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EVEN BIGGER AND BETTER: *REPORT OF THE CHIEF HEALTH OFFICER 2002*

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Chief Health Officer

I am proud to announce the release of the fourth edition of the *Health of the people of New South Wales—Report of the Chief Health Officer* on 28 October. The Report is the biggest yet, weighing in at 368 pages and containing information on 223 health indicators.

I believe that it is also the best yet, reflecting the continuing development of the infrastructure for monitoring population health in NSW. Many components of this infrastructure are recognised as being at the 'leading edge' of such work, nationally. These include our population health datamart (the Health Outcomes Information and Statistical Toolkit, or HOIST), the NSW Health Survey Program, our training programs to build workforce capacity—including the NSW Public Health Officer Training Program and the NSW Biostatistical Officer Training Program—and of course, the *NSW Public Health Bulletin*.

Future editions of the Report will benefit from current developments through the NSW Program for Enhanced Population Health Infostructure (PEPHI), which has been funded through the National Health Development Fund. Products of PEPHI that are in or nearing production include: a web-based emergency department reporting system; a web-based distributed Geographic Information System (GIS); a web-based application for analysing mortality data (using open-source software); and a metadata database for survey management.

The 2002 edition of the *Report of the Chief Health Officer* also reflects current areas of focus for public health in NSW. It presents new information on trends in socioeconomic inequalities in health over time, and on the range of health inequalities associated with living in rural or remote areas. Also, it includes expanded information on chronic diseases and their determinants, environmental health, and the health of NSW children.

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Don't forget to take a look at the interactive web version of the Report. Already, this contains more, and newer, information than the hard copy version, and it will be continually updated.

Finally, I congratulate everyone who contributed to the 2002 edition of the Report. I confidently predict that it will prove not only the biggest and best but also the most influential ever, through its support for evidence-based public health planning and practice.

Printed copies of the *Health of the people of New South Wales—Report of the Chief Health Officer* can be obtained from the Better Health Centre by telephone at (02) 9816 0452 or by facsimile at (02) 9816 0492. An electronic version, with downloaded data tables, is being continually updated and can be viewed at **www.health.nsw.gov.au/public-health/chorep**.

TRENDS IN POTENTIALLY AVOIDABLE MORTALITY IN NSW

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In Australia, mortality rates, prevalence of health risk behaviours (such as smoking and inadequate physical activity), and prevalence of risk factors (such as obesity), have been shown to be significantly higher in lower socioeconomic (SES) groups than in higher SES groups.[1] Similar inequalities in health have also been shown to exist in NSW.[2]

Avoidable mortality refers to deaths that *potentially* could be avoided either through prevention or through early medical intervention.[3] To assess the potential effect of health interventions, it is useful to classify each condition that causes avoidable death according to the level of intervention (primary, secondary, and tertiary) to which that condition is responsive. Primary avoidable mortality (PAM) consists of conditions that are preventable by change in individual behaviour or through population-level interventions including healthy public policy that, for example, may result in introducing laws to reduce exposure to hazards, such as tobacco smoke.[3]

The study of inequalities in PAM allows an analysis of the effectiveness of primary level health interventions in different socioeconomic status groups and highlights conditions for which primary prevention approaches can potentially reduce inequalities. This article describes trends and differences in PAM by sex and socioeconomic status for some of the diseases and injuries that are amenable to primary prevention.

METHODS

Our analysis is based on death data for NSW for the period 1980–2000. All 'premature' deaths—that is, those that occur before 75 years of age—were classified into avoidable and unavoidable deaths, using the 9th revision of the International Classification of Diseases for deaths registered before 1999, and the 10th revision of the International Classification of Diseases for deaths registered from 1999 onwards.[4] Avoidable deaths were subcategorised using the algorithm of Tobias and Jackson,[3] which divides all cases of each potentially avoidable condition into three groups. Cases are allocated to each group based on the evidence for the proportion that could potentially be prevented using primary, secondary, or tertiary interventions. The proportions for lung cancer are 0.95, 0 and 0.05 (for primary, secondary, and tertiary, respectively); for road traffic injury, they are 0.6, 0 and 0.4 respectively; and for ischaemic heart disease, they are 0.5, 0.25 and 0.25 respectively.

For example, for every 100 potentially avoidable deaths from ischaemic heart disease—where the proportions are 0.5, 0.25 and 0.25 respectively—it is estimated that 50 deaths could be avoided through primary interventions (for example, smoking cessation, improved diet, and increased physical activity); 25 deaths could be avoided through secondary interventions (lowering of cholesterol and blood pressure for those with early stage disease); and 25 deaths could be avoided through tertiary interventions (for example, angioplasties for those who have had heart attacks).

Socioeconomic (SES) groups were constructed using the Index of Relative Socioeconomic Disadvantage (IRSD), which is produced by the Australian Bureau of Statistics from census data.[5] Each local government area in NSW was assigned an IRSD according to the socioeconomic characteristics of the area's residents such as income, occupation, education, non-English speaking background, and indigenous status.

Using the IRSD scores for the local government areas, the NSW population was split into three groups: the 'lowest' SES group, or the most disadvantaged 20 per cent of the population; the 'highest' SES group, or the least

disadvantaged 20 per cent of the population; and the balance of the population, consisting of the middle 60 per cent of the population. IRSD scores from the 1986 census were used for the years 1980–1988; scores from the 1991 census were used for the years 1989–1993; and scores from the 1996 census were used for the years 1994–2000.

For each socioeconomic group and potentially avoidable condition, age-standardised rates were calculated for the period 1980–2000, using the Australian population as at 30 June 1991 as the reference population. Additionally, Poisson regression models were used to assess changes in death rates by SES group,[6] after adjusting for the effect of age.

RESULTS

Rates of PAM have decreased steeply for the three SES groups and for both sexes between 1980 and 2000 (Figure 1), with the rates decreasing by 51 per cent in males and 44 per cent in females between 1980 and 2000. However, the decrease has been more rapid for the highest SES group, which experienced a decrease of 60 per cent in PAM in males between 1980 and 2000, compared with the lowest and middle SES groups, which both experienced a decrease of about 50 per cent. For females, a similar pattern was observed, although the decrease was not as great, with decreases of 51 per cent (the highest SES), 42 per cent (the middle SES) and 45 per cent (the lowest SES).

The relative 'gap' in PAM between SES groups can be expressed as the percentage by which the PAM rate is higher in one SES group (for example, the lowest SES group) than in another SES group (for example, the highest SES group). The relative gap between groups was calculated using fitted values from Poisson regression models to enable identification of trends. Figure 2 shows that there was an increased relative gap between the highest SES group and the two lower SES groups between 1980 and 2000 for males and females. By contrast, the relative gap between the lowest and middle decreased slightly for males and remained almost constant for females between 1980 and 2000.

Ischaemic heart disease was the biggest contributor to PAM for all years between 1980 and 2000, accounting for 39 per cent of PAM in 1980 and 25 per cent of PAM in 2000. Rates of ischaemic heart disease decreased very steeply for males in all SES groups (see Figure 3). Rates also decreased for females in all SES groups, although the decrease was not as rapid as that observed for males (Figure 3). The relative gap between the highest and the lowest SES group, and between the highest and the middle SES group, also increased with time for both males and females (Figure 4). The gap between the middle and lowest SES groups remained almost constant between 1980 and 2000 for both males and females.

Lung cancer was the second biggest contributor to PAM for all years between 1980 and 2000, accounting for 21 per cent of PAM in 1980 and 35 per cent of PAM in 2000. Between 1980 and 2000, PAM for lung cancer decreased for males in all SES groups but increased slightly for females in the lowest and middle SES groups (Figure 5). The relative gap between the highest and the lowest SES group, and between the highest and the middle SES group, also increased with time for both males and females (Figure 6). The gap between the middle and lowest SES groups was almost constant between 1980 and 2000 for males and females.

Road traffic accidents were the third largest contributor to PAM in 1980, when they accounted for 15 per cent of primary avoidable deaths, and the fourth largest contributor to PAM in 2000, when they accounted for six per cent of primary avoidable deaths. PAM due to road traffic accidents decreased in all SES groups between 1980 and 2000, especially in males (Figure 7). Again, the relative gap between the highest and the lowest SES group, and between the highest and the middle SES group, also increased with time for both males and females (Figure 8). The gap between the lowest and middle SES groups increased over time for both males and females (Figure 8).

DISCUSSION

During the last two decades, there has been increasing interest in the differences in health experienced by different socioeconomic groups. Socioeconomic health inequalities have become the focus of health sector efforts in many countries around the world. Socioeconomic inequalities in health are not only evident in mortality rates; they are evident at every stage of the life course.[7]

In trying to explain these socioeconomic health inequalities, it has become clear that social, physical, economic, and environmental factors are the most fundamental determinants of health. Government policies and initiatives that address education, housing, and employment opportunities, are likely to have a significant influence on these factors.

Evidence suggests that some of the risk factors for primary avoidable conditions are more prevalent in the lower SES groups than in the highest SES groups. For example, tobacco smoking, which is a risk factor for ischaemic heart disease and lung cancer, was more prevalent in the lower SES groups in NSW in 1994 and 1997–1998 than in the highest SES group.[7,8] National data show that between 1980 and 1995 the prevalence of smoking among males decreased for all SES groups,[8,9,10,11,12] but the smallest decrease occurred in the lowest SES group (defined as lower blue collar workers). Overweight and obesity, which are risk factors for ischaemic heart disease, were higher in the lower SES groups than the highest in 1994 and in 1997–1998.[7,13] Excessive alcohol consumption (as measured by 'Heavy drinking days'), a risk factor for road

traffic accidents, was significantly higher in the lowest SES group (39.5 per cent of those who drink occasionally or regularly) than in the highest SES group (32.8 per cent) in NSW in 1997–1998.[13]

As described in this article, the gradients in PAM that are seen with socioeconomic status also suggest that primary prevention strategies are much more effective in the highest SES group than in the middle and lowest SES groups. There is also international evidence to suggest that this is the case.[7] This might be because people from lower SES groups have less access to preventive health services, because health promotion messages might be less appropriate to these groups and because lower SES groups face greater impediments that hinder behavioural change.[3,7] Increasingly, health promotion messages are being designed to be more relevant to lower SES groups and culturally and linguistically diverse communities.[16] Over time, this should lead to a greater decrease in PAM in the lower SES groups.

It is also of interest that, in 2000, rates of PAM are only slightly higher—six per cent higher for males and five per cent higher for females—in the lowest SES group than in the middle SES group, and that the relative gap between these groups has decreased slightly for males and has been almost constant for females between 1980 and 2000 for PAM. The exception to this is road traffic accidents, where the gap between the lowest and middle SES groups increased between 1980 and 2000. This may be due to an overrepresentation in the lower SES group of people from rural areas, where rates of road traffic accidents are significantly higher.[4]

CONCLUSION

To date, the call to reduce socioeconomic inequalities in health has mainly resulted in interventions targeted at the lowest SES group. PAM data and other health status[4] data indicate that in many cases the greatest gap is between the highest SES group and the rest of the population (lowest and middle SES groups). This raises a number of issues for health policy development:

- the need to continue to target the lowest SES group to maintain its rate of improvement in PAM in the future;
- the need to develop programs that are aimed at reducing the gap between the rest of the population and the highest SES group.

The biggest gains in health across the population will be in improving health outcomes for both the middle and lowest SES groups. This analysis suggests that interventions that target smoking, other risk factors for cardiovascular disease, and road traffic accidents in these groups are likely to have the biggest impact on reducing inequalities in PAM.

Inter-sectoral action is required to identify and address the determinants of health inequalities.

