

## THE HEALTH OF THE PEOPLE OF NEW SOUTH WALES: REPORT OF THE CHIEF HEALTH OFFICER, 2000

*Helen Moore, Lee Taylor and Louisa Jorm  
Epidemiology and Surveillance Branch  
NSW Department of Health*

### INTRODUCTION

Monitoring and reporting on the health of our population is a basic responsibility of NSW Health. It is the means by which we measure the health system's performance at the broadest level and identify, highlight, and target emerging health issues. As such, it is fundamental to the rational planning and development of population-based and clinical health programs and services.

*The health of the people of New South Wales: Report of the Chief Health Officer 2000* is the third in a series that began in 1996. The report:

- provides a comprehensive overview of the health of the people of NSW
- presents trends in key health indicators
- demonstrates health differentials
- highlights emerging health priorities and new health data sources.

It is intended for a wide variety of users, including health professionals and health consumers.

This edition of the report contains information on around 200 health indicators. Many of these have been retained and updated from the 1997 Report. Other indicators from 1997 have been dropped, to allow the addition of new content on emerging priorities, while keeping the size of the report manageable.

The report has four sections:

- determinants of health
- overall health status
- health of specific populations
- health priority areas.

Each of the four sections of the report is divided into several chapters.

*continued on page 90*

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### Section One

*Determinants of health* includes chapters on the NSW population, social determinants of health, the environment, and health-related behaviours. The chapter focusing on social determinants of health includes new indicators of income, education and family structure analysed by Health Area. The chapter on the environment has been considerably expanded since the last report, and includes previously unpublished information about water quality. The health-related behaviours chapter presents previously unpublished data from the 1997 and 1998 NSW Health Surveys, and includes new information on deaths and illness attributable to smoking, alcohol use, and use of illicit drugs.

### Section Two

*Overall health status* presents information about life expectancy, death rates, causes of death, self-rated health, use of health care, and causes of hospitalisation.

### Section Three

*Health of specific populations* examines differentials in health among population groups. Chapters examining the health of Aboriginal and Torres Strait Islander peoples, people born overseas, and socioeconomic groups, have

been substantially revised and improved since the 1997 edition of the report. This section also includes a new chapter on rural and remote health, which introduces the use of the Accessibility–Remoteness Index for Australia (ARIA) classification, and a chapter on the health of NSW mothers and babies.

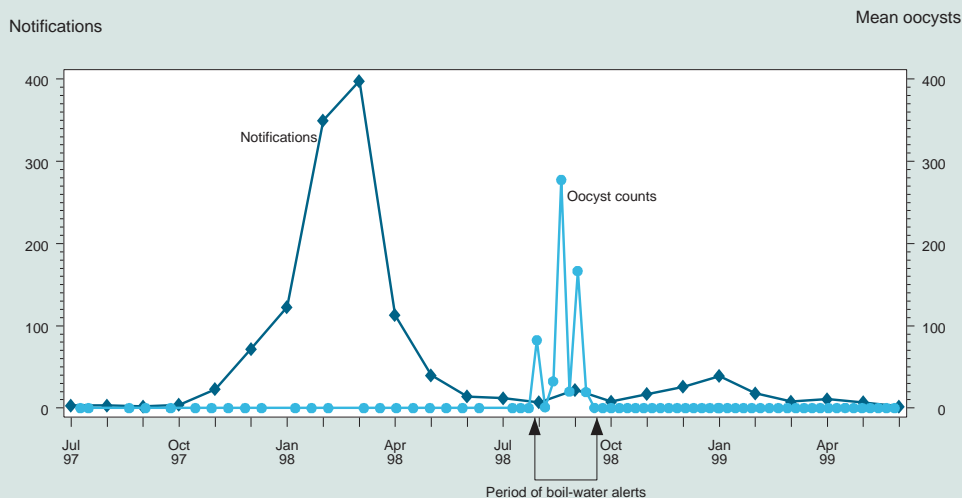
### Section Four

*Health priority areas* presents recent information on key health issues including cardiovascular diseases, diabetes mellitus, cancer, asthma, injury and poisoning, mental health, oral health and communicable diseases.

The report presents the latest available data wherever possible, including a range of previously unpublished data from the 1997 and 1998 NSW Health Surveys. It is accompanied by a Web version, which can be accessed at [www.health.nsw.gov.au/public-health/chorep/chorep.html](http://www.health.nsw.gov.au/public-health/chorep/chorep.html). Over time, new and more detailed, or updated, content will be added to the Web version to ensure that readers always have access to the most current information in the interval between hard copy editions. Both versions of the report depend heavily on data sets and analytic tools made available through our Health Outcomes Information Statistical Toolkit (HOIST) data warehouse.

**FIGURE 1**

#### CRYPTOSPORIDIOSIS NOTIFICATIONS AND SYDNEY WATER CRYPTOSPORIDIUM OOCYST COUNTS, NSW JULY 1997–JUNE 1999



Note: Notifications per month, oocyst counts per test per week. Cryptosporidiosis notification data as at 17 March 2000.

Source: Sydney Water Corporation (unpublished data) and NSW Notifiable Diseases Database (HOIST). Epidemiology and Surveillance Branch, NSW Department of Health.

## HIGHLIGHTS OF THE REPORT

### Social determinants of health

In NSW in 1996, one in five households had a weekly income of less than \$300. More than 579,000 people were receiving the aged pension, about 270,000 were receiving disability or sickness benefits, and 289,000 were receiving unemployment benefits. The unemployment rate among NSW males rose from 7.0 per cent in 1989 to 13.3 per cent in 1993 and then declined to 6.5 per cent in 1999. Among females the rate rose from 7.5 per cent to 11.3 per cent and then declined to 7.8 per cent over the same period. In 1996, 51 per cent of males and 61 per cent of females had no post-school qualifications. One in ten NSW families were single-parent families.

### Health and the environment

Air quality in the Sydney region has improved. Over the period 1994–1997, the goal for atmospheric nitrogen dioxide concentration was not exceeded, although ozone levels were more variable. The number of days in Sydney when atmospheric fine particles exceeded the desired goal declined between 1979 and 1992, with some fluctuations since then, while concentrations of lead in the air have declined steadily. The first representative survey of air quality in NSW homes found elevated levels of fine particles in homes where smoking occurred, and in those with wood

burning heaters.

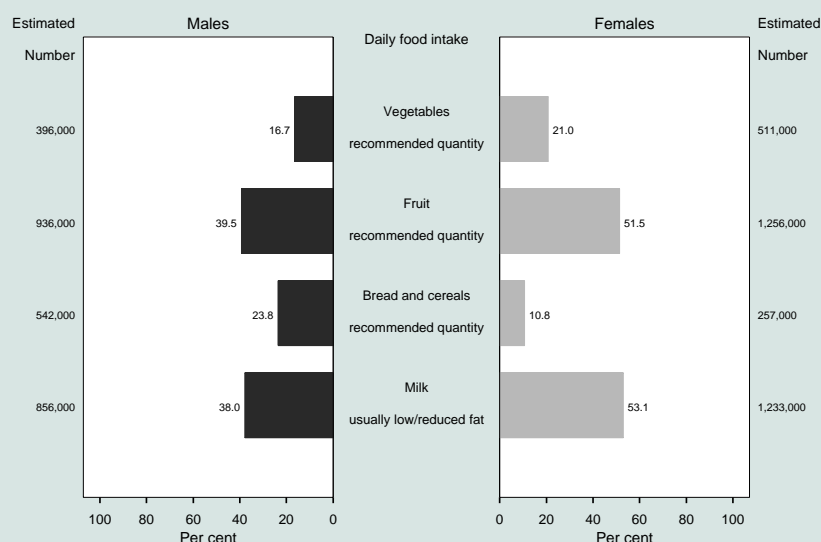
The bacteriological quality of Sydney and Hunter water supplies has improved in recent years, with consistently low levels of faecal and total coliform counts reported. Figure 1 shows that in July 1998, *Cryptosporidium* oocysts and *Giardia* cysts were detected at high levels in Sydney water, prompting the issue of a series of 'boil-water' alerts. There was no significant increase, however, in reports of cryptosporidiosis in Sydney residents, with 0–2 cases reported per week. Notification levels were well below those recorded during the swimming pool-associated outbreak in November 1997–May 1998. Taken together, the surveillance data suggest that the contamination did not pose a major risk to human health.

### Health-related behaviours

In the 1997 NSW Health Survey, two-thirds of men and less than half of women reported adequate levels of physical activity. In the 1997 and 1998 surveys, 50 per cent of men and 35 per cent of women reported being overweight or obese, an increase from the 1989–90 figures of 44 and 30 per cent, respectively. Figure 2 shows that in the same surveys, women were more likely to report eating adequate amounts of fruit and using low or reduced fat milk, while men were more likely to report eating adequate amounts of breads and cereals. Around 20 per cent of men

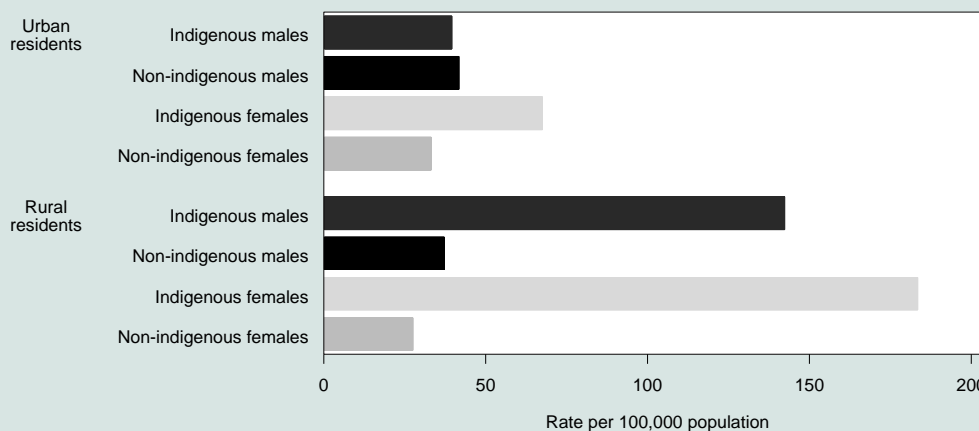
**FIGURE 2**

### USUAL DAILY FOOD INTAKE BY SEX, PERSONS 16 YEARS AND OVER, NSW 1997–98.



Note: Recommended daily quantity of fruit=300 grams or more. Recommended daily quantity of vegetables=300 grams or more. Recommended daily quantity of bread and cereal=210 grams or more. (NHMRC, 1995).

