sudden Infant Death Register, 1996

In 1992, it was observed that 10% (n = 6) of SIDS cases occurred among travelling families and, that based on the latest available Census of Travelling People (1986), the SIDS rate in travelling families in 1992 was ten times the national figure (10.8 v 1.1 / 1,000). While the absolute number of SIDS cases among travelling families each year is small, each year from 1992 to 1996 the 1.8 / 1,000 live births compared to the national SIDS rate of 0.8 / 1000.

5.4 SIDS Age Distribution

Figure 3 shows the age at which children died. The international characteristic pattern for SIDS is evident, with the majority (92%, n = 35) of deaths occurring after the first four weeks of life. It is worth noting that 8% of cases occurred over 12 months of age (13.9 months, 23 months and to 23.4 months)



5.5 SIDS Seasonal Distribution

Figure 4 illustrates the pattern of SIDS by calendar months for 1992, 1993, 1994, 1995 and 1996. Throughout the 1980's the international epidemiology of SIDS showed a predominance of cases occurring in the coldest months of the year. A change in this pattern was first noted in 1993 with a similar number of SIDS cases occurring during summer and winter months. The distribution of cases in 1994, 1995 and 1996 is almost a reverse pattern to that experienced in 1992.

5.6 SIDS Sex Distribution

Consistent with SIDS pattern of recent years, more boys than girls died of SIDS, with a ratio of 1.4 : 1.

5.7 SIDS Geographic Distribution

Table 3 outlines the SIDS rate per Health Board area. These rates are based on the number of live births assigned to each Health Board area by the CSO in 1996. The rates in the North-Western, Eastern, and Western Health Board areas were higher than the national SIDS rate. For four years in the five year period 1992 - 1996, the Eastern Health Board area SIDS rate has been higher than the national rate.

Table 3. SIDS Rates Per Health Board Area in 1996

Health Board Area	Rate* per 1,000 live births
Eastern	0.95
Midland	0.68
Mid-Western	0.22
North-Eastern	0.74
South-Eastern	0.54
Southern	0.40
Western	0.90
North-Western	1.45

*Based on births assigned to each Health Board area in 1996.
Source: National Sudden Infant Death Register, 1996.
CSO, Vital Statistics, Yearly Summary 1996.

5.8 SIDS Day of Death

SIDS cases occurred throughout the week, with the greatest percentage of babies found dead on Sunday (26%) (Appendix B). A weekend trend, observed in 1992 is evident again in 1996 but this pattern is not evident for 1993, 1994 or 1995.

5.9 SIDS Socio-demographic Details

5.9.1 Social Class

Father's social class, classified according to the Classification of Occupations, 1991 Population Census, was recorded in 22 cases (Appendix C). A social class gradient is evident, with 64% (n = 14) of cases occurring in social classes 4, 5 and 6. This figure is greater than the national social class figure (1991 Census) of 55%.

5.9.2 Employment Status

Father's employment status was recorded in 23 cases and reveals an unemployment figure of 26% (n = 6) (Appendix D). The national unemployment figure reported by the Labour Force Survey during 1996 averages at 12% of the total registered work force.

5.9.3 Health Eligibility Status

Health eligibility status was ascertained for 26 parent(s) who participated in the home interviews (Appendix E). Medical card holders accounted for 57% (n=15) of all cases. The national figure for medical card holders in 1996 was 35 %.

5.9.4 Parents' Marital Status

Parent (s) marital status was recorded in 28 cases (Appendix F). Single parents (single, widowed, separated, divorced) accounted for 32% (n = 9) of SIDS cases, which is higher than the 1993 national average of 20%. A total of 3% (n = 1) of the 24 parents for whom data is available were living alone.

5.10 SIDS Perinatal Factors

5.10.1 Maternal Age

Maternal age was recorded for 29 cases (Appendix G). In 3% (n=1) of births, mothers were aged 19 years or less, while a further 35% (n = 10) were aged between 20 - 24 years. A total of 21% (n = 6) of births occurred to mothers over 35 years of age. The corresponding 1996 national figures for maternal births (less than 25 years and greater than 35 years) were 20% and 19% respectively. The average maternal age in SIDS cases in 1996 was 28 years (range 19 - 40) which is the same as the 1993 national figure.