In NSW, a Health and Equity Statement has been developed in an attempt to reduce health inequalities through engaging the health sector, the community and other government and non-government organisations.[15]

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FIGURE 1

PRIMARY AVOIDABLE MORTALITY, NSW, 1980–2000

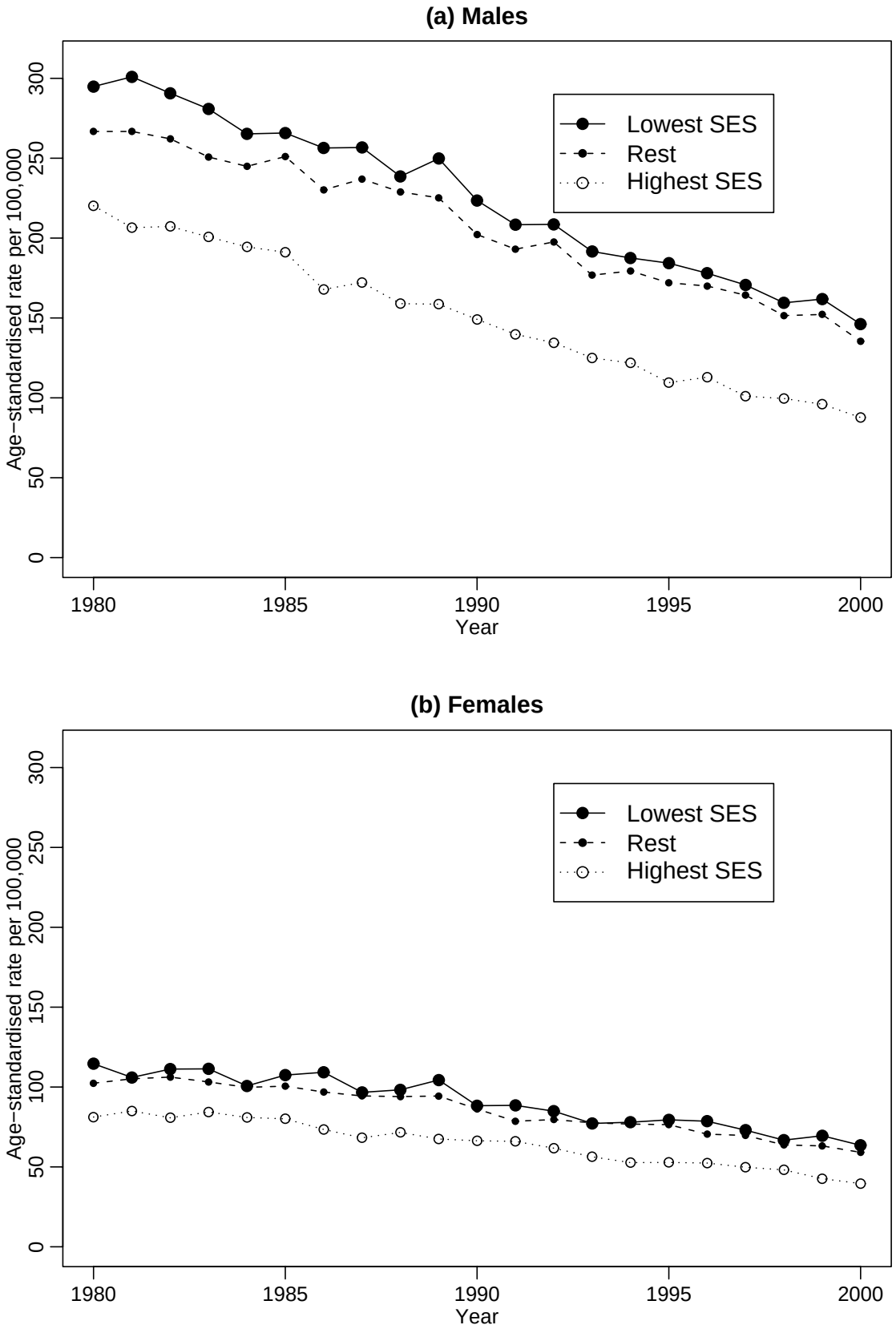


FIGURE 2

GAPS IN PRIMARY AVOIDABLE MORTALITY, NSW, 1980–2000

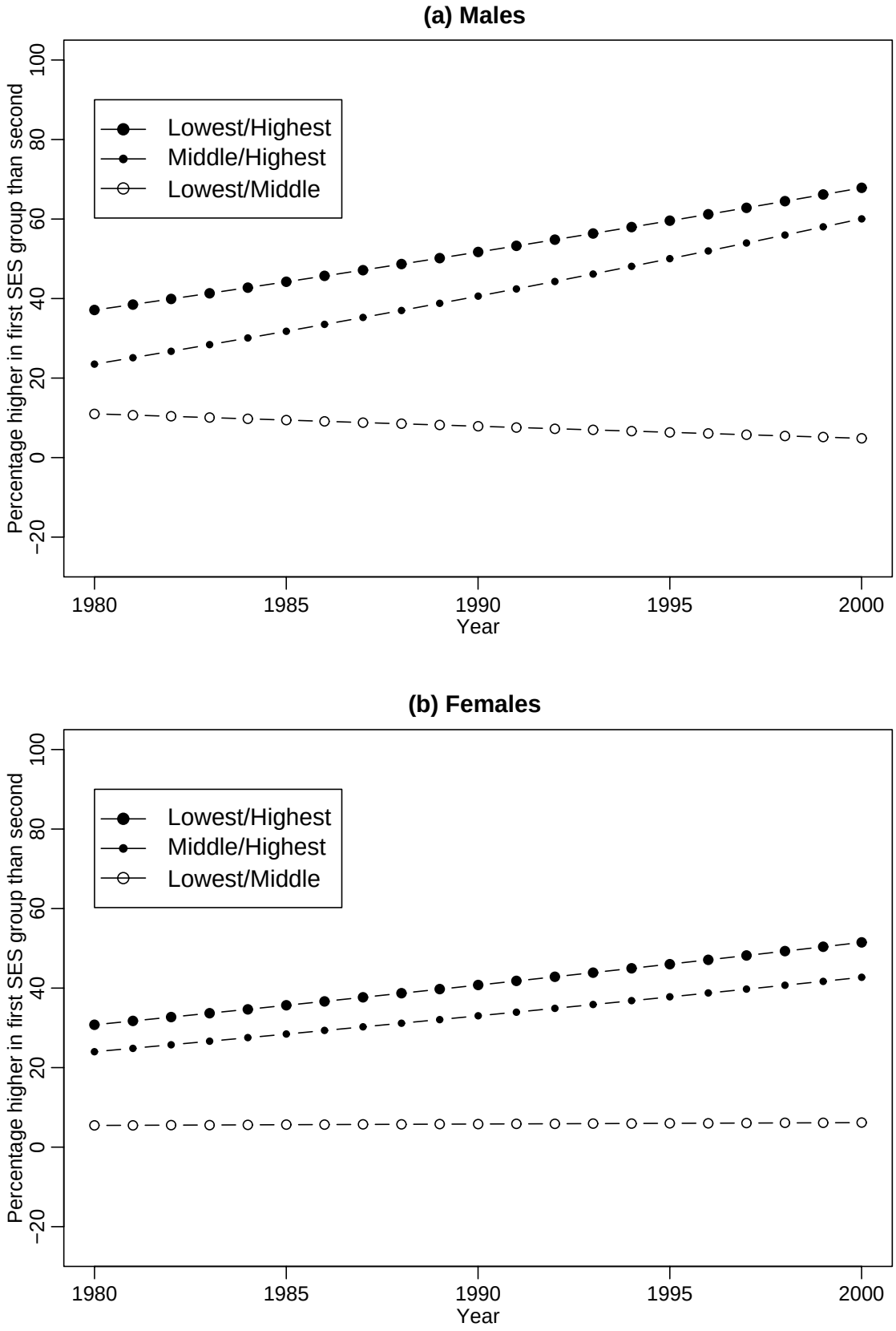


FIGURE 3

