

Review of the New Zealand Cot Death Study

Ed Mitchell

Department of Paediatrics

University of Auckland

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Outline

International comparisons

National data

Mortality reviews (case series)

The New Zealand Cot Death Study (case control study)

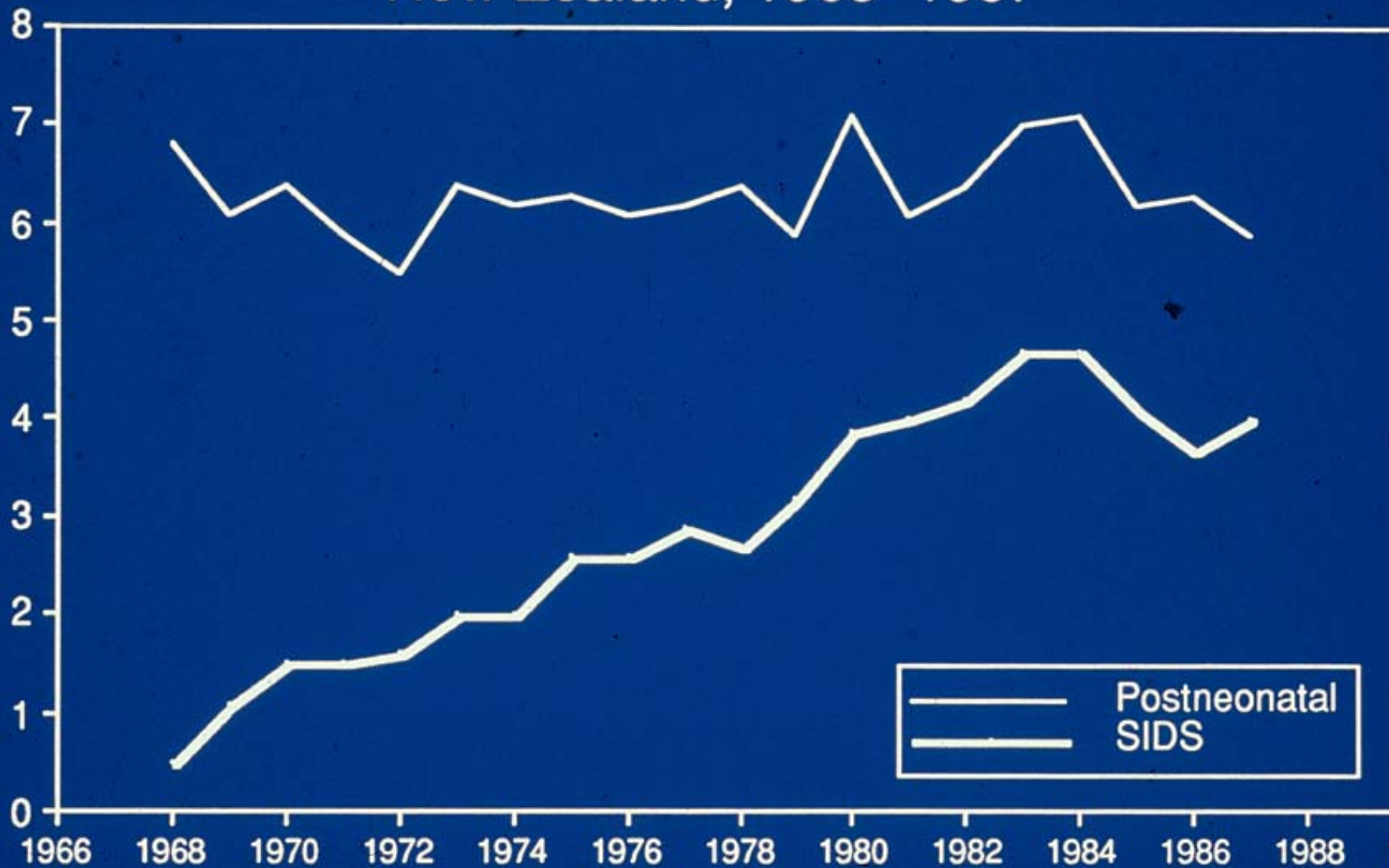
The prevention programme

Outcome

International comparisons (per 1000 live births), late 1980s

	Postneonatal	SIDS
New Zealand	6.0	4.0
Australia	4.2	2.2
UK	4.1	2.0
Sweden	3.1	0.8
Netherlands	2.9	0.7
United States	3.6	1.4