5.10.2 Gestation

Gestation was recorded for 29 cases (Appendix H). Preterm babies (less than 37 completed weeks) accounted for 17% (n=5) of births. The corresponding figure in 1995 was 15%, in 1994 was 13%, in 1993 was 11% and in 1992, 9 %. During the five year period (1992 - 1996) the proportion of SIDS cases who were preterm indicates a rising trend and each year the figures are higher than the national preterm figure (3.9%) for 1993 (Table 4).

5.10.3 Birthweight

Birthweight was recorded for 32 cases (Appendix I). Low birthweight (less than 2,500 grammes) featured in 13% (n= 4) of cases, which is equal to the 1995 figure, lower than the 1994 figure (23%), but higher than the 1993 and 1992 corresponding figures (6%, 9%) and greater than the national low birthweight figure (3.4%) for 1993. Again, over the five year period 1992 - 1996 there is a rising trend in the proportion of SIDS cases who were low birthweight (Table 4).

Table 4. Preterm & Low Birthweight (LBW) Figures 1992 - 1996

	National Figure %	1992 SIDS %	1993 SIDS %	1994 SIDS %	1995 SIDS %	1996 SIDS %
Preterm	4	9	11	13	15	17
LBW	3	9	6	23	12	13

Source: National SID Register 1992 - 1996
Perinatal Statistics, Department of Health, 1992, 1993.

5.10.4 Parity

Parity (number of previous pregnancies) was recorded for 31 cases (Appendix J). A total of 4 (13%) births occurred to mothers with no previous children, while 22 (71%) had 1, 2, or 3 previous children. The corresponding national figures for 1993 are 35% and 56% respectively. Information on miscarriage history was available for 32 mothers. A total of 23% (n = 7) reported a previous miscarriage. The corresponding figure in 1995 was 13%, 8% in 1994, 12% in 1993 and 28% in 1992.

5.11 SIDS-The Impact of 'Reduce the Risks of Cot Death' Guidelines

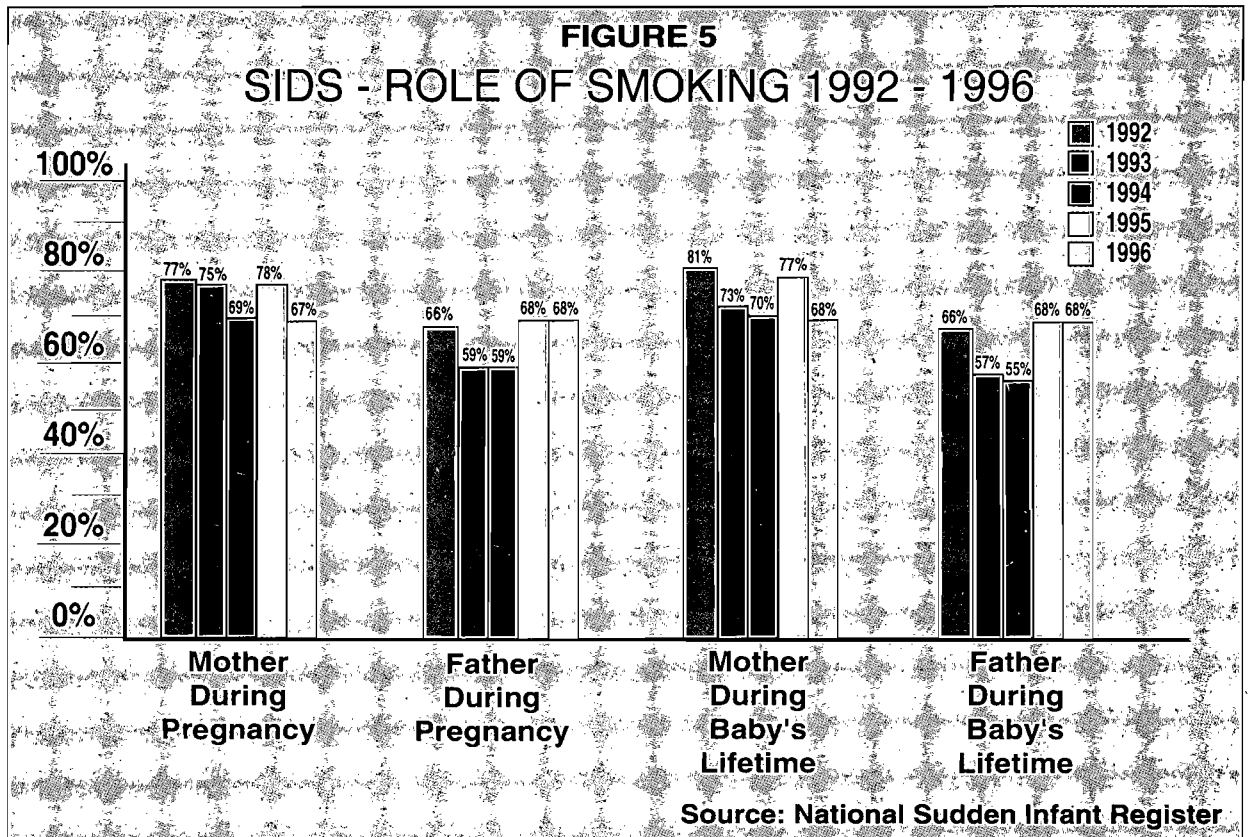
5.11.1 The parents who participated in home interviews provided information on their parenting practices regarding sleep position, place where the baby slept, thermal environment, and smoking habits. Information regarding smoking during pregnancy and feeding practices at the time of birth were ascertained / clarified with medical records.