Source: NSW Health Surveys 1997 and 1998 (HOIST). Epidemiology and Surveillance Branch, NSW Department of Health.

**FIGURE 3****PERSONS RECEIVING HAEMODIALYSIS BY INDIGENOUS STATUS AND URBAN–RURAL HEALTH AREA OF RESIDENCE, NSW 1997–98.**

Note: Haemodialysis was classified according to the ICD-9 code V56.0. Records where indigenous status was not stated were classified as non-indigenous. Health Areas in Greater Sydney, Hunter and Illawarra were classified as urban. Rates were age-adjusted using the Australian population as at 30 June 1991.

Source: NSW Inpatient Statistics Collection linked data and ABS population data (HOIST). Epidemiology and Surveillance Branch, NSW Department of Health.

and women reported drinking alcohol at hazardous or harmful levels, while 27 per cent of men and 21 per cent of women reported current smoking. Smoking rates have been relatively static in NSW over the past five years.

In NSW in 1998, 324 males and 63 females died from opiate overdose. The male death rate from this cause has more than doubled in the past 10 years.

#### The health of people born overseas

More than one quarter of NSW residents at the 1996 Census were born overseas. Twenty per cent of people spoke a language other than English at home. The most common non-English languages were Chinese, Arabic, Italian and Greek. In the period 1993–1998, NSW residents born in overseas countries experienced lower death rates than Australian-born residents.

At the 1997 and 1998 NSW Health Surveys, men and women born in many overseas countries were less likely to report 'excellent' or 'very good' health compared with NSW residents overall. Men and women born in New Zealand, and men born in Vietnam and Lebanon, were more likely to be smokers than NSW residents generally. Men and women born in New Zealand also had higher rates of harmful or hazardous alcohol consumption. In 1997 and 1998, NSW children born in many overseas countries had more teeth affected by decay than did their Australian-born counterparts.

#### The health of Aboriginal and Torres Strait Islander peoples

At the 1996 Census, the indigenous population in NSW numbered 109,925—more than one-quarter of the national indigenous population. Forty per cent of the NSW indigenous population was aged less than 15 years compared with 21 per cent of the non-indigenous population, while less than three per cent of the indigenous population was aged 65 years and over, compared with 13 per cent of the non-indigenous population. In the period 1990–1998, rates of prematurity, low birth-weight and perinatal mortality were one-and-a-half to two times higher among babies of indigenous mothers compared to babies of non-indigenous mothers.

At the 1997 and 1998 NSW Health Surveys, there were higher reported rates of smoking, hazardous or harmful alcohol consumption, and psychosocial distress in indigenous when compared to non-indigenous people. Figure 3 shows that in 1997–98, indigenous people received haemodialysis treatment at much higher rates than non-indigenous people, particularly in rural areas.

#### The health of rural and remote populations

Living in a remote area may influence health by restricting access to health services and to health-promoting messages. The ARIA classification can be used to measure the association between remoteness of residence and

health. When applied to death rates from road injury, the classification shows the death rates among residents of remote localities to be over twice that of NSW residents generally. Figure 4 shows that death rates due to ischaemic heart disease are also higher among residents of very remote areas compared to NSW overall.

### The health of socioeconomic groups

In the period 1993–1998, the NSW local government areas (LGAs) with the lowest socioeconomic status (SES) had the highest rates of premature death (from any cause) among both males and females. In both sexes a similar association existed for premature death from cardiovascular disease, and for injury and poisoning in men. In children aged less than 15 years, there was a trend towards a higher death rate from injury and poisoning with increasing social disadvantage, though this was more apparent in boys than girls.

At the 1997 and 1998 NSW Health Surveys, residents of the least socioeconomically disadvantaged postcode areas were more likely to rate their health as ‘excellent’ or ‘very good’ compared to people living in the more disadvantaged postcode areas. Smoking, overweight or

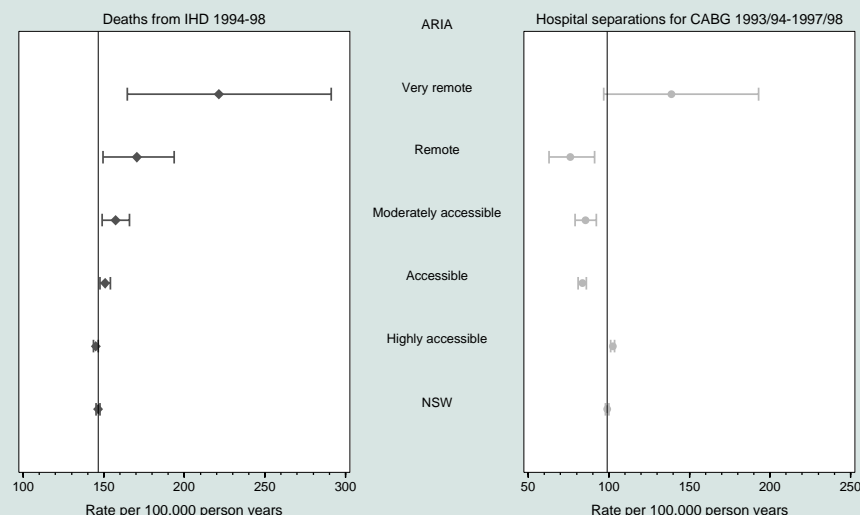
obesity, and hazardous or harmful alcohol consumption were also associated with socioeconomic disadvantage, with rates of each of these being higher among the most disadvantaged postcode areas. Figure 5 shows that psychosocial distress was associated with socioeconomic disadvantage, and was consistently higher among females than males.

### CONCLUSION

*The health of the people of New South Wales: Report of the Chief Health Officer, 2000* provides an update of the key population health indicators in New South Wales, covering physical and mental health status, and environmental and behavioural risk factors. The report uses standard definitions and data that allow for meaningful comparisons to be made between individual health conditions and risk factors, and between different health conditions and health service areas within the State. There are two versions of the report available via the Internet. The first is a facsimile of the printed report, in Adobe Acrobat® (PDF) format. The second version is in the form of an interactive Web site, which contains links to downloadable files of the graphs and tables for each

**FIGURE 4**

#### DEATHS FROM ISCHAEMIC HEART DISEASE AND HOSPITAL SEPARATIONS FOR CORONARY ARTERY BYPASS GRAFT BY ARIA CLASSIFICATION, NSW.

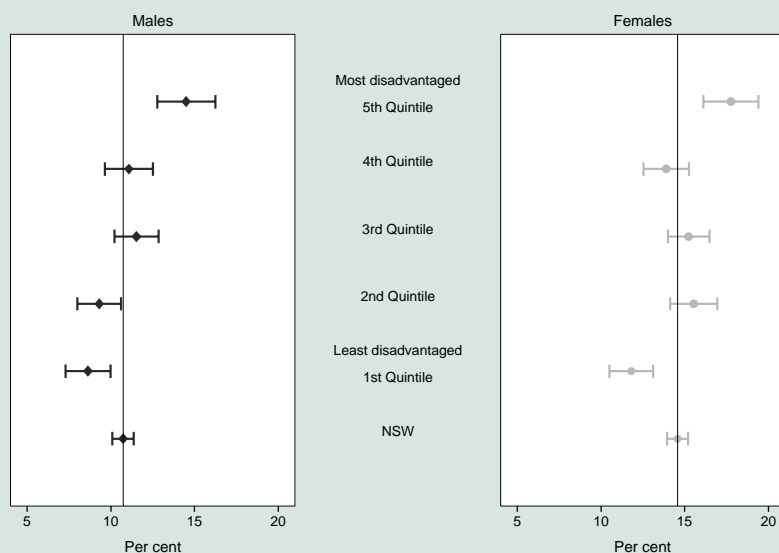


Note: Ischaemic heart disease was classified according to the ICD-9 codes 410–414. Coronary artery graft was classified according to the ICD-9-CM code 36.1. Statistical local areas were assigned to the Accessibility/Remoteness Index of Australia (ARIA). Rates were age-adjusted using the standard Australian population as at 30 June 1991. LL/UL95% CI=lower/upper limits of 95 per cent confidence interval for standardised rate.

Source: ABS mortality data and population estimates (HOIST). Epidemiology and Surveillance Branch, NSW Department of Health.

**FIGURE 5**

**PSYCHOSOCIAL DISTRESS BY SOCIOECONOMIC DISADVANTAGE SCORE FOR POSTCODE OF RESIDENCE AND SEX, NSW 1997 AND 1998.**



Note: Psychosocial distress was measured using the Kessler 10 (K10) questionnaire. Raw K10 scores were transformed so that the NSW mean was 50 and standard deviation was 10. Postcode areas were classified into quintiles by scores based on the ABS Index of Relative Socioeconomic Disadvantage (IRSD) (see the Methods section of the Report p.265). LL/UL95% CI=Lower and upper limits of the 95 per cent confidence interval for the point estimate.

Source: NSW Health Survey 1997 and 1998, ABS census data and SEIFA index (HOIST). Epidemiology and Surveillance Branch, NSW Department of Health.

indicator, that can be used by readers for presentations and in their own documents. The interactive version will be expanded to include extra indicators in most chapters, and existing indicators will be updated as more recent data becomes available. In addition, chapters containing new indicators are planned.