PRIMARY AVOIDABLE MORTALITY DUE TO HEART DISEASE, NSW, 1980–2000

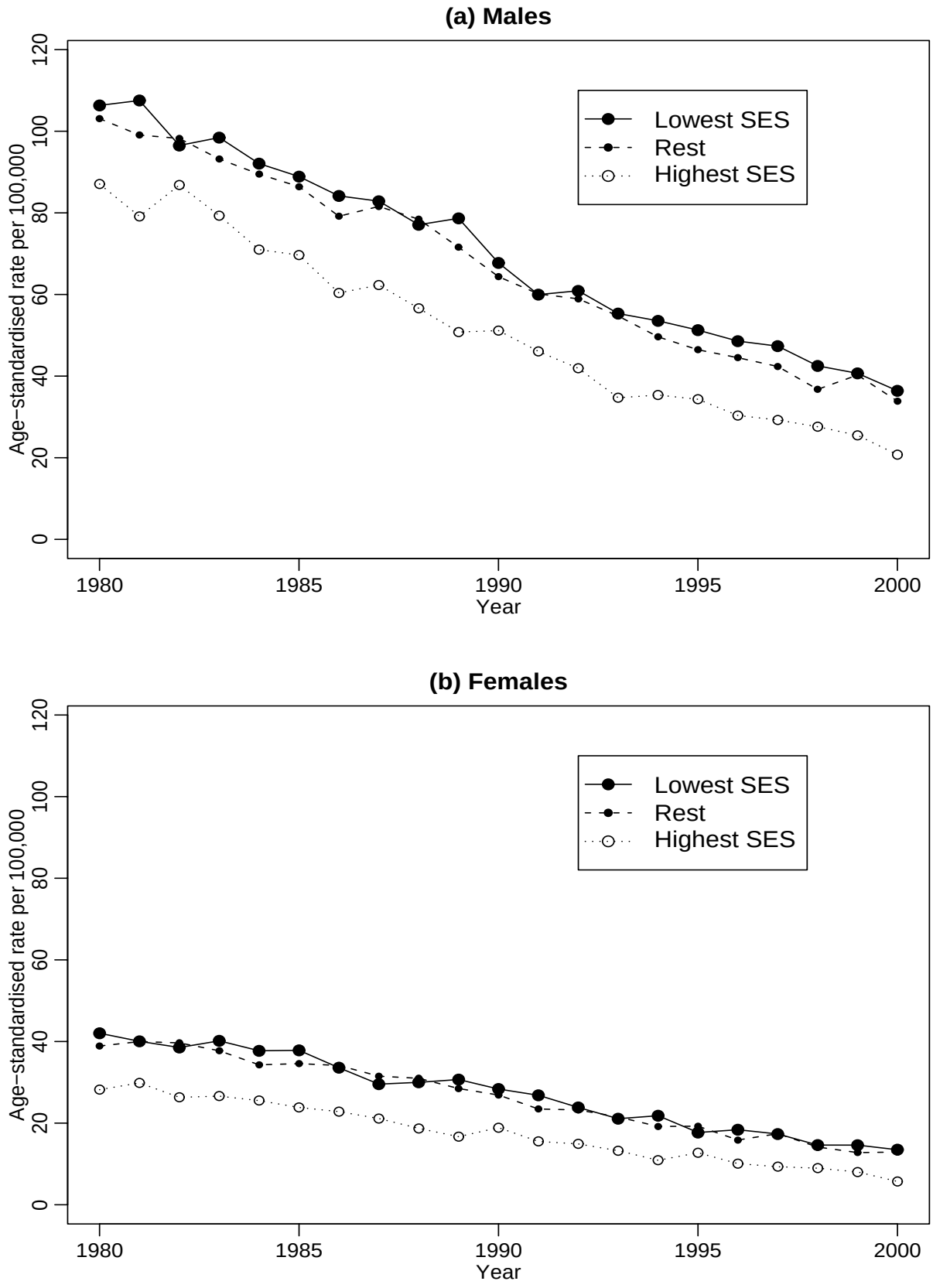


FIGURE 4

GAPS IN PRIMARY AVOIDABLE MORTALITY DUE TO HEART DISEASE, NSW, 1980–2000

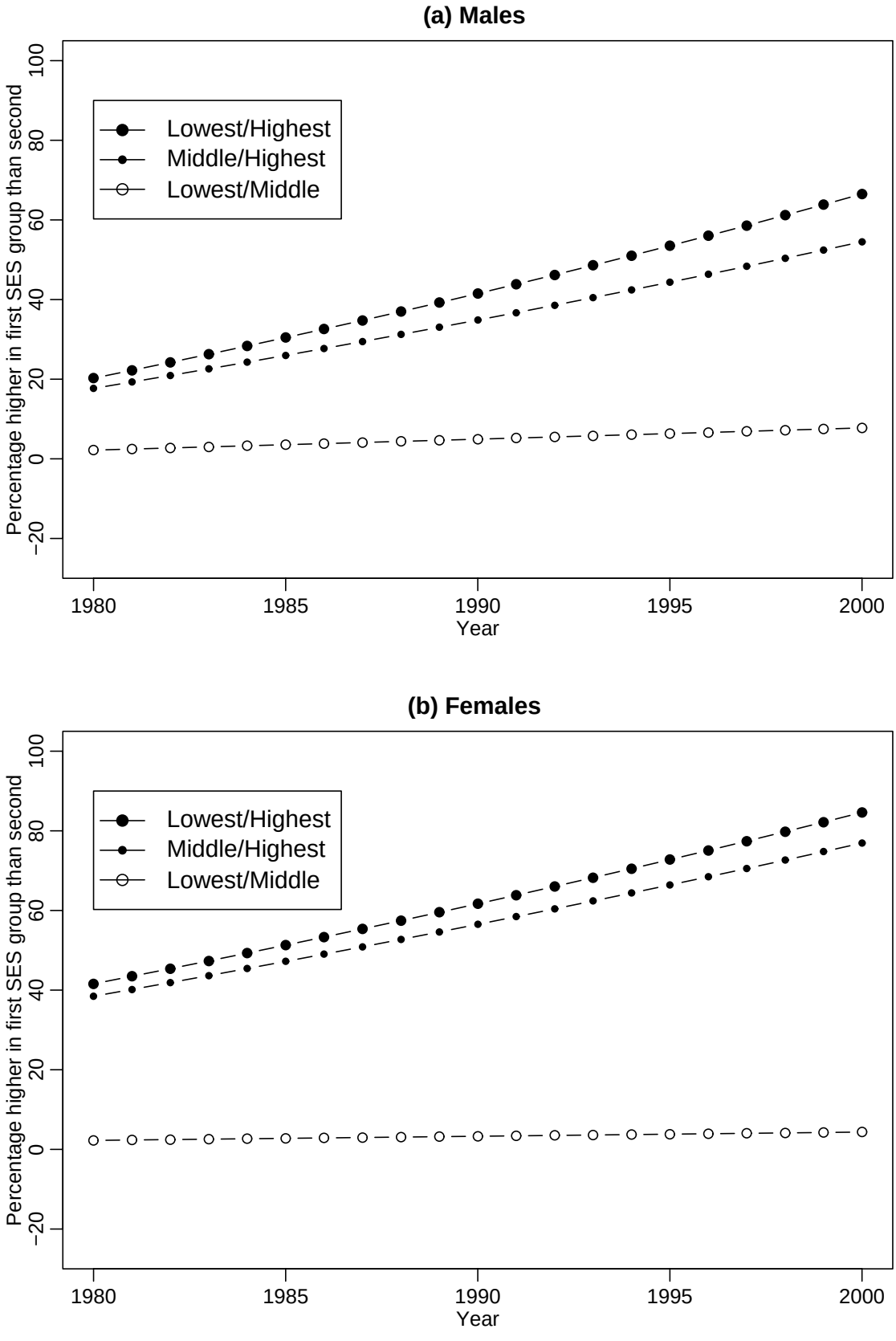


FIGURE 5

PRIMARY AVOIDABLE MORTALITY DUE TO LUNG CANCER, NSW, 1980–2000

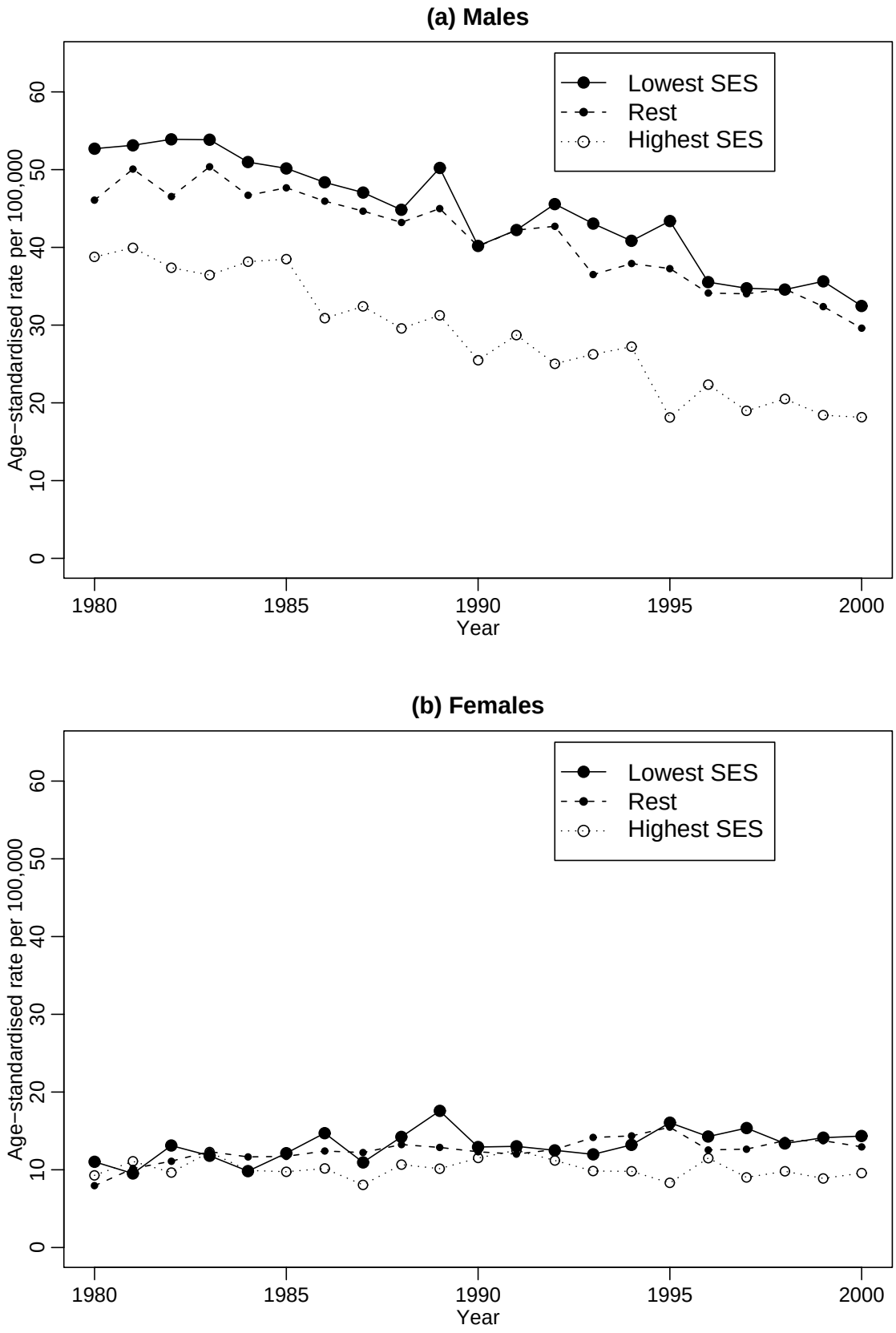


FIGURE 6

GAPS IN PRIMARY AVOIDABLE MORTALITY DUE TO LUNG CANCER, NSW, 1980–2000

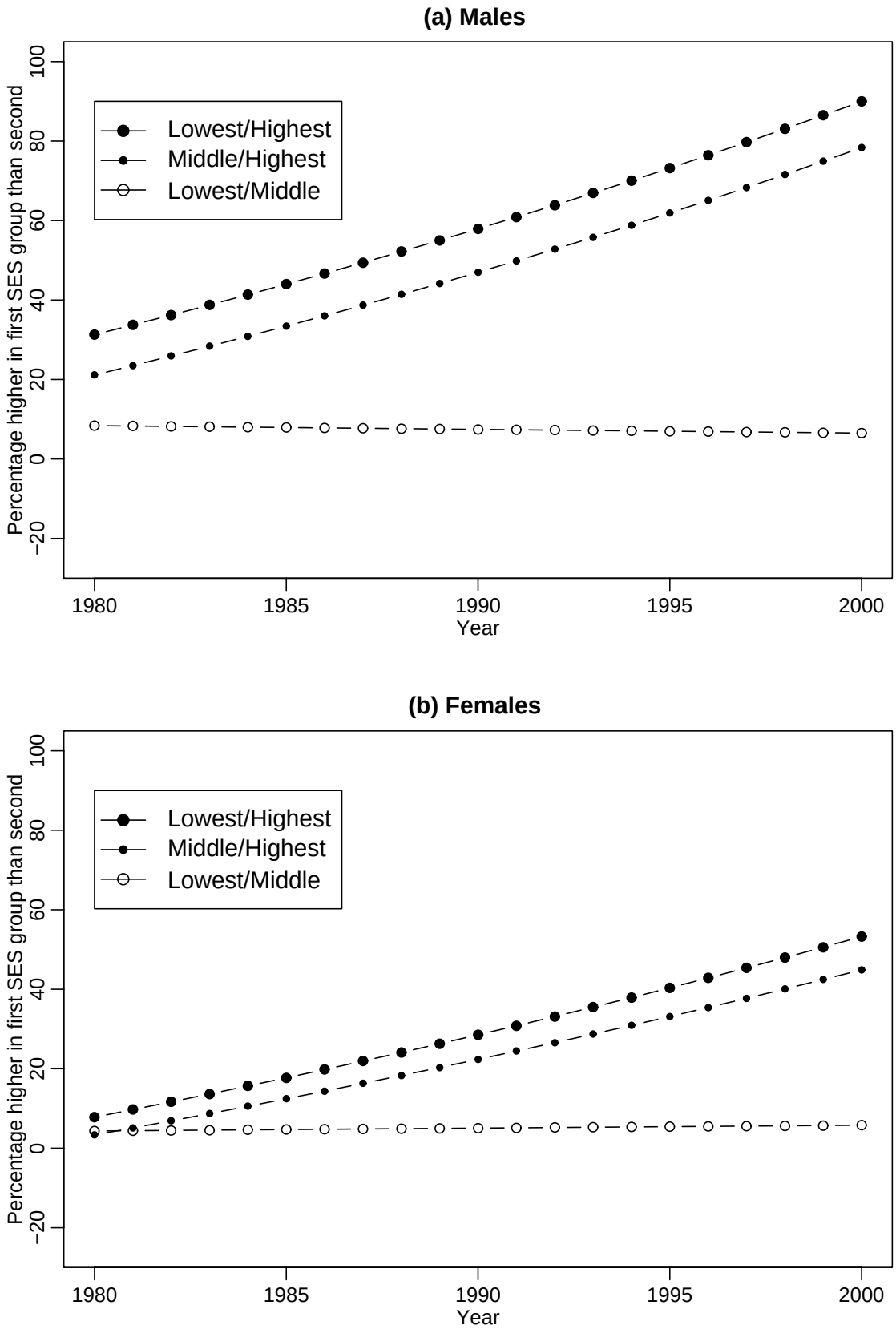
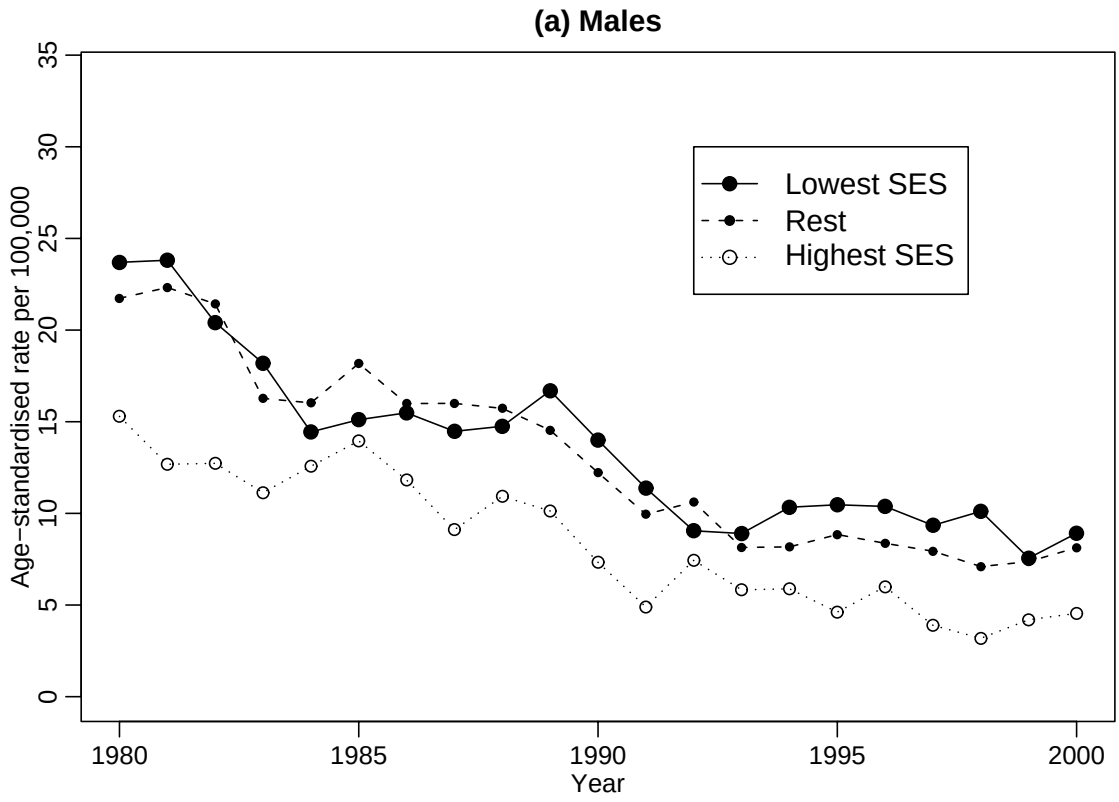