5.11.2 Smoking

Self-reported information on smoking habits during pregnancy was available for 24 (59%) baby's lifetime, for 22 families (mothers 22, fathers 22). Figure 5 illustrates these smoking patterns. In 67% (n=16) of cases, mothers smoked during their pregnancy, with 68% (n=15) of fathers smoking during this time. Corresponding figures for 1995 are 78% and 68%, for 1994 are 69% and 59%, for 1993, 75% and 59% and for 1992, 77% and 66%.

After the baby was born, 68% (n = 15) of mothers smoked while 68% (n = 15) of fathers smoked. Smoking among women and men aged 16 - 44 years in Ireland averaged 31% in 1993 / 4. During pregnancy and after the baby's birth mothers reported smoking an average of 15 cigarettes a day (range 2 - 40). Both during pregnancy and after the baby's birth fathers reported smoking an average of 17 (range 3 - 40) cigarettes a day. While some parents reported that they did not allow smoking in a room where the baby was, 50% stated that the child was regularly in a room where people smoked.

The corresponding figures in 1995, 1994 and 1993 was 69% and in 1992 70%. It should be noted that a further 32% of families reported that although they did not allow smoking in the room where the child was, smoking did occur in the house.



5.11.3 Sleep position

Parents were asked about the child's sleeping habits. Table 5 illustrates the sleeping position for 22 children (59% of all cases), comparing the position they were put to sleep with the position in which they were found dead. Children who were found dead in the prone position (lying on their stomach) accounted for 32% of cases, which is higher than the 1995 figure of 27%, 1994 figure of 24%, and 1993 figure (27%) but lower than the 1992 (43%). The number of children who were placed to sleep on their side and found dead in a different position, i.e. prone or supine (on their stomach or back) 63% (n = 5), again reinforces the argument of the instability of the lateral (side) position. Information regarding children's sleeping patterns in the two weeks prior to death also reveals that 77% of babies who were placed to sleep on their side did not remain in this position.

5.11.4 Examination of the usual sleeping position reveals that, for only one case (5%), prone position was their usual sleeping position. This figure is lower than the figures noted in 1994 (13%), in 1993 (8%) and in 1992 cases (19%). At the time of their last sleep period, 27% (n=6) of children were placed to sleep in the prone position.