### ACKNOWLEDGEMENTS

Many people from within the Department of Health, the area health services and universities have contributed to the report, *The health of the people of New South Wales: Report of the Chief Health Officer, 2000*. These include: Pam Albany, Garth Alperstein, Nicola Atkin, Anna Bacik, Jane Bell, Bill Bellew, Sue Campbell-Lloyd, Jennifer Chipps, Tim Churches, Stephen Corbett, Christine Cowie, Leanne Erkes, Mary Fien, Shing Chung Fung, Michael Giffin, Elizabeth Harris, Jim Hyde, Devon Indig, Louisa Jorm, Jill Kaldor, Ed Kraa, Kim Lim, Lynne Madden, Jeremy McAnulty, Margaret McDonald, Rob Menzies, Helen Moore, Jane Moxon, Hanna Noworytko, Ru Nguyen,

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Copies of *The health of the people of New South Wales: Report of the Chief Health Officer 2000* are available from the Better Health Centre Publications Warehouse, Locked Bag 5003, Gladesville NSW 2111; telephone (02) 9816 0452; fax (02) 9816 0492; or from the Public Health Division Web site at [www.health.nsw.gov.au/public-health/chorep/chorep.html](http://www.health.nsw.gov.au/public-health/chorep/chorep.html).

## THE MAKING OF THE CHIEF HEALTH OFFICER'S REPORT, 2000

**Tim Churches**

*Epidemiology and Surveillance Branch  
NSW Department of Health*

The design and production of a large and eclectic document such as *The health of the people of New South Wales: Report of the Chief Health Officer, 2000* presents a number of organisational and technical challenges. This article outlines some of those challenges, and discusses how they were addressed in the making of the report.

The *Report of the Chief Health Officer* is intended to be an authoritative source of population health indicators for a broad audience, which includes health professionals and health service administrators, other public and private sector service providers, students, and members of the general public. In order to achieve this goal the following design criteria were adopted:

- the report must contain as broad as possible a range of population health status measures and indicators;
- the report should present these indicators in as consistent and coherent a manner as possible, given the diversity of the indicators;
- the report must be understandable by the general public, while containing sufficient detail to satisfy more technically-oriented users;
- the indicators contained in the report need to be as up-to-date as possible;
- an historical context should be provided for each indicator—in other words, time trends should be shown, not just the current value of an indicator;
- comparisons of the values of indicators for NSW with those for other States, Territories and countries should be provided where data is available;
- indicators should be available for geographical and other sub-populations within NSW, in order to maximise the relevance of the report to local communities, and to particular demographic and cultural subgroups;
- the report must be as free of errors as possible;
- mechanisms should be provided which facilitate the reuse and republication of the indicators contained in the report, in order to maximise their exposure and effect.

In order to meet these criteria, the following approaches were taken:

- Wherever possible, indicators were calculated or derived directly from original unit record data (microdata).

- The current and historical unit record data, as well as denominator (population estimate) data, were all drawn from a common source: the HOIST population health data warehouse facility operated by Epidemiology and Surveillance Branch. The HOIST facility employs a range of checking and audit procedures to ensure that the data it contains is as accurate and as up-to-date as possible.
- All data manipulation, and all graph and table production, was performed by a suite of carefully tested software modules which implemented a standardised set of algorithms (details of which appear in the appendices of the report). This purely 'programmatic' approach to the preparation of all quantitative information contained in the report was adopted because it reduces the opportunity for human error, permits auditing and, most importantly, it allows indicators to be easily and efficiently updated as more recent data becomes available. A formal auditing process was used, in which key aspects of all of the computer programs used in the preparation of the report were checked by someone other than the author(s) of each program.
- Each indicator is presented on a separate page. The majority of pages conform to a common layout, comprising a graph (chosen from a small number of basic graph designs, so that the reader develops some familiarity with the graphing paradigms used), a table which repeats the data presented in the graph, a set of footnotes providing details on the data sources and other characteristics of the indicator, a number of paragraphs of explanatory or commentary text, and a set of references and pointers to further information on each indicator.
- Past experience has shown that simple typographical errors, made while transcribing or retyping quantitative data in graphs or tables, were a major source of mistakes that are almost impossible to detect by proofreading. To avoid this, data was produced in formats which avoided any need for transcription or retyping at any stage of the report production process.
- The report is available in both printed and interactive Web (Internet) versions. Initially, these two versions contain the same information. However, the Web version of the report will be updated as more recent source data becomes available. It will also be extended to include both a greater range of indicators and greater levels of detail, such as indicators at the local government area level.

- Each page of the Web version includes links, which permit the reader to download electronic copies of the graph and table displayed on that page in a form that facilitates re-use in presentations and in other reports or documents. For example, downloaded graphs may be embedded in a word processed document, or downloaded tabular data may be imported into a spreadsheet or graphics package.

However, there is still room for improvement:

- Some of the types of graphs in the current report, particular ones which display statistical confidence limits, may appear unnecessarily complex to some readers. To address this problem, we are developing techniques that will allow the reader to dynamically choose (at least in the Web version of the report) his or her preferred type of graph, such as a traditional vertical bar chart without confidence limits, as opposed to the rather more technically oriented horizontal 'dot' chart with confidence limits which is currently used throughout the report.
- It would be desirable for more comparative or 'benchmarking' data to be included in the report. The

limiting factor here is the availability of comparable data from other jurisdictions. This issue is currently being addressed by a number of groups, such as the National Public Health Partnership.

- As greater detail and depth is added to the Web version of the report, the design of the user interface and navigation aids becomes more important to ensure that users can easily find what they are looking for. User testing of different interfaces and navigation aids is required to guide future development.
- Although it is possible to provide more and more detail at relatively low marginal cost, it is impossible to satisfy every user's specific requirements. To address these needs, an interactive facility in which users can specify highly customised or 'bespoke' analyses, graphs or tables is required. Although it is technically feasible to provide access to such a facility via the Internet right now, there are issues of 'disclosure control' (maintenance of confidentiality) and the interpretation of analyses based on small numbers which need to be addressed before such facilities can be made widely available. ☒

## NSW PUBLIC HEALTH BULLETIN

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The *Bulletin* aims to provide its readers with population health data and information to motivate effective public health action.

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Articles, news and comments should be 1000 words or less in length and include a summary of the key points to be made in the first paragraph. References should be set out in the Vancouver style, described in the *New England Journal of Medicine*, 1997; 336: 309–315. Send submitted articles on paper and in electronic form, either on disc (Word for Windows is preferred), or by email. The article must be accompanied by a letter signed by all authors. Full instructions for authors are available on request from the editor.

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# NEW SOUTH WALES MOTHERS AND BABIES REPORT, 1998

**Lee Taylor**

*Epidemiology and Surveillance Branch  
NSW Department of Health*

## INTRODUCTION

The *New South Wales Mothers and Babies Report, 1998* was released in May 2000. This is the second report on mothers and babies in NSW to combine the annual reports of the NSW Midwives Data Collection (MDC), the Neonatal Intensive Care Units' Data Collection, and the NSW Birth Defects Register. This article describes the major findings of the report.

## MAJOR FINDINGS OF THE REPORT

### Recent trends

- The number of births in NSW remained stable at about 86,000 to 88,000 between 1994 and 1998. The proportion of teenage mothers decreased from 5.0 to 4.8 per cent, while the proportion of mothers aged 35 years and over increased from 13.1 to 16.3 per cent.
- The reported number of Aboriginal and Torres Strait Islander mothers giving birth increased from 1,531 in 1994 (1.8 per cent of all mothers) to 2,043 in 1998 (2.4 per cent). Part of this increase is likely to be due to an increased willingness of mothers to be identified as Aboriginal or Torres Strait Islander.
- The rate of normal vaginal birth remained stable at about 70 per cent between 1994 and 1998. The caesarean section rate increased from 17.3 to 19.0 per cent and the rate of instrumental delivery remained steady at approximately 10.5 per cent.
- Since 1994, the perinatal mortality rate varied from 8.8 to 9.6 per 1,000. About two-thirds of all perinatal deaths were stillbirths and one-third were neonatal deaths.
- In the period 1990-96, 81 deaths were reported among pregnant women or women who gave birth less than six weeks previously. Fifty-three of these were classified as directly or indirectly associated with the pregnant state.

### Area Health Services

- In 1998, Western Sydney and South Western Sydney Areas contributed over one-quarter of the State's births.
- In 1998, the proportion of women giving birth at less than 20 years of age varied from 1.1 per cent in the Northern Sydney Area to 14.0 per cent in the Far West Area, while the proportion of mothers giving birth at 35 years of age or more ranged from 8.4 per cent in the

Far West Area to 27.1 per cent in the Northern Sydney Area.

- The highest rates of low birth-weight occurred in the Far West Area (9.0 per cent) and the highest rate of preterm birth was in the Hunter Area (8.4 per cent).
- The perinatal mortality rate in 1998 varied from 5.0 per 1,000 in the Greater Murray Area to 16.0 per 1,000 in the Far West Area.

### Aboriginal and Torres Strait Islander mothers and babies

- In 1998, there were 2,068 babies born to Aboriginal and Torres Strait Islander mothers, 2.4 per cent of all babies born in NSW. Approximately one in five Aboriginal and Torres Strait Islander mothers were teenagers.
- In 1998, 66.3 per cent of Aboriginal and Torres Strait Islander mothers commenced antenatal care before 20 weeks gestation compared with 85.4 per cent of non-Aboriginal and Torres Strait Islander mothers.
- Since 1994, the rates of low birth-weight (less than 2,500 grams) and prematurity (less than 37 weeks gestation) in Aboriginal and Torres Strait Islander babies has been over 10 per cent. These rates are about one and a half times higher than the rates for NSW overall. The perinatal mortality rate in babies born to Aboriginal and Torres Strait Islander mothers was 15.5 per 1,000 in 1998, almost twice the rate of 9.4 per 1,000 for NSW overall.