Post neonatal and SIDS mortality rates, New Zealand, 1968 -1987



National data

Number of deaths and rate (per 1000 live births)

Ethnic group

Gender

Age at death

Month of death

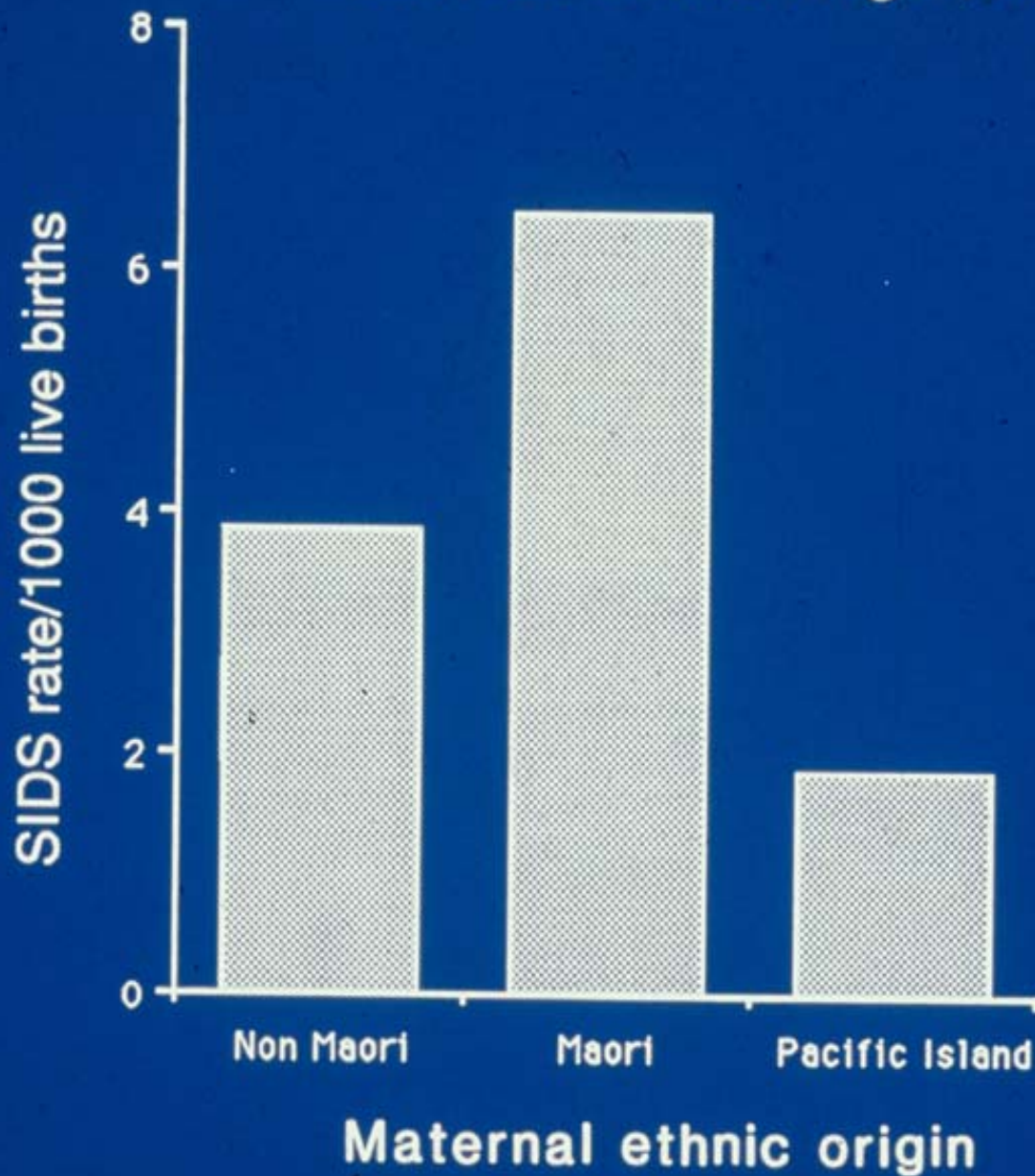
Birthweight

Gestation

Maternal age

Region

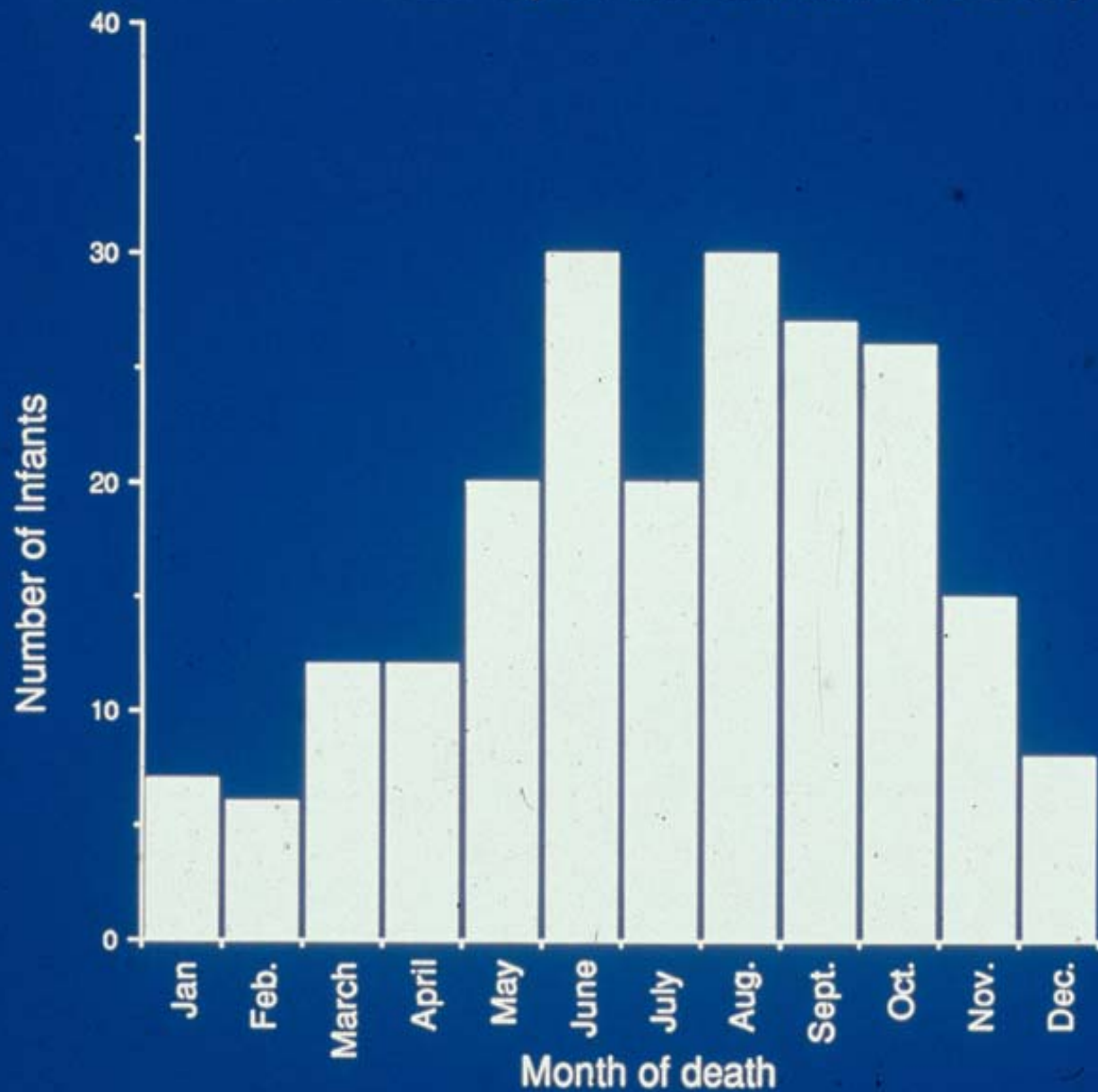
SIDS: Maternal ethnic origin, 1981-83.