Table 5. Movement of SIDS cases during sleep

	Position			Total
	Back	Side	Prone	
Position put to sleep	8	8	6	22
Position found dead	12	3	7	22

Source: National Sudden Infant Death Register, 1996

5.11.5 Place Where Baby Slept

International data on bed-sharing as a risk factor for SIDS lacks agreement and bed sharing in itself may not be a risk. The Register's 1996 information regarding the usual sleeping place for SIDS children reveals that:

- 18% of cases (n=4) always slept with other people (parents or siblings),
- 9% (n = 2) often slept with parents (> two nights per week)
- 23% (n = 5) sometimes slept with parents.
- Only 46% of SIDS children never slept with their parents.

In the child's last sleep period 32% (n = 7) of cases slept with an adult during the entire sleep period, while a further 5% (n = 1) spent more than one hour of their sleep time with an adult. The corresponding figures for 1995, 1994, 1993 and 1992 are 35%, 29%, 19% and 16%.

5.11.6 Thermal Environment

Data on personal clothing and bedding which the baby had during sleep and at the time of the baby's death was available for 22 cases (Appendix K). While there were individual variations in the amount of clothing and bedding used, generally parents tended to increase (double) the tog values during the night time sleep compared to the day time sleep.

During the day sleep, 59% (n = 13) of children had a tog value less than 10, while at night the reverse was true with a tog value > 10 evident for 82% (n = 18) of children. During the child's last sleep period, 73% (n = 16) of the children had a tog value greater than 10.

These findings are in keeping with 1995, 1994 and 1993 figures which did not report an increase in tog values during the child's last sleep period.

5.11.7 Feeding

Information on babies' feeding patterns was recorded for 21 cases (Appendix L). At the time of birth, 44% (n=8) of babies were being breastfed. This figure is higher than the national breast feeding figure (34%) for 1993. After one week the breast feeding figure fell to 32%. These figures are higher than previously reported figures for breast feeding among SIDS cases.

6. Discussion

- 6.1 It is imperative that interpretation of data based on small numbers is viewed with caution. The potential influence of random variation must be also considered and data may require to be monitored over time before being interpreted.
- 6.2 The availability of on-going, accurate information on SIDS in Ireland, coupled with the excellent participation of families and professionals in a variety of SIDS related research projects, provides an essential data base to monitor emerging trends.
- 6.3 The on-going decline in the SIDS rate in the Republic of Ireland is welcomed. The rate from 1988 to 1996 represents a 65% drop (2.3 v 0.7 / 1,000), yet SIDS remains a leading cause of death in infants aged four weeks to one year.
- 6.4 Four years during the five year period 1992 - 1996, the Eastern Health Board area has reported a SIDS rate higher than the national rate.

- 6.5 The change in the seasonal characteristic of SIDS (absence of winter peak) noted in 1995 1994 and 1993 is upheld in 1996.
- 6.6 The consistency of greater parental unemployment (double) and medical card status among SIDS families than the national average figures for 1992, 1993, 1994, 1995 and 1996 raises questions regarding the impact of socio- economic environment on SIDS.
- 6.7 The rising trend in the proportion of preterm and low birthweight babies among SIDS cases requires further investigation. Furthermore, the finding of increased proportions of miscarriage history in mothers of SIDS cases in the past two years is worrying.
- 6.8 With regard to the 'Reduce the Risks of Cot Death' guidelines the persistence of high level of smoking among SIDS families poses questions regarding the effectiveness of existing education programmes. Furthermore, the 1996 data upholds the principal that the lateral sleeping position is unstable. It is disappointing to note that 59% of SIDS cases were usually placed in a side sleeping position and raises questions as to whether the promotion of the supine (back) sleeping position by professionals and the media is being uniformly adhered to.

7. Future Direction

- 7.1 National control data now being collected will considerably enhance evaluation of the findings outlined. At the same time, the on-going collection of data by the Register will ensure that emerging trends are monitored over time.