### Maternal country of birth

- Between 1994 and 1998, about 20 per cent of mothers were born in non-English speaking countries. The proportion of mothers from Asian countries increased slightly from 9.2 to 10.1 per cent, while the proportion of mothers from southern European countries decreased slightly from 2.0 to 1.6 per cent.
- In 1998, 86.9 per cent of mothers born in English speaking countries commenced antenatal care before 20 weeks gestation, compared with 55.8 per cent of mothers born in Melanesia, Micronesia and Polynesia and 68.4 per cent of mothers born in the Middle East and Africa.
- The highest rate of low birth-weight was in babies of mothers born in Southern Asian countries (9.0 per cent). The highest rates of prematurity were in babies of mothers born in Southern Europe (7.7 per cent) and Melanesia, Micronesia and Polynesia (7.8 per cent).
- Babies of mothers born in Melanesia, Micronesia and Polynesia were more likely than other country of birth groups to be stillborn or die in the neonatal period,

**TABLE 1****CLINICAL INDICATORS FOR OBSTETRICS, NSW HOSPITALS AND PARTICIPATING AUSTRALIAN HOSPITALS, 1998**

Indicator	Description	NSW (%)	Australia (%)
<b>Indicator 1:</b>	Induction of labour for other than defined indications #.		
1.1	Mothers undergoing induction of labour for other than defined indications as a percentage of all mothers undergoing induction of labour for any reason.	28.9	36.0
1.2	Mothers undergoing induction of labour for other than defined indications as a percentage of all mothers giving birth.	7.0	9.0
<b>Indicator 2:</b>	The rate of vaginal delivery after primary caesarean section.		
2.1	Mothers delivering vaginally at the birth immediately following primary caesarean section as a percentage of all mothers delivering at the birth immediately following primary caesarean section.	21.3	24.0
<b>Indicator 3:</b>	Primary caesarean section for failure to progress.		
3.1	Mothers undergoing primary caesarean section for failure to progress after a period of labour with cervical dilation of 3 cm or less as a percentage of all mothers undergoing primary non-elective caesarean section.	10.1	9.3
3.2	Mothers undergoing primary caesarean section for failure to progress after a period of labour with cervical dilation of more than 3 cm as a percentage of all mothers undergoing primary non-elective caesarean section.	28.9	28.8
<b>Indicator 4:</b>	Primary caesarean section for fetal distress.		
4.1	Mothers undergoing primary caesarean section for fetal distress as a percentage of total mothers delivering.	2.9	3.1
4.2	Mothers undergoing primary caesarean section for fetal distress as a percentage of mothers delivering by primary caesarean section.	21.9	19.8
<b>Indicator 5:</b>	Incidence of intact lower genital tract in vaginal deliveries.		
5.1	Primiparous mothers not requiring surgical repair of the lower genital tract as a percentage of all primiparous mothers.	31.1	28.8
<b>Indicator 6:</b>	Apgar score.		
6.1	Infants born with an Apgar score of four or less at five minutes post delivery as a percentage of all infants born ##.	0.8	0.8
6.2	Infants born with an Apgar score of six or less at ten minutes post delivery as a percentage of all infants born ###.	–	0.7
<b>Indicator 7:</b>	Term infants transferred or admitted to a neonatal intensive care unit for reasons other than congenital abnormality ####.		
7.1	Term infants admitted to a neonatal intensive care unit for reasons other than congenital abnormality as a percentage of all term infants born.	1.5	0.9

Source: NSW Midwives Data Collection, Epidemiology and Surveillance Branch, NSW Department of Health. Australian Council on Healthcare Standards (unpublished data).

# Defined indications include: diabetes, hypertensive disease, fetal distress, fetal death, chorioamnionitis, blood group isoimmunisation, prelabour rupture of membranes, prolonged pregnancy (41 or more weeks), and suspected intrauterine growth retardation.

## NSW denominator includes live births only.

### NSW data not collected.

#### NSW data are provided by hospital of birth and may be under-enumerated. Infants transferred to another hospital and then admitted to NICU for reasons other than congenital abnormality may not be reported by the hospital of birth.

though the total number of perinatal deaths in this group is small.

#### Neonatal Intensive Care

- There were 1,899 infants registered in the Neonatal Intensive Care Units' Data Collection in 1998 representing a registration rate of 21.0 per 1,000 live births.
- The proportion of women receiving antenatal corticosteroids for fetal lung maturation has increased each year since 1992, with 70.2 per cent of mothers receiving steroids in 1998.
- Most infants (82.5 per cent) were from a singleton pregnancy, 16.0 per cent were from a twin pregnancy and 1.3 per cent were from a triplet pregnancy.
- During 1998, 74.4 per cent of infants registered were preterm (less than 37 weeks gestation), 46.1 per cent were very preterm (less than 32 weeks) and 15.1 per cent were extremely preterm (less than 28 weeks). One in six infants had a major or minor congenital anomaly.
- The majority of infants registered in 1998 (89.9 per cent) received assisted ventilation. The main indication for assisted ventilation varied with gestational age: respiratory distress syndrome, immature lung and transient tachypnoea were more common among the preterm groups, whereas meconium aspiration, perinatal asphyxia and pulmonary hypertension were more common in term infants.
- Overall, 92.5 per cent of infants without a major congenital anomaly survived to six months of age.

Survival improved with gestational age up to 34 weeks, after which it decreased slightly.

#### Birth defects

- About 2,000 infants are born with birth defects each year in NSW. Over the period 1992–98, defects of the cardiovascular system were most commonly reported, followed by defects of the musculoskeletal system and defects of the genito-urinary system. The number of infants born with neural tube defects slowly decreased from 80 in 1992 to 51 in 1997.
- The rate of birth defects increases with increasing maternal age, especially after age 35. However, as most babies are born to mothers aged less than 35 years, the majority of babies with birth defects were born to younger mothers.

#### Clinical indicators for obstetrics

- From 1st January 1998, the MDC includes data elements necessary for most of the Australian Council on Healthcare Standards and Royal Australian and New Zealand College of Obstetricians and Gynaecologists (ACHS–RANZCOG) clinical indicators for obstetrics. A summary of the indicators for all NSW hospitals combined and comparative information for participating Australian hospitals are shown in Table 1. ❏

The *New South Wales Mothers and Babies Report, 1998* is available from the NSW Department of Health's Web site at [www.health.nsw.gov.au/public-health/mdc/mdcrep98.html](http://www.health.nsw.gov.au/public-health/mdc/mdcrep98.html).

## REPORTING ON INDIGENOUS HEALTH: REPORT OF THE CHIEF HEALTH OFFICER, 2000

*Peter Waples and Louisa Jorm*  
*Epidemiology and Surveillance Branch*  
*NSW Department of Health*

### INTRODUCTION

The NSW Department of Health has recently released an updated version of the *Health of the people of NSW: Report of the Chief Health Officer, 2000*. This report, last published in 1997, is a key mechanism for communicating population health information in NSW. It provides a detailed account of the available measures of health for the residents of NSW, including Aboriginal and Torres Strait Islander peoples. The chapter on indigenous health

in the 2000 report was substantially revised and expanded following an evaluation of its 1997 counterpart. This article gives an overview of the evaluation process and the subsequent revision of the chapter.

### METHODS

A one-page fax-back questionnaire was developed, seeking comments on the content, layout, and usefulness of the chapter on indigenous health in the 1997 *Report of the Chief Health Officer*. This chapter covered the following topics:

- projected indigenous population

- perinatal deaths
- premature births
- recording of indigenous status
- premature mortality
- hospitalisation
- indigenous population pyramid
- diabetes mellitus
- respiratory disease
- cardiovascular risk factors
- injury and poisoning
- vaccine-preventable diseases
- alcohol consumption
- cardiovascular disease.

In mid-March 1999, the questionnaire was electronically mailed or faxed to relevant staff in the NSW Department of Health, Directors of NSW Public Health Units, Chief Executive officers of Aboriginal Medical Services, and Aboriginal Health Coordinators. A total of 90 questionnaires were distributed.

## RESULTS

Thirty-four questionnaires were returned, giving a response rate of 38 per cent. Of the 34 respondents, 14 (41 per cent) were Aboriginal.

Thirty respondents (88 per cent) had read or used the report, three had not read the report, and one was not sure whether or not they had read the report.

Twenty-six respondents (76 per cent) suggested new topics to be included in the chapter, with the most often cited being:

- environmental health
- mental health
- socioeconomic factors and health
- sexual health
- oral health
- drug use and other risk behaviours.

Twelve respondents (35 per cent) thought that indigenous health issues should be presented mainly in a discrete chapter. Twenty (59 per cent) preferred a discrete chapter combined with comparisons with other populations spread throughout the report. No respondents supported dropping the special chapter on indigenous health, though two respondents (five per cent) voiced no preference on this issue.

Two important themes that emerged from respondents' comments were:

- The need to avoid stigmatising Aboriginal communities when presenting information on sensitive subjects

(such as sexual health, mental health and drug use, and other risk behaviours), particularly at Area Health Service level.

- The potential reinforcement of negative stereotypes by presenting information on the relatively poor health status of Aboriginal people. Some respondents suggested that the report should highlight any recent improvements in indigenous health or its determinants.

## DISCUSSION

The results of the evaluation supported the retention and expansion of a designated chapter on indigenous health in the *Report of the NSW Chief Health Officer, 2000*. However, addition of new material to the report, in line with the suggestions made in the evaluation, was severely constrained by the limitations of the available data. In NSW, Aboriginality is often poorly recorded in relevant data collections, and as a consequence, there are limited sources of routinely collected data.

However, new information on the following topics is included in the 2000 report:

- socioeconomic factors (using 1996 census data)
- health-related behaviours (using data from the 1997 and 1998 NSW Health Surveys)
- renal dialysis (using NSW Inpatients Statistics Collection data, internally linked to remove duplicate records for individuals)
- psychosocial distress (using data from the 1997 and 1998 NSW Health Surveys).

