

INJURY PREVENTION IN ACTION

GUEST EDITORIAL

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This is the second of two issues of the *Bulletin* that focus on injury in NSW. The first, the July issue (Volume 10, Number 7) examined injury surveillance and research. This issue looks at examples of injury prevention in action.

A number of themes emerge through the articles and reports in this issue, including:

- the importance of 'sustainability' or facilitating change that 'lasts'
- the need to be 'multi-strategic' in our injury prevention planning.

The article by Elkington on scalds prevention demonstrates the power of combining policy, education and environmental change to address the problem of serious scalds in young children. In 'A new health risk for children?' James and Williams illustrate that, while child-resistant closures and warning labels may be a start to addressing poisoning prevention in young children, education of retailers is clearly still needed. The report 'A smoke alarm campaign in Arabic, Chinese and Vietnamese communities' highlights the need to identify barriers to purchasing and installing alarms smoke alarms in communities of people from non-English speaking backgrounds, and for multiple strategies to overcome these barriers. The *Make a Noise* suicide prevention project in the Greater Murray Area, and the *Safe Communities* Project in Ryde, both approach sustainability through building partnerships by engaging and working with communities to identify and address community concerns.

Efforts to prevent injuries have moved on from concentrating on educating those at risk, to laying the foundation for safer environments, and safer behaviour, in the long term. This is achieved through policy, engineering and educational strategies undertaken in partnership with other sectors, and with the community.

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EVALUATION OF A STATEWIDE CAMPAIGN TO PREVENT SCALDS IN YOUNG CHILDREN

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This article describes the results of the evaluation of the first two phases of the NSW Scalds Prevention Campaign. The evaluation took several approaches, including surveys with parents, reviews of sales data for a leading scalds prevention product, and a review of hospital separations data before and after the campaign period. For a more detailed account of each set of findings, refer to the full report, *Hot Water Burns Like Fire*.¹

BACKGROUND

Each year, approximately 450 children in NSW under the age of 15 are hospitalised as the result of scalds (burns resulting from exposure to hot water or steam). It is estimated that a further 900 seek Emergency Department care for such injuries and up to 1,800 seek medical care from a general practitioner.² While few deaths are associated with scalds to young children, there can be lifelong consequences for those who have suffered severe injuries.

Data from Childsafe, a surveillance system that was part of the national Injury Surveillance Information System (ISIS) that was in place in 12 NSW hospitals from 1990 to 1994, and evidence from the international literature indicate four major causes of scalds to young children in the home:¹⁻⁵

- hot beverages
- hot tap water
- saucepans
- kettles.

Hot tap water scalds tend to be among the most serious because they usually involve a large surface area of the child's body and there is often a longer exposure before the child is rescued from the hot water.

CAMPAIGN STRATEGIES

When planning the NSW Scalds Prevention Campaign to reduce scalds in young children, a review of the literature found few studies with rigorous evaluation designs. Despite this, promising strategies included using multimedia approaches,⁶ legislative controls of the temperature of hot tap water,⁷ distributing hot water temperature testing cards,⁶ considering design changes in products linked with scalds,^{4,8} reaching high-risk groups through primary health care providers,⁹ and other community-based approaches.^{10,11}

The first phase of the campaign, implemented in 1992, focused on increasing the awareness of the four main hazards associated with causing scalds in the home and

on creating an environment for change through supportive policies and products. The second phase, implemented in 1994, focused particularly on the risk of hot tap water—educating parents and industry (energy authorities, and manufacturers of hot water heaters and scald safety products) and trade groups (builders, plumbers and electricians)—and on policy changes that address the temperature of hot tap water delivered in the home. Both phases had a social marketing strategy (including the use of television and print media) in addition to working with industry, policy makers, health workers and other groups in contact with parents and carers of young children. Details of the planning, consultation, and the specific strategies incorporated into the campaign are described in the final report on the campaign.¹

EVALUATION COMPONENTS

The scalds campaign has been evaluated by collecting and analysing data from a number of different sources. This article reports on the following elements of the evaluation:

- a telephone survey with a random sample of parents of children aged 0 to 4 years. This was done three times (September 1992, November 1992 and May 1995) in both New South Wales (intervention group, N = 800) and Victoria (the control group, N = 400);
- a summary of sales data for tempering valves (which mix cold with hot water before its released through a hot tap);
- an analysis of NSW hospital separations data for scalds (selected on the code for 'burns due to liquids and steam', ICD-9-CM E924.0) among children aged 0 to 4 years for the eight year period 1988–89 through 1995–96.