FIGURE 7

PRIMARY AVOIDABLE MORTALITY DUE TO ROAD TRAFFIC ACCIDENTS, NSW, 1980–2000



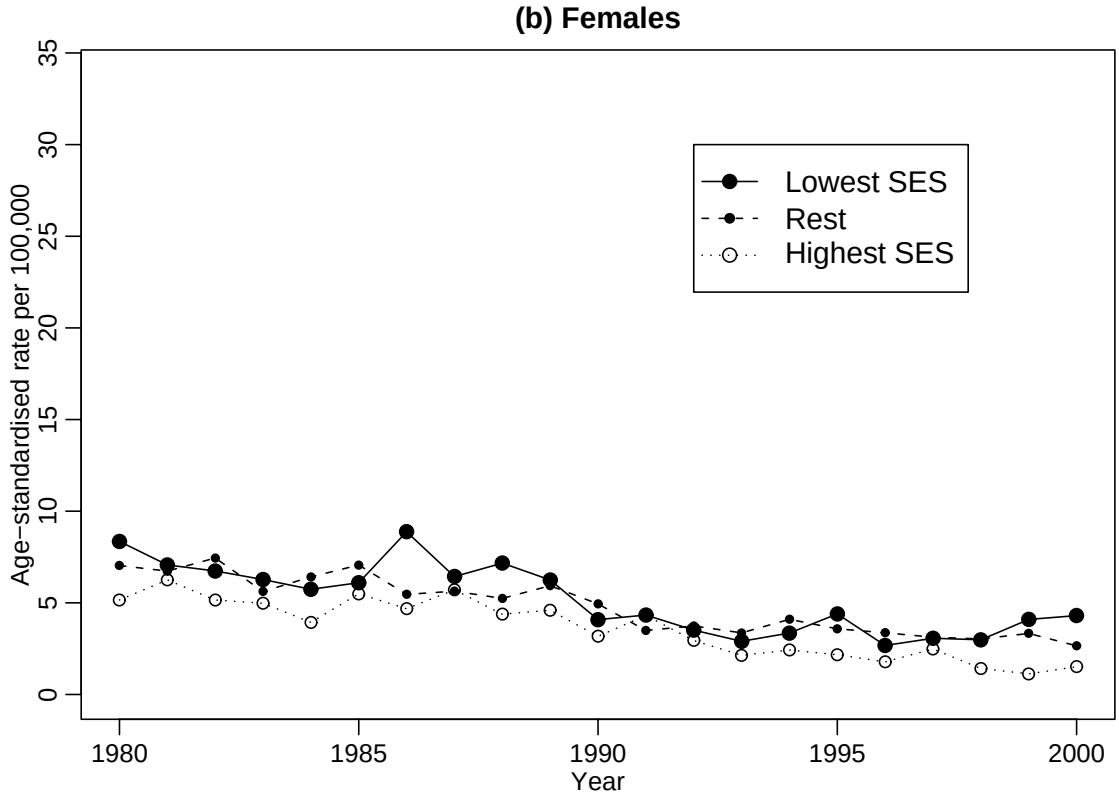
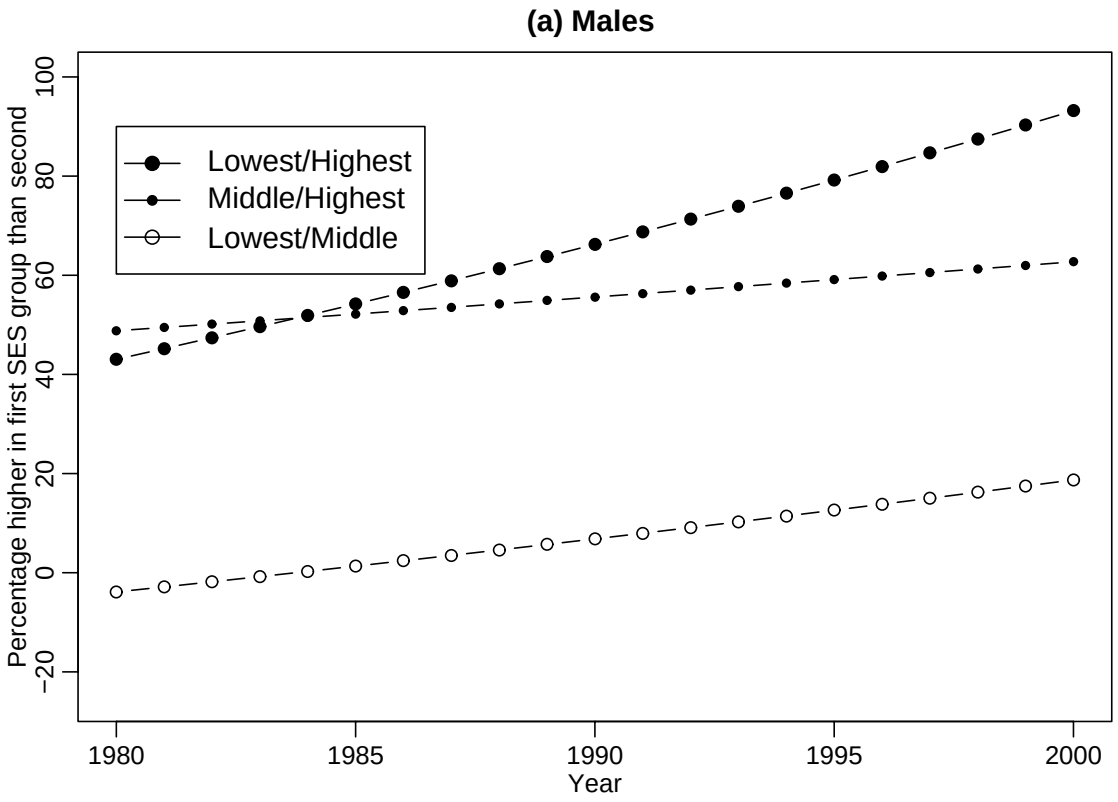
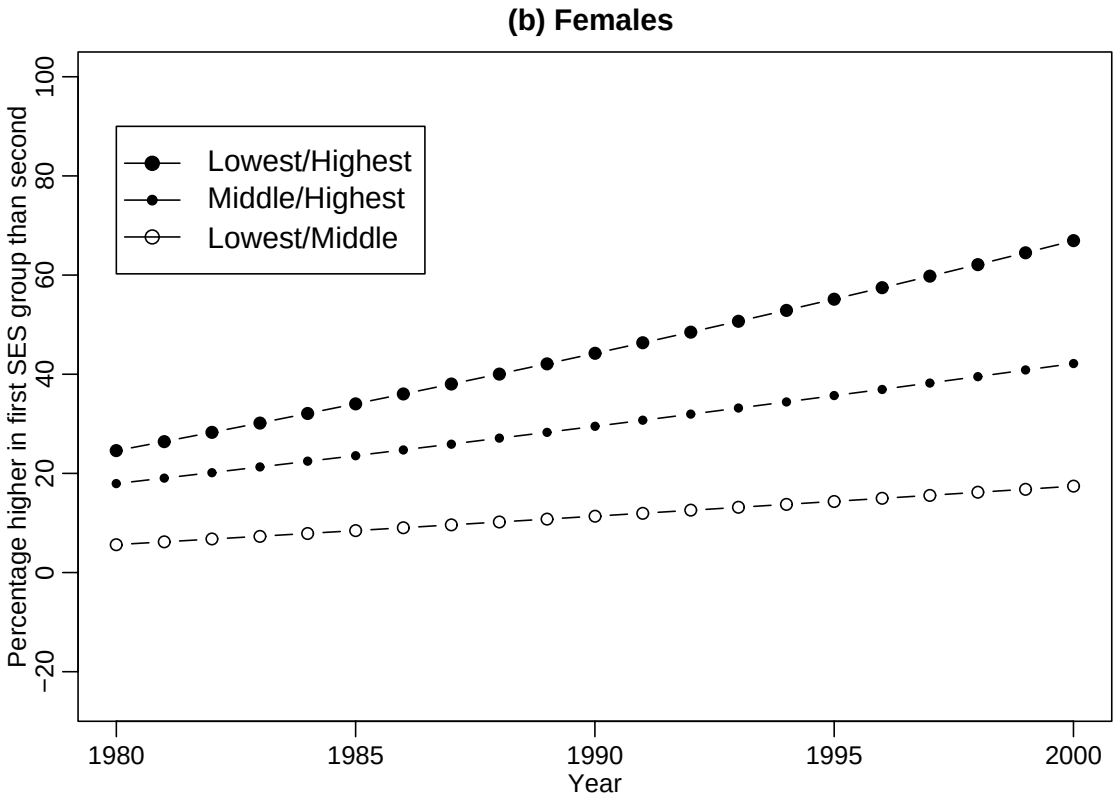


FIGURE 8

GAPS IN PRIMARY AVOIDABLE MORTALITY DUE TO ROAD TRAFFIC ACCIDENTS, NSW, 1980–2000





THE MENTAL HEALTH OUTCOMES AND ASSESSMENT TOOLS TRAINING PROJECT: CREATING THE FOUNDATION FOR IMPROVED QUALITY OF CARE

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The NSW Mental Health Outcomes and Assessment Tools Training Project (MH-OAT) is a collaborative and consumer-centred project that aims to strengthen the assessment skills of the mental health care workforce. MH-OAT does this through training that supports the introduction of a process of standard documentation of clinical practice along with measures of outcomes and potential 'casemix' (a method of describing the different types of patients treated by the health system, which recognises that different patients require different levels of resources). This article describes the rationale for MH-OAT, its implementation, and some of the issues identified during implementation.

BACKGROUND

The *Caring for Mental Health* framework (1998) outlined the strategic direction for mental health services in New South Wales.[1] This framework included:

- standard documentation for health assessment and triage activities;
- measures of health outcomes;
- national standards for mental health services.

In parallel with this state framework, the introduction of standard measures of outcomes and potential casemix has been agreed to by all states and territories, as part of the information development strategy of the Second National Mental Health Plan.[2,3]

MH-OAT was developed to enable the goals of the state framework and of the national strategy to be achieved. MH-OAT has three core components, all of which are collaborative and consumer-centred. The first, a training component, is aimed at strengthening the assessment skills of the mental health workforce. The second, standard modules of clinical documentation, is aimed at improving the quality of health assessment and care of mental health clients. Third, is the collection of standard measures of outcomes and casemix.

IMPLEMENTATION OF MH-OAT

The implementation of MH-OAT involved:

- a planning framework;
- a communication strategy;
- an education and training strategy;
- a data capture and reporting system;
- ongoing support.

Planning framework

To facilitate the implementation of MH-OAT, a steering committee was established, a coordinator appointed, and the following resources were developed:

- standard modules of clinical documentation for triage assessment, admission, review, care, and discharge from mental health care;
- a protocol for data collection that identifies the outcome measures to be collected at various points in the care of each consumer of mental health services.

Funding was secured to support the release of staff for training, and for the appointment of a coordinator to support the implementation process.

Communication strategy

It was essential to communicate the intention and purpose of MH-OAT to the mental health care workforce. Consequently, as a first step, awareness-raising workshops were held with managers in the area mental health services and with senior clinicians in mental health. These workshops outlined the local implementation process, which included the development of a business case, the appointment of a local MH-OAT coordinator in each area, and the creation of local implementation committees with representation from stakeholders.

The second step was to initiate consultation with stakeholders. As important stakeholders are consumers of mental health care, a Consumer Consultation Group was established. Other stakeholders included representatives from the Royal Australian and New Zealand College of Psychiatrists, the Australian and New Zealand College of Mental Health Nurses, the Divisions of General Practice, the NSW Nurses Association, Carers Groups, multicultural groups, tertiary institutions, and Aboriginal and Torres Straight Islander groups. This consultation process is ongoing.

Information was disseminated through regular updates by newsletters, and through the intranet and internet. The MH-OAT website allows both consumers and the mental health workforce to download all material related to MH-OAT from training to progress reports on implementation.

Education strategy

It was estimated that the equivalent of approximately 4700 full-time clinical mental health staff would require training. Due to the large number, a 'Train the Trainer' model was selected and training materials were developed to support the facilitation of training small groups within

the area health services. In total, 14 'Train the Trainer' workshops were held, and the participants in those workshops have now become trainers and resource people within the area health services.

The aim was that each clinician receive eight hours of training to support the clinical processes and documentation of standard modules for mental health triage assessment, care planning, and so forth; and four hours of training in the standard measures of health outcomes. As part of this training, each mental health clinician was required to observe an assessment and a case review, using the standard documentation and outcome measures.

Data capture and reporting system

A computer application supports the collection, storage, extraction, analysis, reporting, and feedback of the de-identified data on outcomes and casemix. Because the NSW Health strategic solution to the collection of data in the community, Community Health Information Management Enterprise (CHIME), was not available, an interim Access application was developed. This interim system, Service Contact Information–Mental Health Outcomes and Assessment Training (SCI-MH-OAT) was developed as the basis of recording and to provide feedback to clinicians.

Ongoing support

To ensure that MH-OAT continues to be implemented:

- coordinator positions have been funded at the local area level;
- support visits are being made to local staff in the area mental health services;
- training has been linked to ongoing staff orientation and university curricula;
- collaboration is occurring with the collection of a minimum data set, to both improve data collection and to monitor the progress of implementation.

ISSUES IDENTIFIED DURING IMPLEMENTATION

A number of issues were identified during the initial phases of implementation:

- the communication and reinforcement of core messages is essential. For example, when standard documentation is completed, this should not be seen as a structured interview with a client; instead, it should support the clinical process. The reinforcement of this message has been achieved through the development of a pamphlet for staff;
- the initial clinical documentation was too onerous. Initial feedback suggests duplication of information collection within the documents. The modules will be adapted in 2003;
- the level of provision of information technology in the area health services is being further developed;
- the computer literacy of staff is variable and additional training is required;
- concerns about the validity and reliability of the selected standard measures. The standard measures of outcomes and casemix used as part of the MH-OAT initiative are seen as a first step in the development of a culture of systematic outcome monitoring. To this end, it is acknowledged that the utility of the standard measures will require review and additional measures for specific purposes will need to be identified.