In addition, the new report contains:

- more internet references to link readers to appropriate Aboriginal and Torres Strait Islander health sites throughout Australia;
- wherever possible throughout the report, comparative statistics to highlight health disparities between indigenous and non-indigenous people.

A statewide project to improve the recording of Aboriginality in health care settings is currently being undertaken as part of the NSW Aboriginal Health Information Strategy. Encouragingly, registrations of indigenous deaths in NSW improved in 1998 compared with previous years. It is hoped that further improvements in the scope and quality of the available data will allow the issues raised in this evaluation to be more fully addressed in subsequent editions of the Chief Health Officer's Report.

## ACKNOWLEDGEMENT

We would like to thank those who gave their time to participate in the evaluation. ☛

Copies of the report: *The health of the people of NSW: Report of the Chief Health Officer, 2000* are available from the NSW Department of Health Web site at: [www.health.nsw.gov.au/public-health/chorep/chorep.html](http://www.health.nsw.gov.au/public-health/chorep/chorep.html). Further details of the evaluation are available on request from Peter Waples, Olympic Planning Unit, NSW Department of Health, Locked Mail Bag 961, North Sydney NSW 2059; or by email at [pwapl@doh.health.nsw.gov.au](mailto:pwapl@doh.health.nsw.gov.au).

## IMPROVING THE QUALITY AND MANAGEMENT OF ABORIGINAL AND TORRES STRAIT ISLANDER HEALTH INFORMATION IN NSW

**Angela Todd**

*Manager, Aboriginal Health Information Strategy Unit  
NSW Department of Health*

In 1997 the NSW Department of Health, in collaboration with the Aboriginal Health & Medical Research Council (AHMRC), developed the Aboriginal Health Information Strategy (AHIS). The Aboriginal Health & Medical Research Council is the peak body representing member Aboriginal Community Controlled Health Services (ACCHSs) in NSW. This article describes the AHIS, the six key projects it contains, and gives details of the first of these projects: the development of the NSW Aboriginal Health Information Guidelines.

### ABORIGINAL HEALTH INFORMATION STRATEGY: AIMS AND COORDINATION

The AHIS aims to improve the quality of information available to support service providers in the planning and delivery of health services for Aboriginal and Torres Strait Islander peoples in NSW. It contributes to the Department's Corporate Plan to:

- promote the delivery of appropriate health services to Aboriginal communities;
- strengthen skills and commitment in quality improvement by increasing capacity to identify and monitor outcomes of care and service delivery, and manage and analyse information;
- enhance information management and analytical skills, including development of new technologies to enhance health services' management.

It also supports the recently released Aboriginal Health Strategic Plan to:

- implement the recommendations of the Multilateral Agreement in relation to the protocols for the collection,

use and dissemination of data and information on Aboriginal health.

- improve recording of Aboriginality in all Area Health Service data collections.
- establish co-ordinated disease registers and patient recall systems to enable early intervention, effective management and follow up by Area Health Services and ACCHSs.

Implementation of the AHIS is overseen by the NSW Aboriginal Health Information Management Group (AHIMG), an intersectoral steering committee comprising senior representatives from the following organisations:

- NSW Department of Health
- NSW Area Health Services
- Aboriginal Health & Medical Research Council
- Aboriginal Community Controlled Health Services
- Aboriginal and Torres Strait Islander Commission
- Commonwealth Office for Aboriginal and Torres Strait Islander Health
- Australian Bureau of Statistics
- Registry of Births, Deaths and Marriages
- Australian Centre for Effective Healthcare.

### ABORIGINAL HEALTH INFORMATION STRATEGY PROJECTS

The AHIS comprises six identified projects:

1. develop an Aboriginal health information agreement, in partnership with the AHMRC, to cover ownership and sharing of data, and confidentiality and privacy guidelines;
2. consult and negotiate with the AHMRC and ACCHSs about their information needs, with a view to possibly assisting in the development and support of

information systems, and the establishment of common definitions and terms;

3. consult and negotiate with other States and Territories to identify ways that might help improve the quality of information in NSW;
4. collaborate with the Registry of Births, Deaths and Marriages to improve the level of registration of births and deaths, and the Australian Bureau of Statistics to improve population estimates, of Aboriginal peoples in NSW;
5. develop and test programs to improve the under-recording of Aboriginality in mainstream health information systems;
6. identify and assess ways of obtaining supplementary information on the health of Aboriginal peoples in NSW.

### **Project 1: NSW Aboriginal Health Information Guidelines**

The first priority of the AHIS was Project 1: develop an Aboriginal health information agreement in partnership with the AHMRC to cover ownership and sharing of data, and confidentiality and privacy guidelines. Work on the development of an agreement commenced in January 1997 and, following lengthy consultation, culminated in the development of the NSW Aboriginal Health Information Guidelines,<sup>1</sup> which were launched by the Minister for Health in August 1998.

The guidelines are the first of their kind in Australia. They aim to ensure consistency and good practice in the management of health and health-related information about Aboriginal and Torres Strait Islander peoples in NSW. In particular, the guidelines provide a framework and set of principles for the collection, ownership and use of information, as well as taking action on issues of confidentiality, privacy and consent. The guidelines briefly consider research involving Aboriginal peoples and communities, however there are national guidelines that provide more detailed information to assist researchers in this regard.<sup>2</sup>

Since the guidelines were released, staff feedback has highlighted the need to clarify how the guidelines can be

applied to various routine information processes. As a result, and to facilitate ongoing implementation of the guidelines, a simple flow-chart has been developed (see Figure 6). This diagram relates to all information collections owned or held by NSW Health. A copy of the guidelines and this flow-chart can be downloaded from the AHIS Intranet site. A copy of the guidelines alone, minus the flow-chart, can be downloaded from the AHIS Web site (see box below).

A review of the guidelines is scheduled for September 2000. The Commonwealth Department of Health and Aged Care has recently commenced work on the development of national data protocols for Aboriginal and Torres Strait Islander health information. The review of the guidelines will provide an opportunity to incorporate any necessary changes arising from the national project, but also any changes identified by stakeholders as a result of practical application of, and experience with, the guidelines. This will be an important opportunity for NSW Health staff to provide feedback.

### **CONCLUSION**

The guidelines are a useful resource for staff working in the provision of health services for Aboriginal and Torres Strait Islander peoples, and for information custodians, information managers, epidemiologists, researchers and Research Ethics Committees.

Since the release of the guidelines, work has continued on the remaining AHIS projects. Priority is currently being given to Project 5: improving the under-recording of Aboriginal and Torres Strait Islander origin information in mainstream health information systems. Details of this work will be provided in a future publication of *The Bulletin*.

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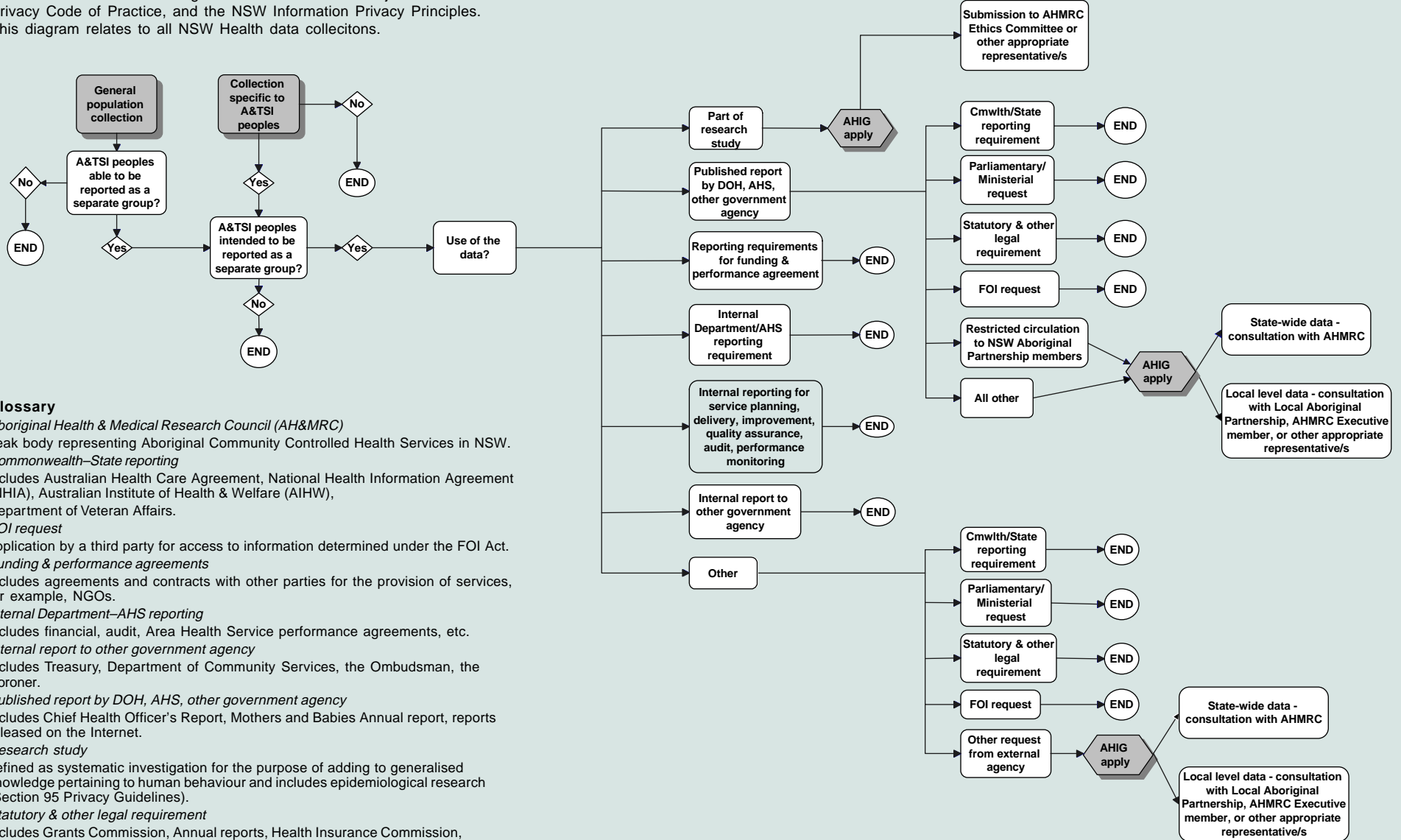
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2. National Health and Medical Research Council. *Guidelines on Ethical Matters in Aboriginal and Torres Strait Islander Health Research*. Canberra: AGPS, 1991. ☞

The guidelines can be viewed and downloaded from the NSW Department of Health AHIS Web site at [www.health.nsw.gov.au/iasd/imcs/ahisu](http://www.health.nsw.gov.au/iasd/imcs/ahisu). Free copies of the guidelines can also be obtained from the Better Health Centre by telephone on (02) 9816 0452, quoting State Health Publication number AHB 980128. Further information and inquiries can be directed to Angela Todd, Aboriginal Health Information Strategy, NSW Department of Health at: [antodd@doh.health.nsw.gov.au](mailto:antodd@doh.health.nsw.gov.au).