7.2 Collaboration with European Research

During 1996 ISIDA's National Sudden Infant Death Register continued to participate in the (complete on 31st December 1996). Funded by the European Union, the study encompasses fifteen centres in twelve countries throughout Eastern and Western Europe who are gathering SIDS Case Control data.

ISIDA's National Sudden Infant Death Register's Unit Head is a member of the project's Steering Committee and a member of the Executive Committee of the SIDS Global Strategy Task Force.

8. National Sudden Infant Death Register Results - Part Two

1997 Provisional Epidemiology Data

- 8.1 The SIDS mortality rate in the Republic of Ireland over the past 15 years has fallen considerably. However, the provisional figure for 1997 indicates a worrying rising trend. While the overall fall in the SIDS rate is greatly welcomed, SIDS still accounts for four in every ten deaths in the age group one month to one year.
- 8.1.1 Table 6 shows the total number of live births, total number of SIDS and the SIDS rate per 1,000 live births for the years 1980 to 1997 inclusive. In 1997, 69 suspected cases of Sudden Infant Death Syndrome (SIDS) were reported to the Register. Final post-mortem details on all cases are awaited. Based on the birth figures for 1996 (50,390), this yields a provisional SIDS rate of 1.4 per 1,000 live births. The corresponding SIDS rate in 1996 was 0.8 / 1,000, 1995, 0.7 / 1,000, 1994 0.8 / 1,000 and in 1993 was 0.7 / 1,000 (Figure 6).