SIDS: Age at death, 1986



Sudden Infant Death Syndrome: month of death, 1986.



(NHSC, 1986)

SIDS

HEALTH DISTRICTS IN NEW ZEALAND

SIDS 1-11 months
all codes
1979-82
NZ rate = 3.8 per
1000 live
births



Mortality review (case series)

Confidential enquiry into postneonatal deaths

Aims:

- Identification of preventable deaths
- Develop and recommend prevention strategies, thus reducing infant mortality at a local level

Methods:

- All cases were identified by the pathologist and checked against death certification
- Parents of cases were interviewed by medical officers using a semi-structured questionnaire

Auckland postneonatal mortality review, 1984-85

SIDS	80 (60%)
Congenital anomalies	24 (18%)
Infections	9 (7%)
Perinatal problems	8 (6%)
Total	134

Mitchell, 1987

Findings

Potentially preventable deaths were infrequent
(n=14, 10%):

9 infective deaths

1 birth trauma

1 accidental displacement of tracheostomy tube

2 unrestrained road traffic crash

1 strangled between cot side and base

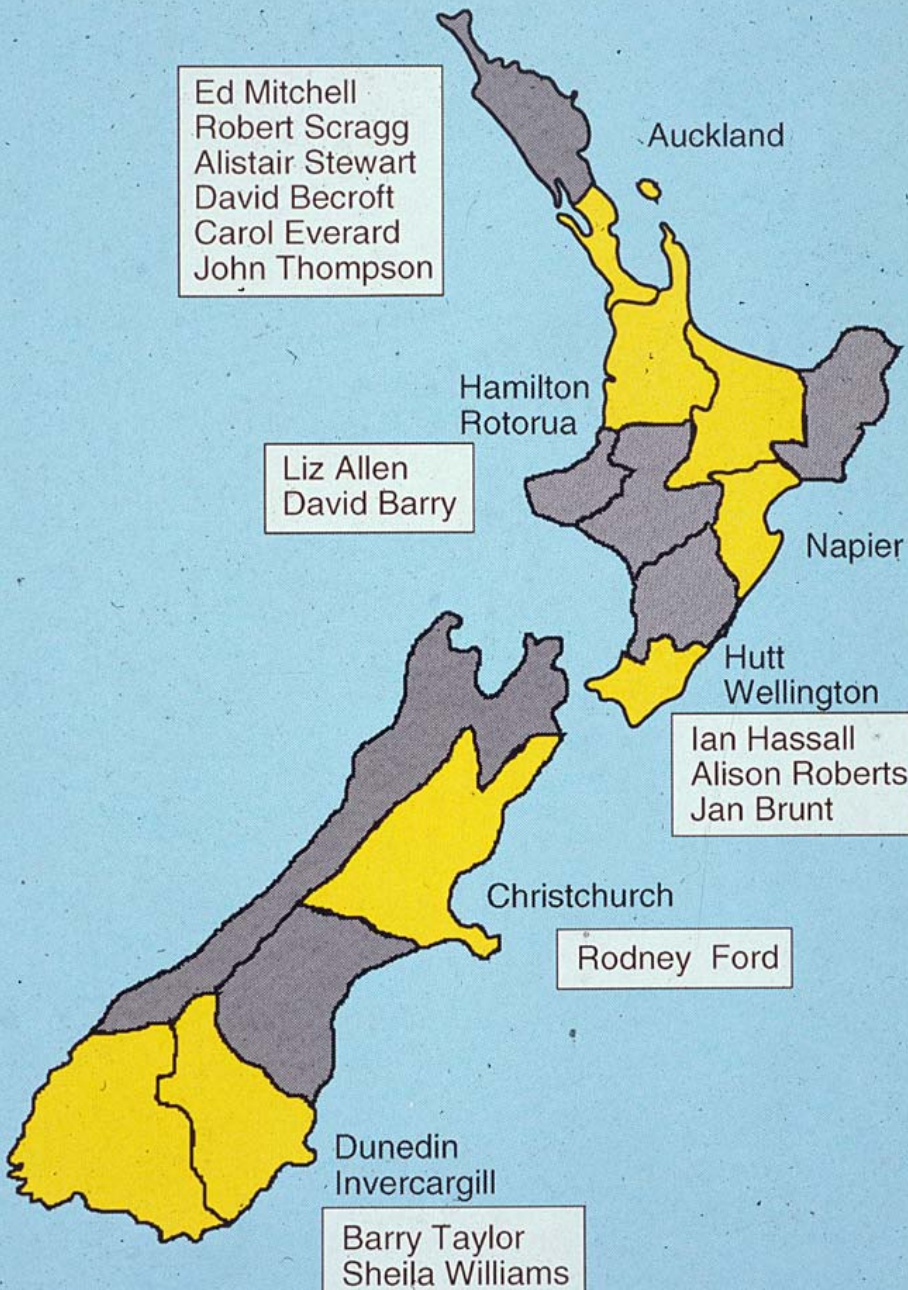
For SIDS cases the following notable factors were identified:

- Young mothers
- Maori
- Low socioeconomic group
- Poor accommodation
- Maternal smoking
- Male infant
- Poor antenatal care
- Low birthweight