FINDINGS

Knowledge and self-reported behaviour

Because Victoria (the intended control state) implemented its own scalds prevention campaign within the evaluation period, little can be made of the comparison between the two states. Therefore, looking just at the baseline and 30-month follow-up for NSW respondents, significant changes in knowledge occurred relating to a number of items. At the follow-up, significantly more parents ($p < 0.05$):

- were aware of products that reduce the chance of scalds in the home (from 31 to 37 per cent)
- were able to specifically nominate tempering valves as a way to prevent scalds from hot tap water (from eight to 24 per cent)

FIGURE 1

AGED-STANDARDISED HOSPITAL SEPARATIONS DUE TO SCALDS IN CHILDREN AGED 0 TO 4 YEARS, NSW, 1988-89 TO 1995-96



Source: *Hot Water Burns Like Fire: The NSW Scalds Prevention Campaign, Phases One and Two 1992-1994*. Final Report, NSW Department of Health, January 1999.

- nominated (unprompted) keeping hot beverages out of reach as a way to prevent scalds (from 68 to 74 per cent)
- nominated (unprompted) hot bath water as a main cause of scalds in children (from 55 to 63 per cent)
- reported that they would seek medical help if a child in their care for was scalded (from 56 to 70 per cent).

It should be noted that there were also a number of changes in a negative direction, suggesting a decline in awareness, including the nomination, of kettles (from 67 to 48 per cent) and saucepans (from 79 to 70 per cent) as a main cause of scalds. By focusing on hot tap water, the second phase of the campaign may have shifted parental awareness away from other sources of scalds, such as hot beverages, saucepans and kettles.

The temperature testing card

Approximately 24,000 brochures and temperature testing cards were requested via the 1-800 free-call number. A further 80,000 cards were distributed through other means, such as early childhood health centres, shopping centers, and doctors' offices. The telephone survey at the follow-up indicated that 25 per cent of the random sample of parents contacted had received a campaign brochure and temperature testing card. Compared with people who had not received a card and brochure (from any distribution

point), people who reported having a card were significantly more likely to have:

- taken some kind of action to prevent scalds in the home (67 versus 49 per cent)
- turned down their hot water system (81 versus 70 per cent).

While clearly a biased sample (those seeking out the card), the card possibly served as an enabling tool for those people predisposed to take action.

Policies

After a series of consultations with industry and other stakeholders, a new NSW Health policy recommending a maximum of 50°C hot water delivery temperature in new bathrooms, was signed by the Chief Health Officer in May 1994. This policy laid the foundation for an amendment to the National Plumbing Code (set down in the Australian Standard AS3500.4), which also adopted a 50°C maximum delivery temperature in new bathrooms.

NSW has recently taken steps to introduce regulations that will enforce this standard for new and renovated bathrooms in homes, matching regulations in all other states in Australia.

Products

The company whose tempering valve won the NSW Health/Standards Australia Child Safety Design Award (1994)

TABLE 1**NUMBER OF CASES AND HOSPITAL BED DAYS FOR SERIOUS AND LESS SERIOUS SCALDS IN CHILDREN AGED 0 TO 4 YEARS, NSW, 1988-89 TO 1995-96**

Financial year	Less serious scalds (1-4 days stay)		Serious scalds (5+ days stay)		Total	
	Cases	Hospital bed days	Cases	Hospital bed days	Cases	Hospital bed days
1988-89	204	396	217	2,431	421	2,827
1989-90	275	471	174	2,299	449	2,770
1990-91	251	440	197	2,477	447	2,917
1991-92	246	437	178	2,257	424	2,694
1992-93	244	445	168	2,143	412	2,588
1993-94	277	452	168	2,183	445	2,635
1994-95	295	506	111	1,430	406	1,936
1995-96	269	434	127	1,624	375	2,058

Source: *Hot Water Burns Like Fire: The NSW Scalds Prevention Campaign, Phases One and Two 1992-1994*. Final Report, NSW Department of Health, January 1999.

advised NSW Health that, during phase two of the campaign (July-August 1994), NSW sales figures for their product increased by 42 per cent (an increase not echoed in other states). From September through December 1994 (after the new Australian Standard had been publicised), their national sales increased significantly for all four models of tempering valves, from approximately a 40 per cent increase in one model to 1,000 per cent (or tenfold increase) in another.