Table 6. Live births, Number of SIDS and SIDS Rate, 1980 - 1997

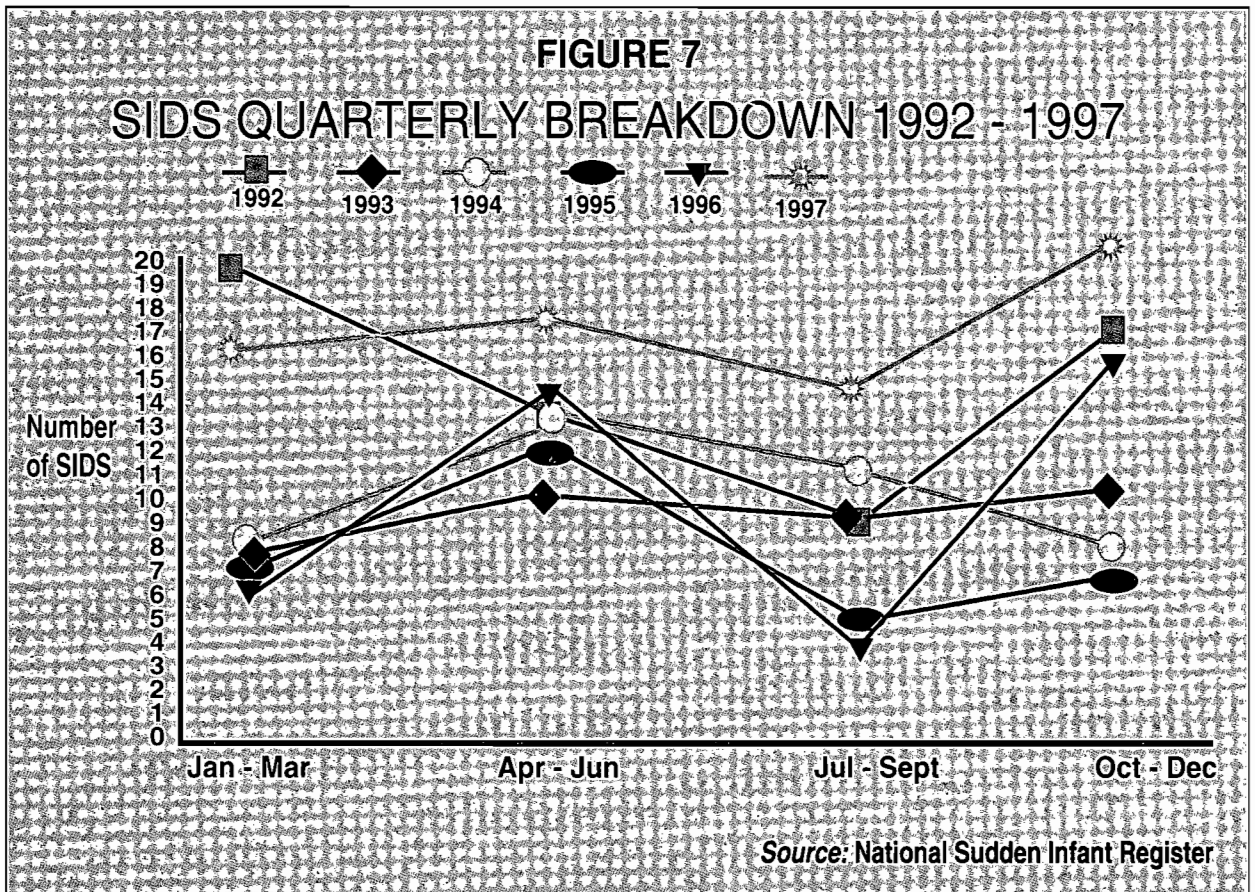
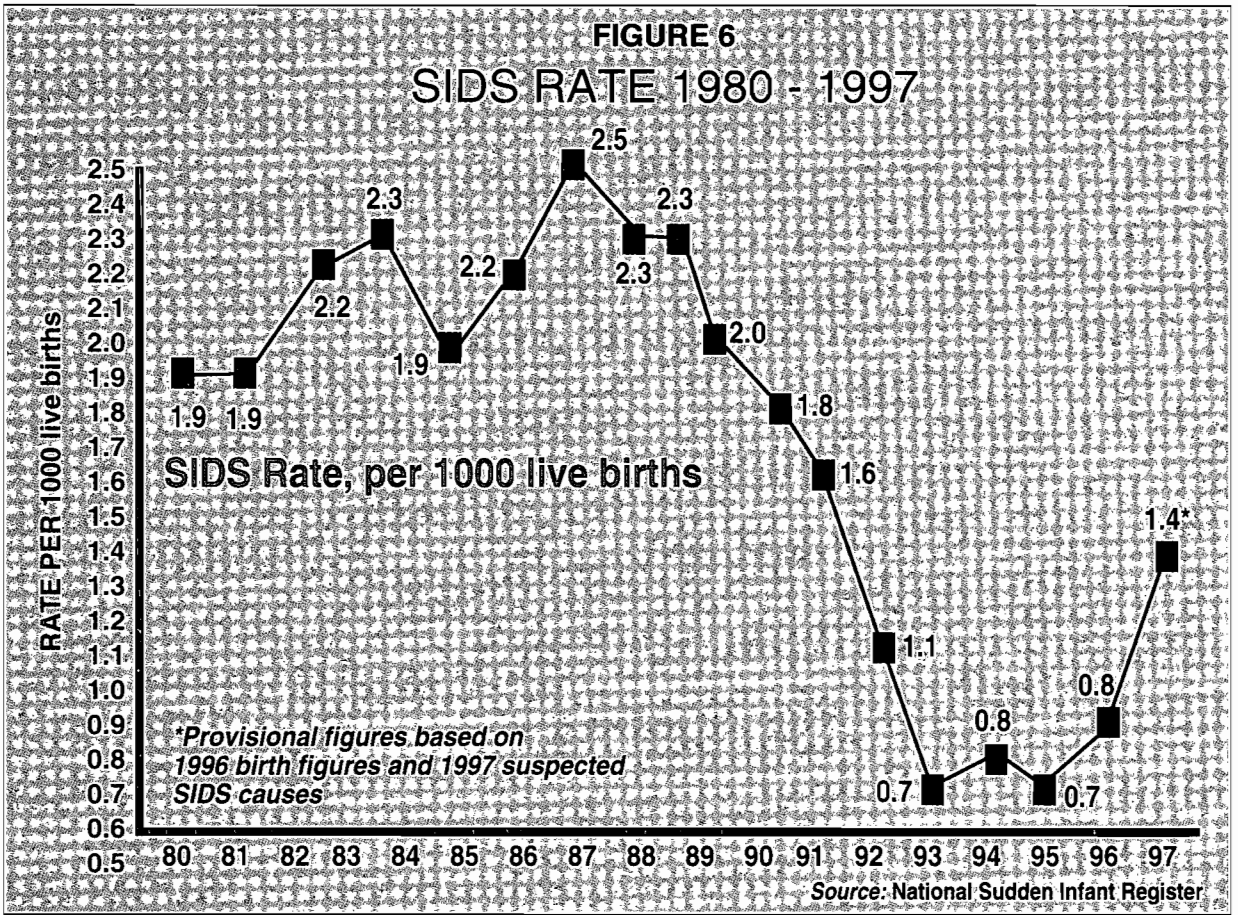
Year	Live Births	Total Number of SIDS	SIDS Rate
1980	74388	144	1.9
1981	72355	138	1.9
1982	70933	157	2.2
1983	66815	159	2.3
1984	64237	22	1.9
1985	62250	139	2.2
1986	61425	157	2.5
1987	58864	136	2.3
1988	54300	125	2.3
1989	51659	108	2.0
1990	52954	98	1.8
1991	52690	84	1.6
1992	51584	59	1.1
1993	49456	37	0.7
1994	47929	40	0.8
1995	48530	33	0.7
1996	50390	38	0.8
1997*	50390*	69*	1.4*

