SUDDEN INFANT DEATH SYNDROME IN NSW, 1992

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In the period 1986 to 1992, deaths due to Sudden Infant Death Syndrome (SIDS) have almost halved in NSW. This is likely to be due to a combination of increased awareness of modifiable risk factors for SIDS and improved diagnosis. Infants who died from SIDS in NSW in 1992 were predominantly male (69 per cent) and less than 24 weeks of age (82 per cent). Of cases where the sleeping position of the infant at the time of death was recorded, 54 per cent were found in the prone position.

BACKGROUND
Sudden Infant Death Syndrome (SIDS) is the sudden death of any 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.

SIDS is a notifiable condition under the Public Health Act 1991. Notifications are received and collated by the Epidemiology and Health Services Evaluation Branch of the NSW Health Department.

The aims of this review were to:
- describe recent trends in the incidence of SIDS in NSW;
- describe the characteristics of infants who died of SIDS in NSW in 1992; and
- determine the notification rate for SIDS in NSW.

METHOD
Under the Coroners Act 1980, the death of a person is examinable by a coroner only in certain circumstances; for example, if the person died a "violent or unnatural death" or "suddenly died of an unknown cause". The Glebe and Westmead Coroner's Courts in Sydney hold records of all deaths reviewed by coroners throughout NSW. Permission was obtained to review records of all deaths due to SIDS in 1992. Data were retrieved, entered onto a Microsoft ACCESS database and analysed using SAS software.

The number of infants who died of SIDS during 1992 and their characteristics were obtained through this review of coroners' records. The notification rate was determined by matching notified SIDS cases to coroners' records.

For the trend analysis, the numbers of deaths due to SIDS were obtained from Australian Bureau of Statistics (ABS) death registration data for 1986-1991, and from the review of coroners' records for 1992. Death rates were calculated per 1,000 livebirths, the denominator populations for which were obtained from ABS birth registration data. The statistical significance of the change in death rate due to SIDS was determined using a chi square test for linear trend.

RESULTS
Recent trends in the incidence of SIDS
Between 1986 and 1992, the number of infant deaths due to SIDS each year decreased from 205 to 108 (Figure 1), and the death rate due to SIDS decreased from 2.5 to 1.2 per 1,000 (Table 1) (p < 0.001).

Notification rate for SIDS
For 1992, 82 SIDS deaths were notified to the NSW Health Department compared with 108 which were identified through the review of coroners' records. All notified SIDS deaths were matched with deaths identified from the coroners' records. The notification rate for SIDS was therefore 75.9 per cent.

Of the 26 deaths which were not notified, 22 (84.6 per cent) occurred among non-Sydney residents. Deaths which occurred among non-Sydney residents were less likely to be notified: 42 of the 46 (91.3) deaths which occurred among Sydney residents were notified, compared with 40 of 62 (64.5 per cent) of deaths which occurred among non-Sydney residents. Autopsies were carried out on all 108 infants. Of these, 106 (98.1 per cent) were carried out by the NSW Institute of Forensic Medicine at Glebe or the Institute of Clinical Pathology and Medical Research (ICPMR) at Westmead.

Characteristics of infants who died of SIDS
The sex of the infant was noted in all 108 cases. Seventy-five (69.4 per cent) deaths occurred among males and 33 (30.6 per cent) among females, giving a male to female ratio of 2.3:1.

The age of the infant at death was reported in all cases. Eighty-eight deaths (81.5 per cent) occurred among infants aged 0 to 24 weeks. One-quarter of deaths occurred in a four-week period from 5-8 weeks of age (Figure 2).

The month of death was reported for all deaths. The incidence of SIDS was highest in the cool months, with 58 cases (53.7 per cent) occurring between April and August. Other peak months included February with 10 cases (9.3 per cent) and October with 15 cases (12.0 per cent).

| TABLE 1 |
| INCIDENCE OF SUDDEN INFANT DEATH SYNDROME (SIDS) IN NSW, 1986-1992 |
| --- | --- | --- | --- | --- | --- | --- |
| 2.5 | 2.1 | 2.1 | 2.1 | 2.1 | 1.5 | 1.2 |
The position of the infant at the time of discovery was
recorded in 72 cases (66.7 per cent). Of these, 39 (54.2 per
cent) were found in a prone position, 20 (27.8 per cent)
on their side and 13 (18.1 per cent) in the supine position.

Sixty-nine cases (63.9 per cent) reported the type of feeding.
In 20 cases (29.0 per cent) breastfeeding was recorded while
in 30 (43.4 per cent) cases full feeds were given, 20
(29.0 per cent) of these bottlefed.

DISCUSSION
The cause or causes of SIDS remain unknown. However,
several modifiable risk factors are recognised: prone sleeping
position2-7, maternal smoking8,9, not breastfeeding5, and
infant overheating7. Observed decreases in the rate of SIDS
in some areas have been attributed to a reduced prevalence
of the prone sleeping position alone2, or in combination with
a reduced prevalence of infant overheating7.

Other potentially modifiable risk factors for SIDS have been
identified: smoking by the father and other household
members in addition to the mother8 and maternal substance
abuse10. Other risk factors include young maternal age and
low birthweight11. It has been suggested that sex differences
in the development of sleep/wake patterns12 and
susceptibility to infection13,14 may also play a role.

Despite the number of epidemiological and physiological
factors which has been identified as increasing the risk of
SIDS, current risk factors do not sufficiently discriminate
high-risk infants to serve as a basis for screening as the
majority of infants with risk factors do not die.15

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