The importance of some “notable factors” could not be interpreted:

- Co-sleeping (15%)
- Pallor, cyanotic or breathing problems, apnoeas (11%)
- Change in environment or routine (20%)
- Prone sleeping (Beal, 1978)
66/108 (61%) found face down
Interpreted as abnormality of baby who had not responded to partial respiratory obstruction.

NEW ZEALAND COI DEATH STUDY GROUP



New Zealand Cot Death Study: Cases

Died aged 28 days through to 1st birthday

1 Nov 1987 – 31 Oct 1990

Study regions covered 80% of all births in NZ

New Zealand Cot Death Study: Controls

Allocated a date of interview

Allocated an age

Date of birth calculated

Random allocation of obstetric hospital

Time of “sleep” randomly allocated

Thus controls are representative of all births and have an age distribution and time of “death” as expected for SIDS cases

Study numbers

	Case	Control
Number	485	1800
Interviewed	393 (81%)	1592 (88%)
Obstetric records	471 (97%)	1773 (98%)

Position placed to sleep for last sleep

	Case	Control	OR (95% CI)
Back	4.7	15.7	1.0
Side	30.9	51.4	2.0 (1.2, 3.5)
Front	64.4	32.9	6.6 (3.9, 11.3)

Population attributed risk

Assuming prone sleeping position is causally associated with SIDS, then 47% of SIDS cases might be prevented if babies were not placed prone to sleep.