CONCLUSION

To date, about 95 per cent of mental health staff have been trained and about 60 per cent of area mental health services have commenced data collection. The implementation of MH-OAT has involved a significant change in work practice for staff and, at present, there are different levels of acceptance. However, there is a universal acceptance of the principles underpinning MH-OAT. During consultation, it was clear that the mental health workforce wants both better mental health assessment and documentation for their clients, and that they support the development of the routine collection of health outcomes and casemix information to encourage a culture of evidence-based practice. How these principles are achieved will be part of the continued development of MH-OAT.

Further information about MH-OAT can be obtained from the NSW Department of Health website at **www.health.nsw.gov.au/policy/cmh/mhoat**, or by email from **mhoat@doh.health.nsw.gov.au**.

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MONITORING CHILD HEALTH IN NSW: THE *NEW SOUTH WALES CHILD HEALTH SURVEY 2001* AND BEYOND

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This article describes the recently-released report of the *New South Wales Child Health Survey 2001*,[1] which provides the first ever snapshot of the health and wellbeing of children aged 0–12 years in NSW. The survey provides a wealth of information to support planning, implementation, and evaluation of health services and programs for children and their families in NSW. The report of the survey, the survey dataset, and the Continuous Health Survey Program (HSP), are all part of the NSW Department of Health's commitment to monitor child health and to address many of the gaps in child health information in NSW.[2,3] The survey report has been produced as a *NSW Public Health Bulletin* supplement (Volume 13, Number S-3). The survey dataset is available for more in-depth analysis.

ABOUT THE *NEW SOUTH WALES CHILD HEALTH SURVEY 2001*

In 2001, the NSW Department of Health, in conjunction with the area health services and the NSW Commission for Children and Young People, conducted a survey of the health of children, using Computer Assisted Telephone Interviewing (CATI). The aim of the survey was to provide baseline data on the health and wellbeing of children aged 0–12 years in NSW, and to support the implementation of the NSW Government's *Families First* initiative and other child health initiatives.[4]

The survey content was developed through consultation with the area health services, relevant government agencies, and a range of experts.[5] Table 1 lists the topics covered by the questionnaire, which was translated into Arabic, Chinese, and Vietnamese.

Interviews were carried out between March and September 2001. The target sample for the survey comprised 500 children from each of the 17 area health services. Households were sampled using list-assisted random digit dialling. One eligible child was randomly selected from each household and that child's main carer was interviewed. The overall response rate was 84.1 per cent. Most survey respondents (84.3 per cent) were mothers. Information was collected on a total of 9425 children.

KEY FINDINGS OF THE *NEW SOUTH WALES CHILD HEALTH SURVEY 2001*

The report of the survey provides descriptive information on the major issues covered by the survey, with breakdowns by child age and sex, area health service of residence, and other demographic factors where appropriate.

The survey results indicate that NSW families with children are reasonably well-connected through community and school networks, and that a high proportion of children aged three to five years are attending either pre-school, long day-care, or other formal care, as recommended in the *Families First* initiative for all children before they start school.[4]

The survey shows that although most women initially breastfeed, as recommended in the Australian dietary guidelines,[6] the majority of mothers cease to breastfeed between four and six months, and only a minority continue breastfeeding to 12 months as recommended.[6] Also, only slightly more that half of the parents were placing their infants to sleep on their backs, which is the recommended sleeping position to reduce the risk of Sudden Infant Death Syndrome.[7]

TABLE 1

TOPICS COVERED BY THE NEW SOUTH WALES CHILD HEALTH SURVEY 2001 QUESTIONNAIRE

The New South Wales Child health Survey questionnaire included questions on:

family functioning
social support
social capital
childhood activities
childcare
preschool and school attendance
smoking in pregnancy
smoking in the home
parental smoking messages
infant sleeping position
maternal folate
breastfeeding
nutrition
food security and hunger
sun protection
water safety
physical activity and inactivity
asthma
oral health
disability
emotional and behavioural problems
infant feeding and behavioural problems
physical health of toddlers
use of health services
immunisation
visits to general practitioners
personal health records
child and family health services
parental support services
health services received in the home (home visiting).

The survey also indicates that few children are meeting the recommended vegetable intake;[6] a considerable proportion of the recommended daily fruit intake is being met through consumption of fruit juices, rather than fresh fruit;[6] and the public health message about protecting children from ultraviolet radiation is mainly being applied to children under five years of age.[8]

The survey also shows that a high proportion of children under five years of age have never visited a dentist for a check-up, as recommended;[9] and that most children under five years of age have used child and family services but a minority are currently using the services. About half of the families with children under five years of age have received health services in the home (a 'home visit') by a health worker or volunteer to provide assistance or advice with the care of their child. This proportion is expected to increase with the introduction of universal home visiting through the *Families First* initiative.[4]

MONITORING CHILD HEALTH 2002 ONWARDS

Areas for ongoing monitoring of child health and wellbeing, as a component of the continuous Health Survey Program, include: asthma; breastfeeding; childcare, preschool and school attendance; use of personal health records; diabetes; environmental tobacco smoke; folate and pregnancy; family functioning and parental support; health status and disability; health service access, use and satisfaction; access and attitudes to childhood immunisation; injury; mental health; nutrition; oral health; physical activity; sight hearing and speech; social capital and sun protection. Child-specific reports will be produced every two years, with the first of these due out in 2005.

The *New South Wales Child Health Survey 2001* available either from the Better Health Centre by phone (02) 9816 0452, or from the Public Health website at **www.health.nsw.gov.au/public-health/phb/phb.html**. Requests to use the survey dataset for further analysis should be directed through the Chief Health Officer. Further information can be obtained from Margo Eyeson-Annan by email at **meyes@doh.health.nsw.gov.au** or by phone at (02) 9424 5759.

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RELEASE OF THE *NATIONAL HEALTH SURVEY: SUMMARY OF RESULTS, AUSTRALIA 2001*

The Australian Bureau of Statistics (ABS) has recently released the *National Health Survey: Summary of Results, Australia 2001*. This report summarises results from the National Health Survey conducted by the ABS from February to November 2001.

The health survey was designed to obtain national benchmarks on a wide range of health issues, and to enable changes in health to be monitored over time. Information was collected on:

- health status of the population;
- use of health services and other actions people had recently taken for their health;
- health-related aspects of lifestyle and other health risk factors.

Some of the findings of the survey include:

- more than 80 per cent of Australians aged 15 years and over considered their health to be good, very good, or excellent;
- almost 90 per cent of Australians assessed their health as being better or about the same as one year ago.

Compared with 1989–90, Australian adults showed improved results against the risk factors of smoking and exercise. However, levels of obesity and overweight continued to increase, and levels of alcohol use were unchanged. Among risk factors, main findings of the Survey were:

- *smoking*—approximately one in four adults (24 per cent) were smokers;
- *exercise*—although most exercised at relatively low levels, 70 per cent of adults reported that they had done some exercise for recreation, sport, or fitness in the two weeks prior to being surveyed;
- *overweight*—some 30 per cent of males and 38 per cent of females assessed themselves as being overweight. When body mass index was calculated from reported height and weight, 58 per cent of males and 42 per cent of females were classified as overweight or obese;
- *alcohol*—the majority of adults (71 per cent of males and 52 per cent of females) had consumed alcohol in the week prior to interview, but over 80 per cent had consumed alcohol at a level that would constitute a low risk to their health.

Other findings from the survey include:

- seventy-eight per cent of the population reported that they had at least one long-term medical condition, such as a respiratory condition, asthma, hay fever, a sight condition, arthritis, hearing loss, or high blood pressure;
- moderate or higher levels of psychological distress were recorded for 36 per cent of the population;
- some 13 per cent of males and 11 per cent of females reported sustaining an injury in the four weeks prior to interview; the most common being low falls (less than one metre) which accounted for one-third of recent injury;
- one in four (24 per cent) people had consulted a doctor in the two weeks prior to interview, and six per cent had consulted a dentist;
- approximately 14 per cent of employed people had taken one or more days off work in the two weeks before being surveyed, due to their own illness or to care for another who was ill;
- just over half (51 per cent) of people aged 15 years and over had private health insurance with 73 per cent of those having both hospital and ancillary cover;
- over three-quarters (78 per cent) of women reported having regular breast examinations of some kind, and 60 per cent have regular Pap tests;
- among females aged 18 to 24 years, 13 per cent were classified as being underweight, based on self-reported height and weight;
- one in five (19 per cent) of women aged 40 years and over reported that they were currently using hormone replacement therapy (HRT) prescribed by a doctor.

For more information about *National Health Survey: Summary of Results, Australia 2001* please visit the ABS website at **www.abs.gov.au** or phone the National Information and Referral Service on 1300 135 070 and quote Catalogue no. 4364.0.

FACT*SHEET*

C H L A M Y D I A

WHAT IS CHLAMYDIA?

Chlamydia is a sexually transmissible infection that can affect both men and women. It is caused by bacterium. Many people who are infected with the bacterium do not have symptoms of infection but can still transmit the bacterium. Chlamydia can affect the urethra (the urine passage), cervix (the neck of the womb), rectum and anus, throat, and eyes. Chlamydia infection can result in complications, but it is preventable.

HOW DO YOU CATCH CHLAMYDIA?

Chlamydia is spread by having sex with someone who has the infection.

The people who are most at risk of catching chlamydia are:

- young sexually active men and women;
- anyone who has recently changed sexual partners;
- anyone who has recently had another sexually transmitted infection.

HOW DO YOU KNOW IF YOU HAVE BEEN INFECTED WITH CHLAMYDIA?

Symptoms can occur within 2–14 days after infection. However, a person may have chlamydia for months, or even years, without knowing it.

In women

If a woman has chlamydia, she may notice:

- cramps or pain in the lower abdomen;
- menstrual changes (that is, changes with her periods);
- pain when passing urine;
- bleeding or pain during or after sex;
- a change in her vaginal discharge.

In men

If a man has chlamydia, he may notice:

- a discharge from the penis;
- pain when passing urine;
- swollen and sore testicles.

In men and women

Infection of the anus can occur but usually goes unnoticed. Occasionally it can cause anal pain or discharge.

IS THERE A TEST FOR CHLAMYDIA?

Chlamydia can be diagnosed by your local doctor or sexual health clinic. The doctor will take a swab from the urethra, cervix, or anus, or a urine sample. The swab or sample will then be tested for chlamydia at a laboratory.

WHAT IS THE TREATMENT FOR CHLAMYDIA?

Chlamydia is easily cured by antibiotics. It is important to see your doctor or sexual health clinic to get tested and treated. If the symptoms return, return to your doctor or sexual health clinic.

It is important that you finish the entire course of antibiotics, even after the symptoms resolve, as the chlamydia bacteria may not have been totally killed.

It is also important not to have sex for at least 7 days after the treatment begins, because the infection can still be spread.

ARE THERE ANY COMPLICATIONS?

Yes. If chlamydia is not properly treated it can cause serious complications.

In women complications include:

- pelvic inflammatory disease (PID). This is when the reproductive organs that are situated in the pelvis become inflamed;
- pelvic adhesions and chronic pelvic pain;
- infertility due to damage to the fallopian tubes (by scar tissue);
- ectopic pregnancy (when the pregnancy develops in the fallopian tubes instead of in the uterus).

In men complications include:

- recurrent urethritis;
- epididymitis (which involves the tube to the testes).

In women and men complications include:

- arthritis;
- conjunctivitis and uveitis (eye inflammation);
- proctitis (inflammation of the rectum).

DO SEXUAL PARTNERS NEED TREATMENT?

Yes. If you have chlamydia you should tell all your sexual partners over the last six months to see a doctor or your local sexual health clinic for testing and treatment.

HOW IS CHLAMYDIA PREVENTED?

Using a condom for vaginal or anal sex can prevent chlamydia and other sexually transmitted infections. Condom use is especially important among those who have more than one sexual partner.

For further information consult your doctor, or contact your local sexual health clinic, which can be found under 'S' in the business listings section of the White Pages.

November–December 2002

NSW HEALTH
Working as a Team

COMMUNICABLE DISEASES REPORT, NSW: OCTOBER–DECEMBER 2002

TRENDS: AUGUST TO OCTOBER

As winter drew to a close in NSW, the expected seasonal increase in notifications of patients diagnosed with **invasive pneumococcal disease** and **meningococcal disease** occurred (Table 8, Figure 1). In early spring the typical nadir in **arboviral infections**, **cryptosporidiosis**, and **legionnaires disease** appeared(Table 9, Figure 1). Notifications of communicable diseases received through to the end of October were in line with seasonal expectations (Table 10, Figure 1). In October, 14 cases of **Q fever** were reported among residents of the Macquarie Area Health Service (Table 10). Reports of other notifiable diseases remained largely stable.