* Provisional figures based on 1996 birth figures and suspected SIDS cases.

Source: CSO, Report on Vital Statistics 1980 - 1988;

CSO, Yearly Summary, 1992, 1993, 1994 and 1996;

National Sudden Infant Death Register 1992 - 1997



8.2 The seasonal breakdown of suspected SIDS cases (SUDS) during 1997 demonstrates an even distribution of cases throughout the year. Figure 7).

Table 7. SIDS Seasonal Distribution, 1992 -1997

Season	1992		1993		1994		1995		1996		1997	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
January - March	20	(34)	8	(22)	8	(21)	8	(24)	7	(18)	16	(24)
April-June	13	(22)	10	(27)	13	(33)	2	(36)	14	(37)	18	(26)
July - September	9	(15)	9	(24)	11	(28)	6	(18)	3	(8)	14	(20)
October - December	17	(29)	10	(27)	8	(21)	7	(21)	14	(37)	21	(30)
Total	59		37		40		33		38		69	

Source: National Sudden Infant Death Register 1992 - 1997

8.3 The age breakdown of SUDS cases in 1997 shows a rise in the proportion of cases under two months of age (Table 8).

Table 8. SIDS Age Distribution, 1992 - 1997

Age	1992		1993		1994		1995		1996		1997	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
<1month	2	(3)	2	(5)	4	(10)	3	(9)	3	(8)	9	(13)
1 mth < 2 mths	10	(17)	7	(19)	10	(25)	7	(21)	10	(26)	20	(29)
2-3mths	18	(31)	13	(35)	11	(28)	13	(39)	12	(32)	20	(29)
4-5mths	14	(24)	10	(27)	9	(22)	2	(6)	4	(11)	6	(9)
6 - 11 mths	12	(20)	5	(14)	5	(12)	7	(21)	6	(16)	9	(13)
12 -24mths	3	(5)	0		1	(3)	1	(3)	3	(8)	5	(7)
Total	59		37		40		33		38		69	

Source: National Sudden Infant Death Register 1992 - 1997

8.4 The sex breakdown of SUDS cases in 1997 yields a ratio of 1.8:1 (corresponding figures for 1996 were 1.1:1, in 1995 1.4 :1 and in 1994 1.8 :1)

8.5 The geographic distribution of SIDS cases (1992 - 1997) shows a decline for some of the Health Board areas and a rise for others. However, because of small numbers in some areas, these rates must be viewed with caution