Other major risk factors identified

	Case	Control	OR (95% CI)
Smoking	64.8	31.0	4.1 (3.3, 5.1)
Not breastfed	31.5	16.2	2.4 (1.9, 3.0)
Bed sharing	24.0	10.5	2.7 (2.0, 3.6)

Interaction between maternal smoking and infant bed sharing

Mother smoked	Bed sharing	Last two weeks	Last sleep
No	No	1.0	1.0
Yes	No	1.4	1.5
No	Yes	1.7	1.0
Yes	Yes	3.9	4.6

Scragg et al, BMJ 1993

The risk increases with duration of bed sharing

	Non-smokers	Smokers
None	1.0	1.4
>0 - <2	1.7	3.3*
2 - <5	1.4	4.0*
5+	2.5*	5.7*

The increased risk of SIDS with bed sharing is with maternal smoking rather than paternal smoking

Mother smoked	Father smoked	OR
No	No	1.2
No	Yes	1.3
Yes	No	2.6*
Yes	Yes	1.6*

The amount smoked does not increase the risk of SIDS from bed sharing

Mother smoked in the last 2 weeks	OR
Nil	1.2
1-9	2.0 *
10-19	2.0*
20+	2.0*

The risk of SIDS associated with bed sharing and number of parents bed sharing

Number of parents bed sharing	OR
Nil	1.0
1	1.7*
2	1.5*

Risk is increased if bed sharing with older siblings
(no data on twins sharing)

Pacifier use and SIDS

	Percentage using pacifier		Number subjects		Unadjusted OR
	Case	Control	Case	Control	
ZCDS, 1993	4.9	10.4	391	1586	0.44

Help prevent Cot Death

He Mokopuna – He Taonga

FREE
MAGAZINE



HEALTHY

Go Sm...
For You and Your...
You'll be much fitter and healthier if you...
and your baby will be too.

During pregnancy

Help Prevent Cot Death

He Mokopuna – He Taonga

BREASTFEEDING

Breastmilk gives your baby all the food needed for the first months and also helps to protect baby from infection.

Cough
Cough

Every time you smoke you get into your blood and your blood...
Smoking slows down your blood and your baby will get less oxygen...
Pregnant women who smoke are more likely to have a miscarriage.

Department
of Health
TE TARI ORA

113 Mairangiwi Street
Wellington
New Zealand
P.O. Box 5073, Wellington
Phone (04) 496 2000
Fax (04) 496 2340

WITH COMPLIMENTS

COT DEATH PREVENTION PROGRAMME



ME TO THIS
FREE
ME

land cot death is the main cause of death for infants in the age group six
one year. The present mortality rate is over four per thousand live births and
occurs almost twice as frequently in Maori infants.

its from the first year of the New Zealand Cot Death Study indicate that the
exists to reduce the number of sudden infant deaths in New Zealand.

Department of Health in its concern to promote health for babies and their

Help prevent Cot Death

He Mokopuna – He Taonga



Place baby on side or back to sleep.
Keep baby smokefree • Breastfeed

For more information contact:

- Plunket • Te Kohanga Reo • Parents Centre • La Leche League • doctor • midwife
- Maori Womens Welfare League • Area Health Board • nurse • Cot Death Society

cut cot
th toll

More Mothers Breast Feeding

Recent results from a survey conducted through the Greenham Clinic indicate that a high percentage of mothers in the Te Awamotau area are breast feeding their infants.

At present 85% are breast fed at six weeks of age, while the rate drops slightly to 80% at three months old.

Dr. Mary Ballantyne says this result is very encouraging and significantly higher than the rates shown by a Waikato Survey which returned rates of 68% for infants aged three months old.

An ambitious education programme is underway which aims by more than half by Zealanders care for

In light of recent findings by the Cot Death Society these results are particularly significant. Children who are not breast fed have a three times higher risk of cot death.

The other clearly identified risk factors from the search carried out over the past three years are babies sleeping on their stomachs and those who have mothers that smoke.

From a health point of view, as well as being a budget and environmental concern, surveys of cigarette and nappy costs were also carried out.

The following are the results:

The risk that babies experience a times more death.