Changes to regular figure of selected communicable diseases

This month we have enhanced Figure 1, which include more detail for some conditions. In the **arbovirus infections** chart, we distinguish between reports of Barmah Forest virus infection and Ross River virus infections, and show that Barmah Forest infection has become the dominant arbovirus reported in the last year in NSW. In the **legionnaires disease** chart, we distinguish between reports of *Legionella longbeachae* infections and *L. pneumophila* infections, and show that *L. longbeachae* infections, which tend to be associated with exposures to soils including potting mix, have predominated in recent months.

In the **measles** chart, we highlight cases that have been confirmed by laboratory tests (usually by IgM positive serology, or by viral isolation), which suggests—pleasingly—that laboratory confirmation is being sought for most cases. (This is vital as we move to eradicate measles, since many suspected cases are in fact due to other infections). In the **meningococcal disease** chart, we highlight cases due to serogroups B and C meningococcus. This is particularly important given the availability of vaccination against meningococcal serogroup C disease (but not serogroup B disease). Of all 1,279 cases of meningococcal disease notified from January 1997 to September 2002, 468 (37 per cent) were reported to be caused by serogroup B meningococcal bacteria, 312 (24 per cent) by serogroup C, 15 (one per cent) by serogroup W135, and nine (one per cent) by serogroup Y, but for 465 (36 per cent) no serogroup was identified. The ratio of disease caused by serogroup B to serogroup C meningococcal bacteria during the whole period was 1.5 to 1, but it has increased from 1:1 in 1997 to 2:1 so far in 2002.

MEASLES REPORT

Four cases of **measles** have been confirmed in recent months; all were either acquired overseas, or were linked to an overseas-acquired case. In July, an unimmunised child from northern NSW was diagnosed with laboratory-confirmed measles after holidaying in Queensland. On investigation, it was discovered that an infectious case of measles from Europe had holidayed in the same area of Queensland, and was the likely source of infection. The case's two unimmunised siblings subsequently developed measles. In August, a sailor from Southeastern Asia developed laboratory-confirmed measles within a few days of arriving in Sydney by air to join his ship. The South Eastern Sydney Public Health Unit assessed the risk to shipmates and dockworkers and recommended immunoglobulin to those who were susceptible. No further transmission was identified.

THE INFLUENZA SEASON OF 2002

The 2002 influenza season for NSW was moderate, compared with the milder 2001 season. Reports from general practitioners providing sentinel surveillance of 'influenza-like-illness' (ILI) peaked at the beginning of July, with a rate of 36.6 per 1,000 consultations. This is higher than in 2001, where the peak in ILIs occurred in the middle of August, with a rate of 27.7 per 1,000 consultations.

Reports of routine laboratory isolates showed two peaks in influenza activity. The first was in June, with 49 isolates of influenza B reported (a rate of 8.1 per 100 samples). The strain of influenza B identified was B/Hong Kong/330/2001-like. This strain was not included in the 2002 vaccine. There was a rapid decline in the number of positive influenza B specimens, and by the beginning of August only small numbers of influenza B were being reported by laboratories. The second peak occurred mid-August, with 149 isolates of influenza A (a rate of 14.2 per 100 samples). The A (H3N2) A/Moscow/10/909-like strain (54 per cent of samples) predominated and was included in the vaccine composition for the 2002 season. Laboratories reported that a total of 14,372 specimens were tested of which 1,025 tested positive for influenza A and 204 tested positive for influenza B.

Laboratory testing of specimens from patients of sentinel general practitioners participating in the Direct Virological Surveillance Program also showed a peak in influenza B in mid June, and a second peak of the season for influenza A in early August. Four hundred and sixty six samples were taken by participating general practitioners, of which 50 (11 per cent) were positive for influenza A and 33 (seven per cent) were positive for influenza B.

Many thanks to all who participated in the influenza surveillance throughout NSW—public laboratories, public health units, general practitioners, the Australian Sentinel Practice Research Network, and the World Health Organization Collaborating Centre for Influenza Melbourne.

The Influenza Surveillance Officer, Communicable Diseases Branch, NSW Department of Health, coordinates weekly influenza reports from May to September. Copies of the reports are available by contacting the Influenza Surveillance Officer on (02) 9391 9234.

MENINGOCOCCAL DISEASE

In spring there was substantial public interest in **meningococcal disease**. However, it is important to place the effect of this disease on the community in context. In terms of morbidity and mortality, meningococcal disease is uncommon. The crude rate in NSW (3.6 cases per 100,000 in 2001) is well below the rate of other diseases considered uncommon (for example: tuberculosis [6.4 cases per 100,000] and syphilis [7.7 cases per 100,000]). Fewer than 10 per cent of patients who contract the disease die as a result.

To the end of August 2002, 145 cases of meningococcal disease had been reported in NSW, compared with 177 for the same period in 2001. To the end of August 2002, 16 deaths from meningococcal disease were reported among NSW residents. In 2001, there were seven deaths, which were fewer than expected (for the previous three years, there was an average of 15 deaths per year). These data indicate that in 2002 the epidemiology of meningococcal disease in NSW has been much the same as in recent years. Year-to-year statistical fluctuations are to be expected whenever small numbers are concerned and cannot be interpreted as representing long-term trends.

Early treatment of suspected cases is vital in improving outcomes for patients with meningococcal disease. While meningococcal disease is uncommon, people should be aware of the symptoms and seek early medical advice if they occur. Early treatment of suspected cases includes the administration of intravenous antibiotics (benzylpenicillin or ceftriaxone).

Vaccines are available that protect against disease caused by serogroup C meningococcus bacteria, which causes about a third of all serogrouped cases and about a half of deaths from meningococcal disease in NSW. The vaccines do not protect against serogroup B meningococcus bacteria, which account for over half the serogrouped cases and about half the deaths in NSW.

All cases of meningococcal disease should be reported to the local public health unit who will identify close contacts who may be at risk; arrange for them to receive information about the disease; and, where necessary, arrange for them to be prescribed antibiotics designed to eliminate the bacteria from their throats.

A fact sheet on meningococcal disease is available through the NSW Department of Health's website at **www.health.nsw.gov.au** under Common Health Topics A–Z.

QUARTERLY REPORT: HIV–AIDS

HIV notifications

HIV notifications in New South Wales continue to decline in 2002. To the end of June 2002, the cumulative number of HIV diagnoses in NSW residents was 12,590 (Table 1). The number of HIV diagnoses for 2001 was 347, compared with 360 in 2000. The estimated number of persons living with HIV–AIDS in NSW was 9099 on 30 June 2002. An estimated 1592 were living with an AIDS defining illness.

Of the 165 new diagnoses of HIV between 1 January and 31 June 2002, 150 were in males (91 per cent), 12 were in females (seven per cent), two were transgender (one per cent), and one was of unknown sex (<1 per cent) (Table 1). All notified cases were aged 20 years or older at the time of diagnosis; 28 per cent were aged between 20–29 years; and 40 per cent were aged between 30–39 years. By risk factor, male-to-male sexual contact (with or without a history of injecting drug use) was reported for over two-thirds of cases; heterosexual contact, as the only risk factor, was reported for 16 per cent. Only one case (<1 per cent) reported injecting drug as the only risk factor. This compared with 19 cases reported in 2001 with injecting drug use as the only risk factor. In the first half of 2002, risk exposure remains undetermined or unknown for 14 per cent of cases notified.

AIDS diagnoses and AIDS deaths

The cumulative AIDS diagnoses and AIDS deaths to 30 June 2002 were 5083 and 3491 respectively (Table 2). The number of AIDS diagnoses and AIDS deaths continues

TABLE 1

NOTIFICATION OF HIV, AIDS AND AIDS DEATHS REPORTED BY YEAR, NSW, 1981–JUNE 2002

Year	HIV	AIDS	AIDS deaths
1981	1	1	1
1982	1	1	0
1983	1	3	1
1984	202	30	6
1985	981	91	46
1986	1106	162	108
1987	1636	251	143
1988	1141	321	139
1989	980	355	239
1990	813	425	326
1991	812	443	344
1992	705	432	330
1993	599	480	379
1994	506	552	423
1995	543	473	356
1996	459	368	272
1997	432	200	125
1998	413	173	69
1999	387	108	63
2000	360	119	71
2001	347	69	36
Jan–June 2002	165	26	14
Total	12590	5083	3491

TABLE 2

CHARACTERISTICS OF NSW RESIDENTS REPORTED WITH HIV INFECTION, AIDS, OR WHO HAVE DIED FROM AIDS, 1981 TO 31 JUNE 2002

Characteristic	All cases 1981–-2001						1991–2000						Jan–Dec 2001					
	HIV		AIDS		AIDS deaths		HIV		AIDS		AIDS deaths		HIV		AIDS		AIDS deaths	
	N	%	*N*	%	*N*	%	*N*	%	*N*	%	*N*	%	*N*	%	*N*	%	*N*	%
Gender																		
Female	667	5.3	207	4.1	120	3.4	32	9.2	6	8.7	3	8.3	12	7.3	0	0.0	0	0.0
Male	11634	92.4	4863	95.7	3362	96.3	308	88.8	63	91.3	33	91.7	150	90.9	25	96.2	14	100.0
Transgender	23	0.2	13	0.3	9	0.3	0	0.0	0	0.0	0	0.0	2	1.2	1	3.8	0	0.0
Not stated	266	2.1	0	0.0	0	0.0	7	2.0	0	0.0	0	0.0	1	0.6	0	0.0	0	0.0
Age																		
0–2	26	0.2	7	0.1	3	0.1	0	0.0	0	0.0	1	2.8	0	0.0	0	0.0	0	0.0
3–12	36	0.3	11	0.2	8	0.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
13–19	203	1.6	13	0.3	9	0.3	3	0.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
20–29	3970	31.5	757	14.9	539	15.4	84	24.2	7	10.1	4	11.1	46	27.9	1	3.8	1	7.1
30–39	4818	38.3	2113	41.6	1433	41.0	144	41.5	24	34.8	19	52.8	66	40.0	10	38.5	4	28.6
40–49	2386	19.0	1482	29.2	1019	29.2	73	21.0	22	31.9	8	22.2	36	21.8	10	38.5	6	42.9
50–59	766	6.1	528	10.4	350	10.0	21	6.1	12	17.4	2	5.6	10	6.1	5	19.2	3	21.4
60 +	269	2.1	172	3.4	130	3.7	9	2.6	4	5.8	2	5.6	4	2.4	0	0.0	0	0.0
Not reported	116	0.9	0	0.0	0	0.0	13	3.7	0	0.0	0	0.0	3	1.8	0	0.0	0	0.0
Exposure																		
Male homosexual–bisexual	7390	58.7	4124	81.1	2900	83.1	219	63.1	52	75.4	25	69.4	109	66.1	20	76.9	12	85.7
Male homosexual–bisexual and IDU	283	2.2	195	3.8	137	3.9	16	4.6	1	1.4	3	8.3	5	3.0	2	7.7	1	7.1
Injecting drug use	422	3.4	47	0.9	23	0.7	19	5.5	1	1.4	0	0.0	1	0.6	1	3.8	1	7.1
Heterosexual	904	7.2	364	7.2	190	5.4	57	16.4	9	13.0	4	11.1	27	16.4	3	11.5	0	0.0
Haemophilia–Coagulation	112	0.9	52	1.0	46	1.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Blood–Tissue recipient	116	0.9	105	2.1	91	2.6	0	0.0	0	0.0	1	2.8	0	0.0	0	0.0	0	0.0
Vertical	36	0.3	14	0.3	7	0.2	0	0.0	0	0.0	1	2.8	0	0.0	0	0.0	0	0.0
Undetermined	3272	26.0	0	0.0	0	0.0	13	3.7	0	0.0	0	0.0	6	3.6	0	0.0	0	0.0
Not stated	55	0.4	182	3.6	97	2.8	23	6.6	6	8.7	2	5.6	17	10.3	0	0.0	0	0.0
Residence																		
Greater Sydney *	7143	56.7	4253	83.7	2931	84.0	307	88.5	52	75.4	28	77.8	143	86.7	23	88.5	11	78.6
Rest of New South Wales	824	6.5	673	13.2	425	12.2	38	11.0	16	23.2	8	22.2	10	6.1	3	11.5	3	21.4
Unknown	4623	36.7	157	3.1	135	3.9	2	0.6	1	1.4	0	0.0	12	7.3	0	0.0	0	0.0
Total	12590	100	5083	100	3491	100	347	100	69	100	36	100	165	100	26	100	14	100

Source: NSW HIV–AIDS database, Communicable Diseases Branch, NSW Department of Health
Recent HIV data may contain duplicates
* Greater Sydney area health services include Central Sydney, North Sydney, Western Sydney, Wentworth, South West Sydney, and South East Sydney

to decline significantly, with only 26 and 14 cases diagnosed to June 2002 respectively.

The National Centre for HIV Epidemiological and Clinical Research recently performed a data linkage exercise, linking data from the National AIDS Register with National Death Index data for the period 1988–1997. Previously unnotified AIDS cases and AIDS deaths were added to the National AIDS Register. This has resulted in a slight increase in AIDS and AIDS death notifications reported for NSW for the period 1988–1997 compared to previously published data.