**FIGURE 6**

**NSW ABORIGINAL HEALTH INFORMATION GUIDELINES (AHIG) :  
WHEN TO APPLY THEM IN THE COLLECTION, ACCESS, USE AND PUBLISHING OF ABORIGINAL AND TORRES STRAIT ISLANDER INFORMATION**

Note: The AHIG and this diagram should be read in conjunction with the NSW Health Information Privacy Code of Practice, and the NSW Information Privacy Principles.  
This diagram relates to all NSW Health data collections.



**Glossary**

**Aboriginal Health & Medical Research Council (AH&MRC)**  
peak body representing Aboriginal Community Controlled Health Services in NSW.

**Commonwealth–State reporting**  
includes Australian Health Care Agreement, National Health Information Agreement (NHIA), Australian Institute of Health & Welfare (AIHW), Department of Veteran Affairs.

**FOI request**  
application by a third party for access to information determined under the FOI Act.

**Funding & performance agreements**  
includes agreements and contracts with other parties for the provision of services, for example, NGOs.

**Internal Department–AHS reporting**  
includes financial, audit, Area Health Service performance agreements, etc.

**Internal report to other government agency**  
includes Treasury, Department of Community Services, the Ombudsman, the Coroner.

**Published report by DOH, AHS, other government agency**  
includes Chief Health Officer’s Report, Mothers and Babies Annual report, reports released on the Internet.

**Research study**  
defined as systematic investigation for the purpose of adding to generalised knowledge pertaining to human behaviour and includes epidemiological research (Section 95 Privacy Guidelines).

**Statutory & other legal requirement**  
includes Grants Commission, Annual reports, Health Insurance Commission, Guardianship Board and Protective Office, NSW Cancer Registry, subpoenas.

## MULTICULTURAL FAMILY HELP KIT

**Suzanne Pope, Kym Scanlon and Beverley Raphael**

*Centre for Mental Health  
NSW Department of Health*

**Jan Heslep, Maria Cassaniti and John Spiteri**

*Transcultural Mental Health Centre, Parramatta*

The burden of mental health problems is large and increasing. Eighteen per cent of people aged over 18 years in Australia report experiencing a mental health problem or disorder (anxiety, affective or substance use disorders) in the past 12 months. Prevalence is highest for young people aged 18 to 25 years (27 per cent). Despite this, only a small percentage of people with mental disorders actually seek help (38 per cent).<sup>1</sup> Further, there is uncertainty about the number of people requiring information about mental health issues. This highlights the importance of improving mental health literacy among the NSW population and establishing initiatives to promote mental health and prevent the onset of mental health problems and disorders.<sup>2-4</sup> This article describes a new resource, the *Multicultural Family Help Kit*, that will help to improve the level of mental health literacy in NSW residents who are from non-English speaking backgrounds.

New South Wales has the most culturally diverse population in Australia. The State is home to 40 per cent of Australia's non-English speaking background (NESB) overseas-born population.<sup>5</sup> In 1996, 27 per cent of the NSW population were born overseas, and were from a NESB. This equals a total of 1,015,862 people aged five years and over who reported speaking a language other than English at home.<sup>5</sup> Children, adolescents and their families from culturally and linguistically diverse backgrounds may be at risk for poor mental health outcomes due to a wide range of factors. These include:

- migration or refugee experiences
- intergenerational conflict
- grief and loss relating to separation from extended family
- post traumatic stress from experiences prior to resettlement; and possible experiences of racism and discrimination after resettlement.<sup>6</sup>

Further, recent research highlights that communities of NESB have a lower utilisation of mental health services. While these communities may be less inclined to use mental health services, the prevalence of mental health problems and disorders may not be less.<sup>7</sup>

The *Multicultural Family Help Kit* has been developed to assist people from culturally and linguistically diverse backgrounds to recognise the signs of mental health

problems in children and young people and to seek help early. The kit, launched by the Minister in December 1999, will ensure families are better informed about mental health issues and the services that exist to assist them and their children. The kit is a collaborative initiative of the Transcultural Mental Health Centre (TMHC), NSW Department of Health and SBS Radio.

The TMHC provides a statewide service for people from culturally and linguistically diverse communities. Their role includes: the provision of clinical services; consultation to metropolitan and rural Area Health Services for developing appropriate multilingual mental health services; and, the development of multilingual mental health information and resources.

Bi-lingual community workers, multicultural community welfare agencies, ethnic community organisations and key community members, including young people, were consulted to ensure that the information and issues covered in the kit were sensitive to the cultures, values and practices for several different communities and languages.

The *Multicultural Family Help Kit* provides information on the following important topics:

- child and adolescent mental health problems
- prevention of suicide
- challenging behaviours
- psychosis
- body image and eating disorders
- post traumatic stress
- depression
- fears and anxiety.

The kit is available in a range of formats (audio-tape, print format and on the Web site) and was also developed as an SBS radio series. The SBS radio series was aired in November and December 1999 in 16 languages, including English, Arabic, Cantonese, Croatian, Filipino (Tagalog), Greek, Hindi, Italian, Korean, Macedonian, Mandarin, Serbian, Spanish, Tongan, Turkish and Vietnamese.

The radio program addressed mental health issues of concern for children and young people from non-English speaking backgrounds and their families, including: commonly held misunderstandings and myths about mental disorders, information on mental health services, and details of where to obtain the kit. A call for action was broadcast after each session giving listeners the opportunity to contact the Transcultural Mental Health Centre for services or further printed information.

The kit is being distributed to mental health professionals, community health centres, general practitioners,



multicultural community welfare agencies, ethnic community organisations, early childhood centres, child and adolescent mental health services and other relevant services. The use of the kit by service providers and feedback from consumers on the relevance and usefulness of the information will be monitored and evaluated by the TMHC. This information will be used to inform best practice in the area of cross-cultural health information provision.

The *Multicultural Family Help Kit* is an important new resource that will contribute towards the mental health information needs of culturally and linguistically diverse communities in NSW.

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The various formats of the *Multicultural Family Help Kit* can be ordered as follows:

Copies of the eight print versions of the kit in Arabic, Chinese (both Cantonese and Mandarin), Greek, Italian, Korean, Spanish, Turkish and Vietnamese can be ordered from: the Better Health Centre, PO Box 58, Gladesville, NSW 2111; Telephone: (02) 9816 0452; Facsimile: (02) 9816 0492.

The 16 audio tapes are available from: the Transcultural Mental Health Centre, LMB 7118, Parramatta BC, NSW 2150; Telephone: (02) 9840 3800; Facsimile: (02) 9840 3755.

From April 2000 the other six language versions of the kit (Serbian, Macedonian, Hindi, Croatian, Filipino and Tongan) can be downloaded from the TMHC Web site at [www.tmhc.nsw.gov.au](http://www.tmhc.nsw.gov.au), or from the Multicultural Health Communication Service Web site at [www.mhcs.health.nsw.gov.au](http://www.mhcs.health.nsw.gov.au).

## REFUGEE HEALTH IN NSW

### **Mitchell Smith**

*Director, NSW Refugee Health Service*

Each year over 4,000 humanitarian entrants settle in NSW. They have endured persecution and violations of their rights as human beings, sometimes torture, and almost always psychological trauma. Most have had significantly limited access to medical and dental care. Some have been exposed to adverse environmental conditions while fleeing or in refugee camps. In terms of health, refugees and other migrants with refugee-like experiences are recognised as being one of the most vulnerable groups in our society.

Source countries have altered over the decades, from the post-war and 1960s European migrations, through the South East Asian phases of the late 1970s and 1980s, to

the more recent intakes from Iraq, Iran, the former Yugoslavia, and the Horn of Africa. Two-thirds of humanitarian migrants to NSW settle in the Greater West of Sydney. Smaller numbers live across metropolitan Sydney, in the Hunter and Illawarra Areas, and throughout rural areas in towns as diverse as Bathurst, Coffs Harbour and Wagga Wagga.

The NSW Department of Health has recently produced a blueprint, the first of its kind in Australia, which outlines an integrated and coordinated approach to the health needs of refugees. Called *Strategic Directions in Refugee Health Care in NSW*,<sup>1</sup> the document provides a framework to guide existing service provision, and to promote collaboration in responding to the diverse health service needs of refugees.

As part its response, the Department established the NSW Refugee Health Service (RHS), the goal of which is to protect and promote the health of refugees and people from refugee-like backgrounds living in NSW. Located at Liverpool and administered by the South Western Sydney Area Health Service (SWSAHS), the formation of the RHS was based on the bringing together of several existing programs:

- the Refugee Screening Program, established in 1977, which offered health assessments for newly arrived refugees, with a particular focus on public health screening;
- a health information program for refugees, which since 1987 has provided information on the health system in NSW to new arrivals;
- a project, previously based at the University of New South Wales's Department of General Practice in Fairfield, to improve the skills of General Practitioners (GPs) on refugee health.