Table 9. BIDS Geographic Distribution, 1992 - 1997

Health Board Area	1992		1993		1994		1995		1996		1997	
	No.	(%) Rate /1000	No.	(%) Rate /1000	No.	(%) Rate /1000	No.	(%) Rate /1000	No.	(%) Rate /1000	No.	(%) Rate /1000
Eastern	27	(46)1.4	15	(41)0.8	15	(38)0.8	14	(42)0.8	18	(47)1.0	32	(47)1.7
North-Eastern	8	(14)1.2	3	(8)0.7	0	(0)0.0	3	(9)0.8	3	(8)0.7	7	(10)1.7
South-Eastern	5	(8)1.1	5	(13)0.9	5	(13)1.0	3	(9)0.6	3	(8)0.5	7	(10)1.3
Southern	5	(8)0.5	4	(11)0.6	8	(20)1.0	6	(18)0.7	4	(8)0.4	12	(17)1.6
Midland	2	(3)0.9	4	(11)1.4	1	(2)0.4	1	(3)0.4	2	(5)0.7	2	(3)0.7
Mid-Western	3	(5)0.3	4	(11)0.9	8	(20)1.9	3	(9)0.7	1	(3)0.2	3	(4)0.7
North-Western	1	(2)0.4	0		1	(2)0.4	0		4	(11)1.5	0	
Western	8	(14)1.6	2	(5)0.4	2	(5)0.5	3	(9)0.7	4	(11)0.9	6	(9)1.4
Total	59		37		40		33		38		69	

Source: National Sudden Infant Death Register, 1992 - 1997

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March 1998

Appendix B. Daily Distribution of SIDS Cases

Day	Number	Percentage
Monday	6	15.8
Tuesday	6	15.8
Wednesday	1	2.6
Thursday	4	10.5
Friday	5	13.2
Saturday	6	15.8
Sunday	10	26.3
Totals	38	100.0

Appendix C. SIDS Paternal Social Class

Social Class	Number	Percentage
1	2	9.1
2	3	13.6
3	2	9.1
4	6	27.3
5	3	13.6
6	5	22.7
Never Worked	1	4.5
Total	22	100.0

Appendix D. SIDS Parental Employment Status

Employment Status	Number	Percentage
Full Time	14	60.9
Part-time	3	13.0
Unemployed	6	26.1
Total	23	100.0

Appendix E. SIDS Health Eligibility Status

Health Eligibility Status	Number	Percentage
Medical Card	15	57.4
VHI	7	26.9
Other	0	0.0
None	4	15.4
Total	26	100.0

Appendix F. SIDS Families Marital Status

Marital Status	Number	Percentage
Single	6	21.4
Married	16	57.1
Cohabiting	3	10.7
Separated	3	10.7
Total	28	100.0

Appendix G. Maternal Age

Years	Number	Percentage
<19	1	3.4
20-24	10	34.5
25-29	7	24.1
30-34	5	17.2
35-39	5	17.2
40-44	1	3.4
Total	29	100.0

Appendix H. Gestation of SIDS Cases

Gestation	Number	Percentage
32-36 weeks	5	17.2
37-40 weeks	7	24.1
> 40 weeks	17	58.6
Total	29	100.0

Appendix I. Birthweight of SIDS Cases

Grammes	Number	Percentage
<2500	4	12.5
2500-2999.9	11	34.4
3000-3499.9	7	21.9
3500-3999.9	8	25.0
4000-4499.9	1	3.1
> 4500	1	3.1
Total	32	100.0

Appendix J. Parity of SIDS Cases

No. of previous	Number	Percentage live births
None	4	12.9
1,2,3	25	80.6
>3	2	6.5
Total	31	100.0

Appendix K. SIDS Tog Values, usual and last sleep period

Tog	Usual sleep period		Last sleep period	
	No.	(%)	No.	(%)
<5	0	0	4	18.2
5-9.9	4	18.2	2	9.1
10-14.9	8	36.4	8	36.4
15- 19.9	7	31.8	5	22.7
>20	3	13.6	3	13.6
Total	22	100.0	22	100.0

Appendix L. SIDS cases Initial Feeding Pattern

Type	Number	Percentage
Breastonly	7	38.9
Bottle only	10	55.5
Breast & bottle	1	5.5
Total	33	100.0