ENTERIC DISEASE SURVEILLANCE

August

August was a busy month for viral gastroenteritis, mostly due to Norwalk-like virus infections, with 18 outbreaks reported from nursing homes and other residential institutions in NSW. *Salmonella* serotype clusters currently under investigation include infections of *S. typhimurium* 197 (four cases), *S. typhimurium* 108 (two cases) and *S. enteritidis* (seven cases).

The staff at the Microbiological Diagnostic Unit (MDU), University of Melbourne, have previously reported an association between an unusual *Salmonella* strain *Salmonella paratyphi B biovar Java* (or *S. Java*) and contact with fish tanks. There was one such case in NSW, in August, in a child who had a tropical fish tank at home.

September

In September there was a rise in case notifications of *Salmonella typhimurium* 135a infections (five cases) and for *Salmonella typhimurium* 197 infections (four cases). A single case of *Salmonella nyanza* infection was identified in a three year-old child from the Hunter. This is the first time this serovar has been isolated in a human in Australia. One case of listeriosis in an 80-year-old person from Central Sydney was reported.

Notifiable food-borne diseases increased in October, and will probably continue to increase throughout the summer. Particular pathogens observed to increase were: *Salmonella typhimurium* phage type 135a (see below), *Salmonella typhimurium* phage type 197 (15 cases in October, which is the largest number recorded for a single month, with no evidence that the cases were related) and *Salmonella enteritidis* (15 cases). Three episodes of 'gastrointestinal disease in an institution' were reported for October: two at a nursing homes and one in at a child care centre (11 cases).

October

During October, there was an outbreak of *S. typhimurium* phage type 135a in one community in regional NSW. A total of 25 cases became ill, the majority being children under seven years of age. The source of the outbreak was not determined; however, 14 of these cases reported eating food from the same bakery. There have been two other recent outbreaks associated with bakeries in Victoria and South Australia, which have been linked to contaminated piping bags and cream custard.

In future

S. enteritidis

In the coming months, NSW Health will initiate follow up of cases with *S. enteritidis*. The purpose of the follow up will be to ascertain whether they have travelled during the incubation period for the disease. *S. enteritidis* is the most common Salmonella serovar in the Northern Hemisphere where it is usually associated with eating undercooked eggs; however, this serovar is uncommon in Australia. We expect to find the majority of *S. enteritidis* in NSW has been acquired overseas.

Change to regular table: Reports of Notifiable Conditions Received by Area Health Services

From October 2002, individual cases included in the rubrics *Food-borne illness in two or more people* and *Gastroenteritis in an institution* will no longer be reported in the regular table Reports of Notifiable Conditions Received by Area Health Services. Instead, summary information about significant outbreaks investigated in NSW will be reported in the text of the Communicable Diseases Report of the *NSW Public Health Bulletin*, and Epi*Reviews* will both summarise and provide an analysis of longer-term trends.

QUARTERLY REPORT: AUSTRALIAN CHILDHOOD IMMUNISATION REGISTER

Table 3 details the percentage of fully immunised children aged 12 months to less than 15 months in each area health service, reported by all service providers.

These data refer to five different cohorts of children whose age has been calculated 90 days before data extraction. The information contained in each of the reports has been extracted from the Australian Childhood Immunisation Register (ACIR) and may not reflect actual coverage due to under-reporting. Table 4 details the percentage of fully immunised children identified as Aboriginal or Torres Strait Islander in New South Wales for the same cohort, reported by all service providers.

TABLE 3

PERCENTAGE OF FULLY IMMUNISED CHILDREN AGED 12 MONTHS TO LESS THAN 15 MONTHS BY AREA HEALTH SERVICE

Area Health Service	30 Sept 01	31 Dec 01	31 Mar 02	30 June 02	30 Sept 02
Central Coast	93	94	92	90	92
Central Sydney	89	87	88	89	90
Hunter	96	93	94	94	93
Illawarra	93	91	93	89	94
Northern Sydney	89	89	90	89	91
South Eastern Sydney	89	89	90	89	92
South Western Sydney	90	89	90	90	90
Wentworth	92	91	92	90	91
Western Sydney	90	89	90	90	91
Far West	92	94	92	90	90
Greater Murray	93	93	93	92	94
Macquarie	92	95	92	93	91
Mid North Coast	91	88	90	90	88
Mid Western	92	92	92	91	91
New England	92	94	94	92	91
Northern Rivers	86	84	80	84	84
Southern	91	89	93	90	91
NSW	**91**	**91**	**91**	**90**	**91**
Australia	**91**	**90**	**91**	**90**	**91**

TABLE 4

PERCENTAGE OF FULLY IMMUNISED CHILDREN IDENTIFIED AS ABORIGINAL AND TORRES STRAIT ISLANDER, AGED 12 MONTHS TO LESS THAN 15 MONTHS

	30 June 02	30 Sept 02
NSW	**87**	**85**
Australia	**85**	**85**

ERRATUM

In the Year in Review: Communicable Disease Surveillance, 2001 (*NSW Public Health Bulletin* August 2002; 13[8]: 177–187), incorrect figures were published for notifications of malaria. Tables 5–7 provide the correct figures.

TABLE 5

NOTIFICATIONS OF MALARIA, CASES BY AREA HEALTH SERVICE, NSW, 2001

Health Area	Number of Cases
CSA	13
NSA	36
WSA	13
WEN	4
SWS	21
CCA	9
HUN	18
ILL	7
SES	23
NRA	3
MNC	10
NEA	7
MWA	5
GMA	4
SA	4
Total	177

TABLE 6

NOTIFICATIONS OF MALARIA, CASES BY AGE GROUP AND SEX, NSW, 2001

Age (Years)	Female	Male
0–4	0	2
5–24	12	29
25–44	22	62
45–64	6	42
65 +	0	2
Total	40	137

TABLE 7

NOTIFICATIONS OF MALARIA, CASES BY MONTH OF DIAGNOSIS, NSW, 2001

Month	Number of Cases
Jan	16
Feb	14
Mar	23
Apr	8
May	20
Jun	17
Jul	15
Aug	18
Sep	2
Oct	10
Nov	20
Dec	14
Total	177

FIGURE 1

REPORTS OF SELECTED COMMUNICABLE DISEASES, NSW, JANUARY 1997 TO OCT 2002, BY MONTH OF ONSET

Preliminary data: case counts in recent months may increase because of reporting delays.
Laboratory-confirmed cases only, except for measles, meningococcal disease and pertussis
BFV = Barmah Forest virus infections, RRV = Ross River virus infections
LI = Legionella longbeachae infections, Lp = L. pneumophila infections
Gp C and Gp B = disease due to serogroup C and serogroup B infection, other/unk = other or unknown serogroups

NSW population	
Male	50%
<5	7%
5–24	28%
25–64	52%
65+	13%
Rural*	42%

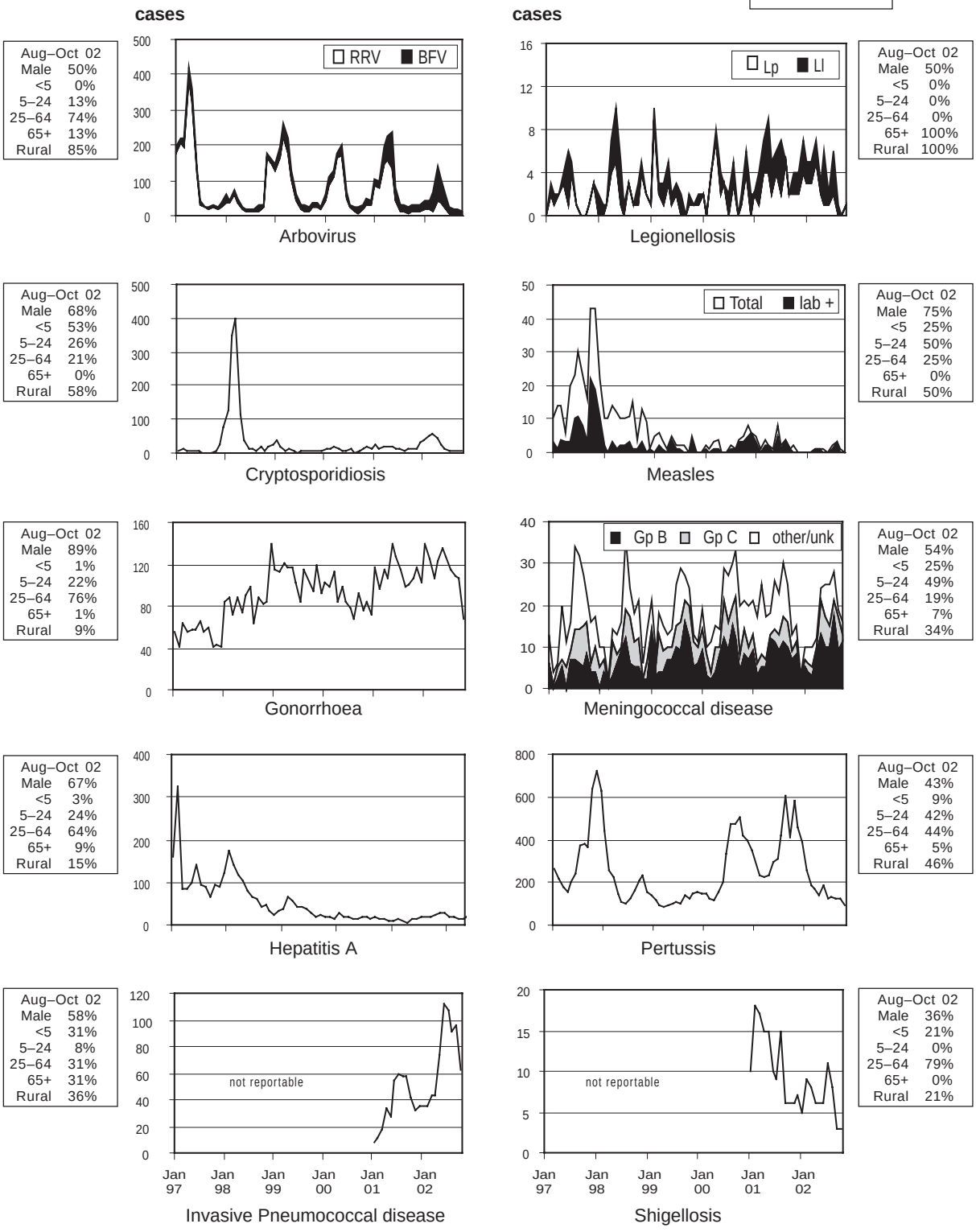

TABLE 8 REPORTS OF NOTIFIABLE CONDITIONS RECEIVED IN AUGUST 2002 BY AREA HEALTH SERVICES

Condition	Area Health Service																		Total	
	CSA	NSA	WSA	WEN	SWS	CCA	HUN	ILL	SES	NRA	MNC	NEA	MAC	MWA	FWA	GMA	SA	CHS	for Aug†	To date†
Blood-borne and sexually transmitted																				
Chancroid*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlamydia (genital)*	43	54	38	17	-	17	44	19	95	21	18	8	-	12	4	16	15	-	422	3,537
Gonorrhoea*	21	7	6	3	-	2	-	1	42	3	-	2	-	1	-	-	-	-	88	963
Hepatitis B - acute viral*	1	1	1	-	1	1	1	1	1	-	-	-	-	-	-	-	-	-	8	64
Hepatitis B - other*	34	44	45	1	1	6	4	3	41	4	-	2	1	4	-	4	1	2	197	2,561
Hepatitis C - acute viral*	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	2	96
Hepatitis C - other*	65	30	70	28	1	41	43	31	68	29	29	12	6	18	2	14	16	2	507	5,039
Hepatitis D - unspecified*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Syphilis	12	9	5	1	-	1	1	1	24	6	-	3	-	2	-	1	-	1	67	611
Vector-borne																				
Barmah Forest virus*	-	-	-	-	-	-	2	-	-	1	12	-	-	-	1	1	1	-	18	338
Ross River virus*	-	-	-	-	-	-	1	1	-	-	2	-	-	-	-	1	-	-	5	172
Arboviral infection (Other)*	-	2	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	5	62
Malaria*	-	-	-	-	-	1	2	-	1	-	-	-	-	-	-	-	-	-	4	88
Zoonoses																				
Anthrax*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brucellosis*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Leptospirosis*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25
Lyssavirus*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Psittacosis*	-	-	1	7	-	-	6	1	-	2	2	1	1	-	-	1	-	-	22	98
Q fever*	-	1	1	-	1	-	-	-	1	5	-	4	11	1	2	-	1	-	28	164
Respiratory and other																				
Blood lead level*	3	2	-	7	-	-	10	4	5	-	1	-	-	1	-	-	-	-	35	306
Influenza*	15	15	42	18	10	6	16	22	122	10	4	6	-	5	-	3	2	-	299	728
Invasive pneumococcal infection*	6	10	16	4	7	5	8	6	12	-	2	1	-	1	-	-	2	-	80	484
Legionella longbeachae infection*	-	-	1	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	3	21
Legionella pneumophila infection*	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	18
Legionnaires- disease (Other)*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leprosy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Meningococcal infection (invasive)	-	1	4	4	2	-	2	5	4	-	-	4	1	1	-	-	-	-	30	145
Tuberculosis	1	3	2	-	2	-	3	1	11	-	-	-	-	-	-	-	-	-	24	306
Vaccine-preventable																				
Adverse event after immunisation	-	1	-	-	1	1	-	1	7	-	-	-	-	1	-	3	-	-	15	125
H. *Influenzae b* infection (invasive)*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
Measles	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	4	8
Mumps*	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2	20
Pertussis	12	17	27	2	9	2	16	2	16	8	7	-	1	4	1	2	6	-	132	1,575
Rubella*	-	-	-	-	1	-	-	-	1	2	-	-	-	-	-	-	-	-	4	22
Tetanus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Faecal-oral																				
Botulism	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cholera*	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Cryptosporidiosis*	1	-	-	-	-	-	-	-	4	1	3	1	-	-	-	-	-	-	10	263
Food borne illness (not otherwise specified)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27
Gastroenteritis (in an institution)	46	-	93	33	2	-	69	-	85	-	-	-	-	-	-	-	-	-	328	1,636
Giardiasis*	-	14	3	2	5	-	3	4	10	1	-	3	-	-	-	1	-	-	46	609
Haemolytic uraemic syndrome	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	6
Hepatitis A*	4	1	2	2	-	-	-	-	2	-	-	-	-	-	-	-	-	-	11	120
Hepatitis E*	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	2	5
Listeriosis*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Salmonellosis (not otherwise specified)*	5	16	14	9	10	-	6	3	14	10	2	-	-	5	-	7	-	-	101	1,542
Shigellosis*	2	1	-	3	-	-	-	-	-	-	-	1	-	-	-	-	-	-	9	56
Typhoid and paratyphoid*	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	22
Verotoxin producing *E. coli**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3