Collocation of these programs sought to bring about a more coordinated approach, while additional funding of \$300,000 was provided to broaden the scope and reach of the RHS. Roles of the new service include:

- consultation with, and support for, health care workers;
- training for mainstream health service providers on refugee health and related issues, in conjunction with the NSW Service for the Treatment & Rehabilitation of Torture & Trauma Survivors (STARTTS);
- linking agencies that work with refugees and the health system;
- providing health information to refugees;
- health assessments with a primary health care focus;
- facilitating and conducting research in refugee health;
- advocating for health policies and services to protect and improve the health of refugees.

The creation of the RHS in April 1999 was timely, with the first plane load of Kosova evacuees from Macedonia arriving in Sydney just three weeks later. Operation Safe Haven, the Australian government's response to the United Nations High Commission for Refugees' request for temporary protection for Kosovars (and later, for East Timorese) was unusual in that it was the first time that evacuees have been brought directly to Australia.

In conjunction with the Commonwealth Department of Health and Aged Care, the NSW Health Counter Disaster Unit and SWSAHS, the RHS assisted with planning and coordination of health care provision for the 4,000 Kosova evacuees, and later for several hundred evacuees from East Timor. The RHS also contributed advice and training for staff from a range of health services and other government and non-government organisations.

Liaison at the national level has continued, with the service representing NSW Health on a Commonwealth Task Group examining public health screening issues among refugees and asylum-seeker groups.

At the State level, the RHS represents the Department on a committee convened by the Department of Immigration and Multicultural Affairs (DIMA) which brings together representatives from all government departments that provide services to newly arrived refugees.

Much of the RHS's ongoing work will build on existing service provision to refugees by mainstream and multicultural health services. A range of consultations has commenced with providers at an Area Health Service level, and will extend to include various refugee communities. Planning to meet identified needs will take place in conjunction with Area Health Services, with service agreements negotiated around specific projects and activities.

Work with GPs occurs through local Divisions of General Practice and the Royal Australian College of General Practice (RACGP). Staff contribute twice yearly to the RACGP training program for all NSW Advanced Trainees in General Practice. A number of resources to support GPs who see refugee patients have been developed, some in collaboration with other States.

Certain key health issues will also be a focus. Cuts to the Commonwealth Dental Program in 1996 had a particular affect on humanitarian entrants, many of whom have extremely poor dental health. Work is progressing at local and State levels to facilitate provision of public dental services for refugees.

The high profile nature of Operation Safe Haven raised awareness in Australia about the plight of refugees, and about displaced persons more generally. Each year, thousands of people with refugee-like experiences settle in NSW. Provision of adequate and appropriate medical care for this population is a challenge for our health system, requiring innovative approaches, and collaboration within and between health services and other agencies.

## REFERENCE

1. NSW Department of Health. *Strategic Directions in Refugee Health Care in NSW*. Sydney: NSW Department of Health, 1999. ☒

For further information about the NSW Refugee Health Service contact Dr Mitchell Smith by telephone on (02) 9828 6600, or by email at [mitchell.smith@swsahs.nsw.gov.au](mailto:mitchell.smith@swsahs.nsw.gov.au).

## MENINGOCOCCAL DISEASE

### WHAT IS MENINGOCOCCAL DISEASE ?

- Meningococcal disease is an infection caused by a bacterial germ known as meningococcus.
- Up to 20 per cent of healthy people carry the bacteria in their throat or nose without the bacteria causing illness.
- There are 13 different types of meningococcal bacteria.

### HOW COMMON IS IT?

- The disease is rare and affects less than one in ten thousand people in NSW.
- It can occur at any age, but is mostly seen in children and young adults.

### HOW IS IT SPREAD ?

- The disease is *NOT* easily spread and is only passed on by close person-to-person contact through saliva: for example, mouth kissing, or sharing drink bottles, toothbrushes or cigarettes.

### WHAT ARE THE SYMPTOMS AND HOW IS IT TREATED?

- Meningococcal infections can lead to meningitis (infection of the lining of the brain), septicaemia (blood poisoning) and other illnesses.
- Symptoms include sudden onset of fever, headache, tiredness, neck stiffness, vomiting or nausea, sore eyes sensitive to light, joint pain, and a rash.
- Symptoms are often less specific in young children and may include fever, drowsiness, vomiting, being unsettled and a rash. The rash is quite distinctive and may look like bleeding into the skin or purple-red spots. However, a rash does not always appear.

- *IT IS IMPORTANT TO SEEK MEDICAL ATTENTION EARLY.* Most people recover completely from meningococcal disease with early treatment with antibiotics. In a few individuals, however, the disease can be serious and life-threatening.

### WHAT ABOUT CONTACTS?

- Contacts are people who have been identified as having *VERY* close contact with a person who has the disease, such as family and household members, or those who have been exposed to the person's saliva.
- Contacts are offered a special antibiotic to kill the bacteria in the nose or throat, and therefore reduce the risk of further cases. This antibiotic does *NOT* treat the disease but simply stops the likelihood of the bacteria being carried in the nose and throat. Different antibiotics are used if symptoms develop.

### IS THERE A VACCINE?

- A vaccine is *NOT* available for all types of meningococci.
- A meningococcal vaccine is given to travellers visiting countries where specific types of meningococci frequently cause disease (for example, Africa and South America), and to persons with specific health conditions.
- Vaccines are used only in special circumstances in Australia, during outbreaks of meningococcal disease in confined environments (such as boarding schools, residential colleges or military barracks).
- The current vaccine is *NOT RECOMMENDED* in children less than two years of age.

For more information please contact your local public health unit, community health centre, or doctor. ☒

## INFECTIOUS DISEASES, NSW: JUNE 2000

### TRENDS

Notifications of infectious diseases to the end of April 2000 were in line with seasonal expectations (Figure 7, Table 3). Notably, the late summer peak in **arbovirus disease** notifications (largely due to 247 Ross River virus infections, and 48 Barmah Forest virus infections in the three-month period to the end of April) was smaller than in most recent years.

The expected autumn peak in **legionnaires disease** has appeared with eight cases in NSW reported in April. No causal link has been identified for these cases, although cases are thought to increase in NSW as air-conditioning systems that use cooling towers are operated inconsistently as the weather cools down. This inconsistent use could result in an increased creation of aerosols (aerosolisation), allowing subsequent inhalation of any resident legionella bacteria. Building operators must ensure that cooling towers are properly cleaned and disinfected to minimise the risk that they will harbour these bacteria.

In April, the Victorian Department of Human Services reported a large outbreak of Legionnaires disease caused by *Legionella pneumophila* infections linked to visiting the recently opened **Melbourne Aquarium**. As of 11th May, 91 confirmed cases associated with the outbreak had been reported, including two deaths. Cases were aged between 23–89 years old, and reported visiting the Aquarium between 11–25 April.

The **urinary antigen test** for *L. pneumophila* serogroup 1 has proven useful in establishing the diagnosis in many recent cases. Clinicians are encouraged to use this test in the management of suspected cases.

Cases of **meningococcal disease** can be expected to increase with the onset of winter. Clinicians are reminded of the importance of early treatment with intravenous

antibiotics for suspected cases, and notification of such cases to the local Public Health Unit. The Public Health Unit can then assist in the identification of contacts at risk, and institute preventive measures. The Public Health Unit can also advise on newly available diagnostic tests, including PCR and serological assays.

### INTRODUCTION OF THE AUSTRALIAN STANDARD VACCINATION SCHEDULE

The National Health and Medical Research Council (NHMRC) has endorsed the Australian Standard Vaccination Schedule (ASVS) that commenced on 1st May 2000 (Table 2), which heralds the introduction of universal infant hepatitis B vaccination. Babies born prior to that date will remain on the previous NHMRC immunisation schedule.

The ASVS offers a choice of two 'paths' to incorporate two new combination vaccines. NSW Health has chosen to follow Path 1 of the ASVS, which will introduce the new combination vaccine, InfanrixHepB.

To ensure the smooth implementation of the new ASVS, all general practitioners will receive supporting information, including the new NHMRC Australian Immunisation Handbook, seventh edition, from the Commonwealth in May 2000. Additional copies may be obtained by phoning 1800 671 811. Hospitals, Community Health Centres and other service providers will receive their copies of the handbook from their local Public Health Unit.

Copies of the NSW Immunisation Schedule, a new vaccine order form, and a hepatitis B pamphlet have been widely distributed to service providers. The NSW Immunisation Schedule will also be available on the NSW Department of Health Web site. ☒

**TABLE 2****NSW IMMUNISATION SCHEDULE 2000**

Babies born BEFORE 1 May

Babies born on or AFTER 1 May

AGE	ANTIGEN	VACCINE	AGE	ANTIGEN	VACCINE
<b>2 months</b>	DTPa Hib Polio	Infanrix HibTITER/PedvaxHIB* OPV	<b>Birth (maternity units)</b>	Hep B	H-B-Vax II
<b>4 months</b>	DTPa Hib Polio	Infanrix HibTITER/PedvaxHIB* OPV	<b>2 months</b>	DTPa-HepB Hib	InfanrixHepB PedvaxHIB Polio OPV
<b>6 months</b>	DTPa Hib Polio	Infanrix HibTITER OPV	<b>4 months</b>	DTPa-HepB Hib Polio	InfanrixHepB PedvaxHIB OPV
<b>12 months</b>	MMR Hib	Priorix PedvaxHIB*	<b>6 months</b>	DTPa-Hep B Polio	InfanrixHepB OPV
<b>18 months</b>	DTPa Hib	Infanrix HibTITER	<b>12 months</b>	MMR Hib	Priorix PedvaxHIB
<b>4 years</b>	DTPa MMR Polio	Infanrix Priorix OPV	<b>18 months</b>	DTPa	Infanrix
<b>10 years</b> 1 mths later 5 mths later	Hep B (1) Hep B (2) Hep B (3)	H-B-Vax II	<b>4 years</b>	DTPa MMR Polio	Infanrix Priorix OPV
<b>15-19 years</b>	ADT Polio	ADT OPV	<b>15-19 years</b>	ADT Polio	ADT OPV