Mothers create the baby from three and smoke 10 cigarettes.

Not increases the risk.

Regulation may save 10 per cent (based on the work of Dr Edna McMichael at the school).

death study

Programme aims to slash cot death rate

After the first week of life the commonest single cause of infant death in New Zealand is cot death - otherwise known as Sudden Infant Death Syndrome (SIDS).

Things which parents can do to prevent cot death - that babies are less likely to choke on:

1. Breast feeding
2. Not smoking
3. Not sleeping on stomach
4. Not sleeping with baby
5. Not sleeping with baby in bed
6. Not sleeping with baby in bed
7. Not sleeping with baby in bed

Cot death prevention role 'vital'

Programme is for HBPs

Grandparents have a vital role to play in preventing cot deaths, says the co-ordinator of the Cot Death Society, Mrs Patricia Price.

The latest information on cot deaths was given to grandparents at a meeting in Miramar yesterday.

Mrs Price said the meeting was arranged because grandparents had a key role to play in preventing cot deaths by ensuring that their babies are in a safe sleeping position.

"They are a tremendous influence on their babies," she said.

"A lot of grandparents are not aware of the dangers of cot death."

Medical - mystery

Cot death links seen

Mothers who smoked tripled the risk of cot death in their babies, a study has found.

Dr Mitchell said not breast feeding tripled the risk of cot death. Together the three risk factors accounted for 80 percent of cot deaths.

The task for Manawatu-Wanganui health workers was to get these messages across, said Wanganui Health Officer, Dr Patrick O'Connor.

The three factors would be prevented through the various organisations and health workers would monitor how effective the message was getting through.

Dr Mitchell's research team has been funded by the academic institution.

Infants and maternal deaths in New Zealand

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Research well worth

When I wrote about cot deaths a few years ago I remember saying that although not much was known about the cause, much research was going on.

The Department of Health has done a recent review of the subject of sudden infant death syndrome (SIDS) and it is the result of this research that we are publishing today.

Family Doctor

Cot death study provides 'final proof'

Three significant factors from the first comprehensive cot death study in New Zealand have encouraged doctors to publicise changes in the care of newborn babies. Sleeping positions, smoking, and not breast feeding are not new factors suspected of cot death.

The research has confirmed data specific to New Zealand. As a result, researchers Barry Taylor told NZ Health Education Centre.

Plan to Campaign

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Cot death crusade

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The Timaru Herald

Cot death help

The results of a national study on cot death have been keenly awaited by all those with an interest in the health of babies. Of all ailments that afflict children, cot death has been one of the least understood yet one of the most threatening.

What the researchers have come up with is no magical cure, but rather the formal recognition of three key risk factors that have been known for some time. These are placing babies on their stomachs, not breast feeding, and if the mother smokes.