* lab-confirmed cases only + includes cases with unknown postcode * HIV and AIDS data are reported separately in the *NSW Public Health Bulletin* each quarter

CSA = Central Sydney Area
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NRA = Northern Rivers Area
MNC = North Coast Area
NEA = New England Area
MAC = Macquarie Area
MWA = Mid Western Area
FWA = Far West Area
GMA = Greater Murray Area
SA = Southern Area
CHS = Corrections Health Service

TABLE 9 REPORTS OF NOTIFIABLE CONDITIONS RECEIVED IN SEPTEMBER 2002 BY AREA HEALTH SERVICES

Condition	Area Health Service																		Total for Sept†	To date†
	CSA	NSA	WSA	WEN	SWS	CCA	HUN	ILL	SES	NRA	MNC	NEA	MAC	MWA	FWA	GMA	SA	CHS		
Blood-borne and sexually transmitted																				
Chancroid*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlamydia (genital)*	64	43	26	26	5	17	50	20	107	26	15	5	2	16	10	13	16	1	464	4,040
Gonorrhoea*	20	4	11	2	3	1	-	4	28	1	-	1	-	3	-	1	-	-	82	1,052
Hepatitis B - acute viral*	2	-	-	-	-	-	-	2	4	1	2	-	-	-	-	1	-	-	12	75
Hepatitis B - other*	60	43	74	4	61	4	6	3	58	6	6	4	3	2	3	-	4	-	343	3,038
Hepatitis C - acute viral*	-	-	-	-	2	-	-	-	-	-	8	-	1	-	-	-	-	1	12	112
Hepatitis C - other*	78	42	65	29	63	38	27	35	79	34	38	14	7	20	7	9	6	-	591	5,810
Hepatitis D - unspecified*	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	7
Syphilis	12	3	9	2	1	1	-	3	12	1	-	3	1	-	1	-	1	1	52	676
Vector-borne																				
Barmah Forest virus*	-	-	-	-	-	-	2	1	-	3	10	-	1	-	-	-	-	-	17	355
Ross River virus*	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	2	-	-	5	176
Arboviral infection (Other)*	-	3	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	6	68
Malaria*	-	-	-	2	-	-	1	-	1	1	1	-	1	-	-	-	-	-	7	95
Zoonoses																				
Anthrax*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brucellosis*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Leptospirosis*	-	-	-	-	-	-	1	-	-	-	2	-	-	-	-	-	-	-	3	28
Lyssavirus*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Psittacosis*	-	-	-	18	-	-	3	-	-	-	1	-	-	-	-	-	1	-	23	122
Q fever*	-	-	-	-	-	-	1	1	-	3	5	4	9	6	2	1	3	-	35	200
Respiratory and other																				
Blood lead level*	-	2	-	-	5	-	20	-	5	-	-	-	-	-	15	-	-	-	47	371
Influenza*	-	6	21	16	4	2	17	11	37	9	13	2	-	3	-	3	4	-	150	907
Invasive pneumococcal infection*	5	19	18	6	15	10	17	6	18	-	3	-	-	3	4	1	2	-	127	618
Legionella longbeachae infection*	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	21
Legionella pneumophila infection*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18
Legionnaires- disease (Other)*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leprosy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Meningococcal infection (invasive)	2	1	3	1	2	-	2	-	5	1	-	-	-	-	-	-	-	-	17	161
Tuberculosis	9	1	5	1	8	-	-	1	11	-	-	-	-	-	-	2	-	-	38	355
Vaccine-preventable																				
Adverse event after immunisation	2	-	-	1	-	-	2	-	2	1	1	-	-	1	-	-	-	-	10	136
H. Influenzae b infection (invasive)*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
Measles	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	9
Mumps*	-	-	-	-	1	-	-	-	-	1	-	-	1	-	-	-	-	-	3	23
Pertussis	6	16	12	-	12	6	26	5	14	2	8	4	4	2	3	6	3	-	129	1,704
Rubella*	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	2	24
Tetanus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Faecal-oral																				
Botulism	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cholera*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Cryptosporidiosis*	-	-	2	-	1	-	-	-	2	-	-	-	1	-	-	2	-	-	8	271
Food borne illness (not otherwise specified)	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	4	31
Gastroenteritis (in an institution)	24	-	2	30	-	-	47	-	20	-	7	-	-	-	-	-	-	-	130	1,811
Giardiasis*	-	4	6	1	3	4	11	3	10	-	2	-	4	1	2	6	-	-	57	669
Haemolytic uraemic syndrome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Hepatitis A*	3	-	-	-	-	-	1	-	1	1	-	2	-	-	-	-	-	-	8	127
Hepatitis E*	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	6
Listeriosis*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Salmonellosis (not otherwise specified)*	-	8	8	4	12	6	7	1	8	11	5	5	2	5	-	2	5	-	89	1,630
Shigellosis*	-	3	2	1	1	-	-	-	-	-	-	-	-	1	-	-	-	-	8	68
Typhoid and paratyphoid*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
Verotoxin producing *E. coli**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3

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NRA = Northern Rivers Area
MNC = North Coast Area
NEA = New England Area
MAC = Macquarie Area
MWA = Mid Western Area
FWA = Far West Area
GMA = Greater Murray Area
SA = Southern Area
CHS = Corrections Health Service

TABLE 10 REPORTS OF NOTIFIABLE CONDITIONS RECEIVED IN OCTOBER 2002 BY AREA HEALTH SERVICES

Condition	Area Health Service																		Total for Oct†	To date†
	CSA	NSA	WSA	WEN	SWS	CCA	HUN	ILL	SES	NRA	MNC	NEA	MAC	MWA	FWA	GMA	SA	CHS		
Blood-borne and sexually transmitted																				
Chancroid*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlamydia (genital)*	55	55	54	24	26	15	59	19	106	18	14	15	2	22	2	24	6	1	525	4,568
Gonorrhoea*	30	9	12	1	5	-	2	1	75	1	2	3	-	1	2	-	-	-	145	1,210
Hepatitis B - acute viral*	-	-	-	-	-	-	1	-	3	-	-	-	-	-	-	-	-	-	4	79
Hepatitis B - other*	68	50	64	10	43	3	4	4	40	1	6	2	2	1	2	2	3	-	305	3,369
Hepatitis C - acute viral*	-	-	-	-	-	1	1	1	-	-	1	1	1	-	-	-	-	-	6	125
Hepatitis C - other*	50	33	83	28	44	22	51	36	74	27	22	14	12	15	5	14	11	1	545	6,370
Hepatitis D - unspecified*	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	8
Syphilis - Congenital*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Syphilis - <1 yr*	2	1	-	-	-	-	-	-	9	-	2	2	1	-	-	-	-	-	17	92
Syphilis - others*	23	3	3	1	14	4	1	1	30	-	-	-	2	-	2	1	3	1	90	487
Vector-borne																				
Barmah Forest virus*	-	-	-	-	-	2	1	-	-	2	7	-	-	-	1	-	-	-	13	369
Ross River virus*	-	-	-	-	-	-	-	-	-	1	1	-	1	-	-	-	-	-	3	179
Arboviral infection (Other)*	-	1	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	3	70
Malaria*	-	1	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	3	98
Zoonoses																				
Brucellosis*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Leptospirosis*	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	29
Psittacosis*	-	-	-	1	-	-	2	-	-	-	-	-	-	-	-	2	2	-	7	131
Q fever*	-	-	1	-	-	-	4	-	1	-	2	4	14	7	2	-	-	-	35	235
Respiratory and other																				
Blood lead level*	-	4	-	3	3	2	7	2	-	2	1	-	4	-	-	-	1	-	30	428
Influenza*	13	61	34	6	9	3	2	3	17	-	7	2	2	-	-	1	2	-	163	1,094
Invasive pneumococcal infection*	8	5	3	6	12	7	14	8	21	-	-	1	1	2	2	-	-	-	90	711
Legionella longbeachae infection*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21
Legionella pneumophila infection*	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	19
Legionnaires- disease (Other)*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leprosy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Meningococcal infection (invasive)*	-	4	4	1	1	2	-	-	5	-	1	-	-	1	-	2	-	-	22	184
Tuberculosis*	7	5	6	1	4	-	-	3	4	-	1	-	-	-	-	-	1	-	32	393
Vaccine-preventable																				
Adverse event after immunisation	1	5	-	-	-	-	8	-	2	-	-	-	-	3	2	2	1	-	24	161
H. *Influenzae b* infection (invasive)*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
Measles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
Mumps*	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	2	25
Pertussis	12	39	12	4	10	7	23	3	18	5	13	9	2	5	-	2	7	-	171	1,875
Rubella*	-	-	1	-	-	-	-	-	1	1	2	-	2	-	-	-	-	-	7	31
Tetanus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Faecal-oral																				
Botulism	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cholera*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Cryptosporidiosis*	-	-	-	-	-	1	-	1	-	1	1	-	1	1	-	-	1	-	7	278
Food borne illness (not otherwise specified)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31
Gastroenteritis (in an institution)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,811
Giardiasis*	1	10	10	1	8	4	1	-	11	-	1	3	2	-	-	3	5	-	60	740
Haemolytic uraemic syndrome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Hepatitis A*	1	6	5	-	-	-	1	-	-	2	-	-	-	-	-	-	-	-	15	142
Hepatitis E*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Listeriosis*	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2	8
Salmonellosis (not otherwise specified)*	4	18	18	7	11	2	7	1	25	5	2	4	2	6	1	27	1	2	144	1,775
Shigellosis*	-	-	-	1	-	-	1	-	-	1	-	-	-	-	-	-	-	-	3	71
Typhoid and paratyphoid*	-	-	1	1	-	-	-	1	3	-	-	-	-	-	-	-	-	-	6	29
Verotoxin producing *E. coli**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3

* lab-confirmed cases only + includes cases with unknown postcode * HIV and AIDS data are reported separately in the *NSW Public Health Bulletin* each quarter

CSA = Central Sydney Area
NSA = Northern Sydney Area
WSA = Western Sydney Area
WEN = Wentworth Area
SWS = South Western Sydney Area
CCA = Central Coast Area
HUN = Hunter Area
ILL = Illawarra Area
SES = South Eastern Sydney Area
NRA = Northern Rivers Area
MNC = North Coast Area
NEA = New England Area
MAC = Macquarie Area
MWA = Mid Western Area
FWA = Far West Area
GMA = Greater Murray Area
SA = Southern Area
CHS = Corrections Health Service

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2002 INDEX BY AUTHOR

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NSW PUBLIC HEALTH BULLETIN

The *NSW Public Health Bulletin* is a publication of the NSW Department of Health.
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Dr Michael Giffin is the managing editor.

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The preferred length of Bulletin articles is 1500 words. Tables and figures may be additional to that.
News, comments, and other reports should be 500–600 words.
All manuscripts should contain a short introductory abstract that reflects the structure of the manuscript.
References should be set out in the Vancouver style.
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The manuscript must be accompanied by a letter signed by all authors.
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