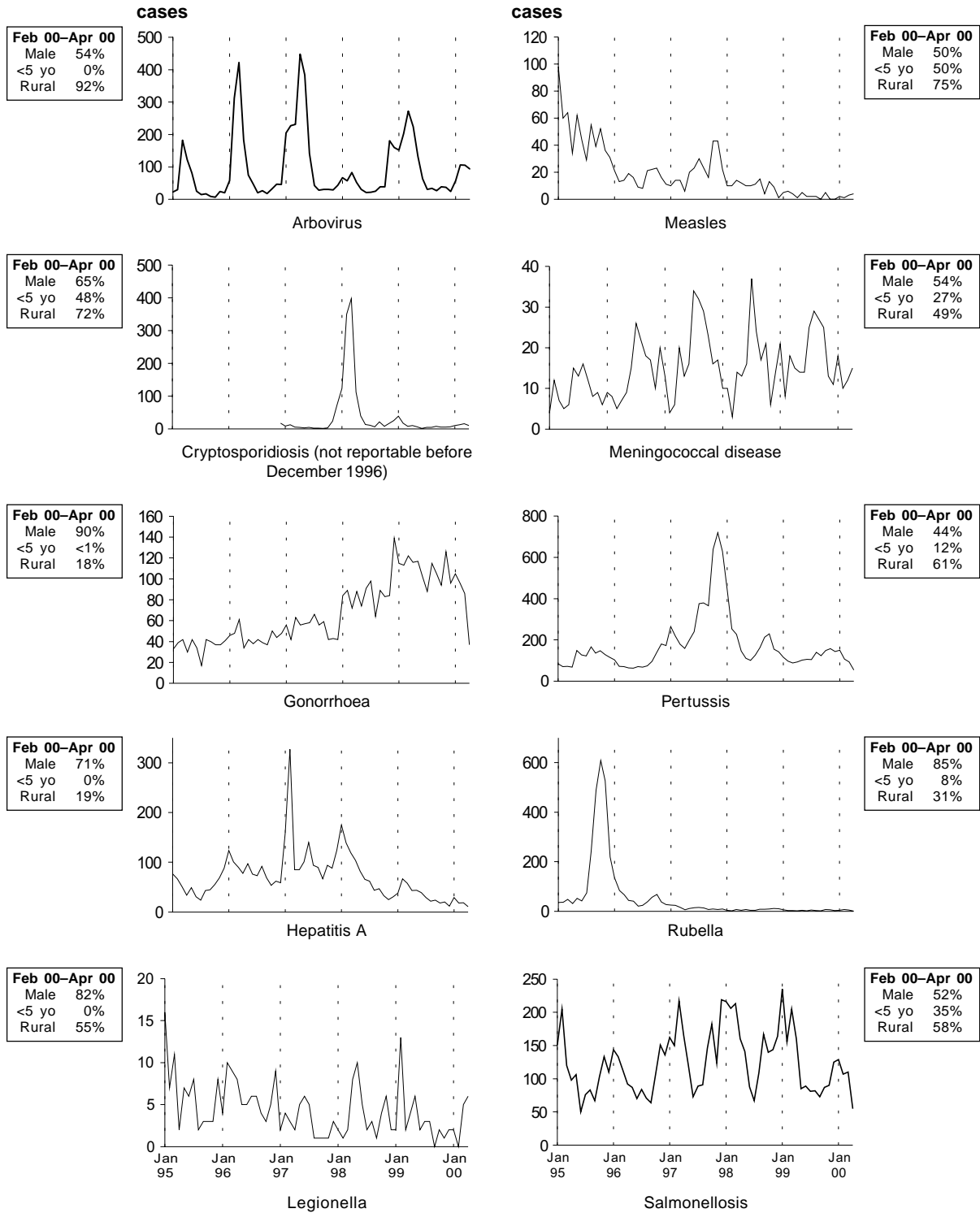
\* Aboriginal & Torres Strait Islander children born before the 1st of May 2000 should continue to receive PedvaxHIB. All children born on or after that date should receive PedvaxHIB.

**FIGURE 7**

**REPORTS OF SELECTED INFECTIOUS DISEASES, NSW, JANUARY 1995 TO APRIL 2000, BY MONTH OF ONSET**

These are preliminary data: case counts in recent months may increase because of reporting delays

<b>NSW population</b>	
Male	50%
<5 yo	7%
Rural*	42%



\* For definition, see *NSW Public Health Bulletin*, April 2000

**TABLE 3** REPORTS OF NOTIFIABLE CONDITIONS RECEIVED IN APRIL 2000 BY AREA HEALTH SERVICES

Condition	Area Health Service (2000)																	Total		
	CSA	NSA	WSA	WEN	SWS	CCA	HUN	ILL	SES	NRA	MNC	NEA	MAC	MWA	FWA	GMA	SA	for Apr †	To date †	
<b>Blood-borne and sexually transmitted</b>																				
AIDS	2	-	-	-	-	-	1	-	1	1	-	-	-	-	-	-	-	5	53	
HIV infection*	-	-	-	-Reported every two months						-	-	-	-	-	-	-	-	-	-	90
Hepatitis B - acute viral*	-	1	-	1	1	-	-	-	1	-	-	-	-	-	-	-	1	7	28	
Hepatitis B - other*	1	26	56	5	-	3	5	4	41	1	3	2	1	-	4	3	4	159	1,295	
Hepatitis C - acute viral*	-	-	-	-	-	-	-	-	1	-	-	1	-	1	-	-	-	3	20	
Hepatitis C - other*	94	33	102	44	-	28	52	19	91	42	18	10	7	31	1	17	18	609	3,001	
Hepatitis D - unspecified*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Hepatitis, acute viral (not otherwise specified)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chancroid*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chlamydia (genital)*	-	11	20	9	-	1	13	21	42	13	9	7	5	2	4	2	2	162	856	
Gonorrhoea*	9	5	2	1	1	-	3	1	39	-	1	2	-	1	-	-	1	66	381	
Syphilis	15	2	1	-	-	-	-	2	18	-	-	-	-	1	1	-	-	41	187	
<b>Vector-borne</b>																				
Arboviral infection (BFV)*	-	-	-	-	-	-	-	3	-	2	6	-	-	-	-	1	1	13	67	
Arboviral infection (RRV)*	1	-	3	-	-	-	17	3	1	2	31	3	4	7	10	17	2	101	269	
Arboviral infection (Other)*	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	3	15	
Malaria*	-	2	-	-	-	-	-	-	2	1	1	-	-	-	1	-	1	9	52	
<b>Zoonoses</b>																				
Brucellosis*	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	1	
Leptospirosis*	-	-	-	-	-	-	1	-	-	2	-	1	-	-	-	-	-	4	12	
Q fever*	-	-	-	-	-	-	1	-	-	1	-	-	1	1	-	-	-	4	39	
<b>Respiratory and other</b>																				
Blood lead level*	2	2	-	2	-	-	5	1	1	1	2	-	-	-	23	1	-	40	248	
Legionnaires' Longbeachae*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	2	
Legionnaires' Pneumophila*	1	1	3	-	-	-	-	-	-	-	1	-	-	-	-	-	-	6	9	
Legionnaires' (Other)*	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	1	
Leprosy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Meningococcal infection (invasive)	2	2	2	1	1	2	-	3	1	-	-	1	-	-	1	1	-	17	58	
Mycobacterial tuberculosis	4	1	5	1	-	1	-	-	4	-	3	-	-	-	-	-	-	20	144	
Mycobacteria other than TB	6	8	-	1	1	5	2	-	2	-	-	1	-	-	-	-	-	27	107	
<b>Vaccine-preventable</b>																				
Adverse event after immunisation	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	2	3	
H.influenzae b infection (invasive)*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
Measles	-	-	-	-	1	-	-	1	-	-	-	-	2	-	1	-	-	5	10	
Mumps*	1	1	1	-	1	-	-	1	5	-	-	-	-	-	-	-	-	10	16	
Pertussis	4	4	6	4	7	9	15	7	1	-	1	1	-	6	-	1	5	71	516	
Rubella*	-	-	1	-	-	-	-	-	2	-	-	-	-	-	-	-	-	3	39	
Tetanus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
<b>Faecal-oral</b>																				
Botulism	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cholera*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cryptosporidiosis*	1	-	-	-	-	-	1	-	3	4	2	-	-	1	-	3	-	15	51	
Giardiasis*	1	13	8	3	-	5	6	-	8	14	2	1	2	3	2	2	1	72	351	
Food borne illness (not otherwise specified)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62	
Gastroenteritis (in an institution)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	
Haemolytic uraemic syndrome	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	3	
Hepatitis A*	2	1	1	2	2	1	-	-	3	1	-	1	-	1	-	1	-	16	82	
Hepatitis E*	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	
Listeriosis*	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	5	
Salmonellosis (not otherwise specified)*	-	11	-	1	-	4	6	4	10	11	3	6	1	2	1	6	2	70	444	
Typhoid and paratyphoid*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	
Verotoxin producing Ecoli*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

\* lab-confirmed cases only

† includes cases with unknown postcode

CSA = Central Sydney Area  
NSA = Northern Sydney Area  
WSA = Western Sydney AreaWEN = Wentworth Area  
SWS = South Western Sydney Area  
CCA = Central Coast AreaHUN = Hunter Area  
ILL = Illawarra Area  
SES = South Eastern Sydney AreaNRA = Northern Rivers Area  
MNC = North Coast Area  
NEA = New England AreaMAC = Macquarie Area  
MWA = Mid Western Area  
FWA = Far West AreaGMA = Greater Murray Area  
SA = Southern Area

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