Major provisions

Cot death

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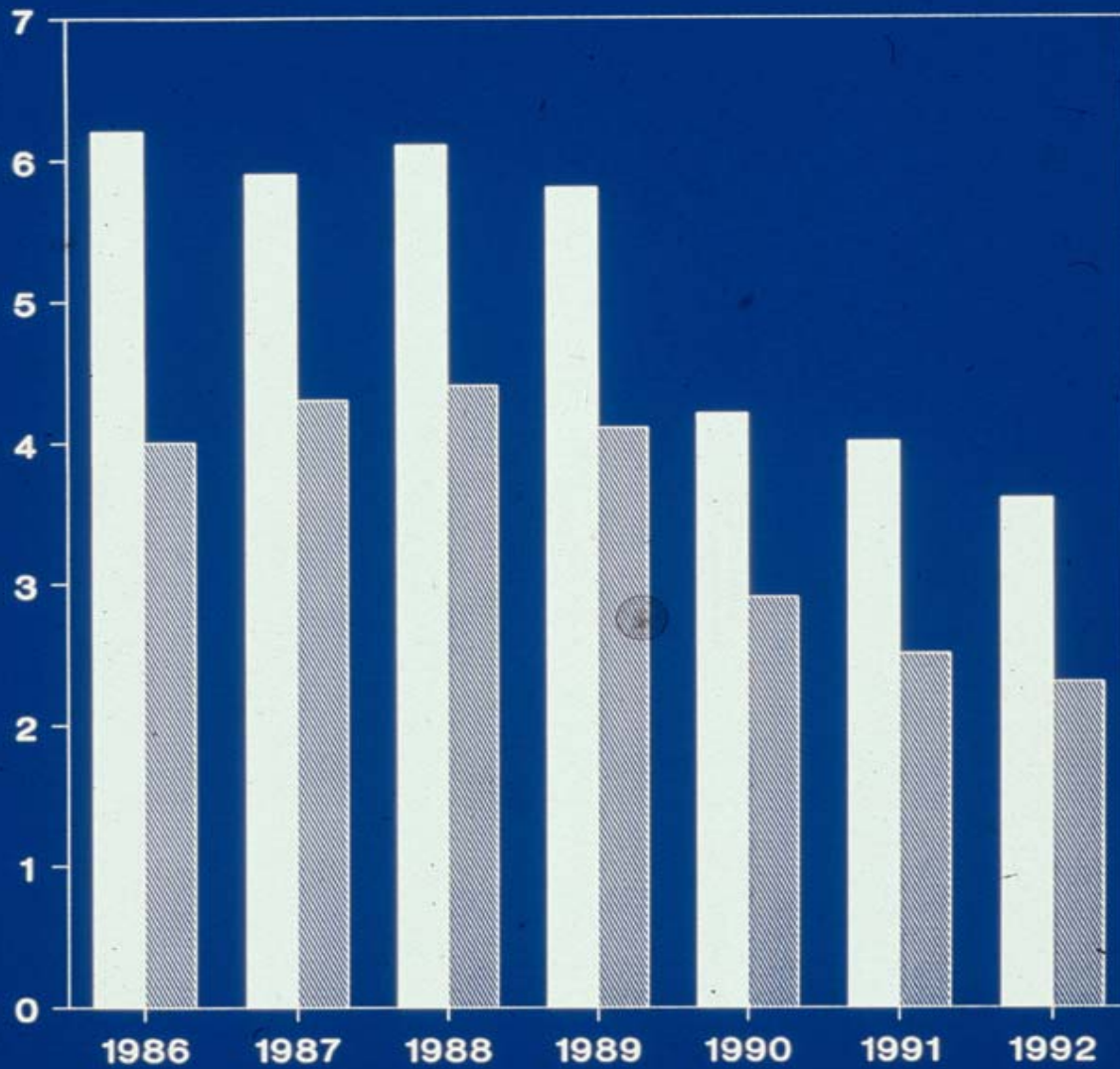
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Postneonatal and SIDS mortality rates (per 1000 live births)



Mitchell et al, 1993

Unique contribution of the NZCDS

- Initiated the recommendation to avoid the prone sleeping position (Back to Sleep, Reduce the Risk) worldwide

NZCDS explained the high Maori SIDS rate

The high Maori SIDS rate appears to be largely explained by the higher prevalence of maternal smoking (65% and 24% respectively) and bed sharing (21% and 8%) compared with non-Maori.

Univariate OR = 3.7

Adjusted OR = 1.3 (not significant)

Risk factors for SIDS not previously identified include:

- interaction between smoking and bed sharing
- the protective effect of pacifiers (dummies)
- the protective effect of sleeping in the same bed room as the parents
- smoking by the father
- postnatal depression
- described the epidemiology of SIDS after Back to Sleep campaign

NZCDS has confirmed

- the importance of thermal insulation
- duration and degree of breastfeeding
- symptoms of illness

NZCDS has excluded

- a causal relationship between SIDS and immunisations
- types of nappies and how they are cleaned
- travel in the preceding two days