Unfortunately, efforts to promote regulations in regard to 'curly cords' with electric kettles (as the standard cord sold with kettles) and the manufacture of a scalds-reducing coffee mug did not succeed.

Scalds outcomes

Figure 1 shows age-standardised data for hospital separations due to scalds in children aged 0 to 4 years for the financial year period 1988-89 to 1995-96. These data show a downward trend, most pronounced in the last two year period, following phase two of the campaign.

Length of stay is a useful index of severity for an injury like a scald burn. As Table 1 shows, there was no clear change in the number of cases or total bed days due to less serious scalds over the eight years (and perhaps a slight increase in numbers in the last two data years). However, there was a sizable decrease (36 per cent) in the number of cases and the total number of bed days (35 per cent) due to serious scalds for the period 1994-95 and 1995-96 compared to the previous six years. This finding

is consistent with the focus of phase two of the campaign, commencing July 1994, on tap water scalds, which are responsible for the majority of serious (or long-stay) cases.

Across all levels of severity, there was a 10 per cent reduction in the total number of cases in the last two financial year periods (1994-95 and 1995-96) compared to the preceding six years, and a 27 per cent reduction in the total number of bed days. Personal communication with Dr Hugh Martin, the head of the Burns Unit, New Children's Hospital, indicated that there were no notable changes in efficiency of treatment or hospital processing of patients during this two year period to explain the size of the reduction in hospital bed days. This suggests that fewer severe scalds were presenting for treatment.

Cost savings

In an unpublished but widely quoted paper, Kidsafe Australia has estimated that a serious scald (hospital stay of five or more days) has direct medical costs in the range of \$60,000 to \$100,000.¹² These costs include repeat hospital visits for skin grafts, physiotherapy and other rehabilitation, medications and medical checkups. Before phase two of the campaign, an average of 184 children aged 0 to 4 years were hospitalised in NSW for serious scalds each year (1988-89 to 1993-94). For the last two years of available data (1994-95 to 1995-96), this average has fallen to 119 cases per annum. In dollar terms, this represents a cost saving between \$3.8 to \$6.467 million per annum, or \$7.6 and \$12.934 million across both years.

DISCUSSION

The evaluation of the first two phases of the NSW Scalds Prevention Campaign was conducted under the constraints of a statewide community-based campaign with a limited budget. There was little opportunity to place controls on implementing the campaign within NSW because it was taken up to varying degrees by key stakeholders including trade, health and community groups, manufacturers, electricity and gas authorities. Furthermore, Victoria, the intended non-intervention comparison state, together with the rest of Australia, adopted scalds prevention campaigns of their own and were heavily influenced by the development of the 1994 amendment to the Australian Standard for safer residential hot water temperatures. This made clear identification of the components of the intervention difficult and assessment of its effect problematic.

Data on many of the intended indicators of the impact of the campaign were patchy. There was limited information on sales figures for scalds prevention devices, funds were not available to conduct the post-test hot water temperature check in a random sample of homes with young children, and process evaluation (what was done where, and how it was received) was scant. While none of the available indicators on their own imply the effectiveness of the campaign, the strength of the findings lies in the overall picture they create.

In considering the findings as a whole, it appears that the Scalds Prevention Campaign was highly successful. There are many indications of increased awareness of and action taken regarding the issue by parents, industry, trade groups and policy makers. Furthermore, there was a concomitant reduction in scalds presentations by young children, most particularly for serious scalds. There can be little argument that the campaign was successful if it succeeded in reducing the number of serious scalds, both in terms of health care savings and preventing enormous pain and suffering on the part of young children and their families.

The challenge lies in maintaining the level of awareness among parents, industry, and trade groups; in passing legislation for safer hot water temperatures in new homes in NSW; and in finding ways to reduce the number of less severe scalds (such as those caused by hot beverages and electric kettles).

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Children's Hospital, Kidsafe, the Area Health Promotion Units, the Master Plumbers' Association, and the Reliance Manufacturing Company in developing and implementing the campaign.

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Copies of the NSW Department of Health publication '*Hot Water Burns Like Fire: The NSW Scalds Prevention Campaign*', is available from the Better Health Centre, (02) 9816 0452. Please quote State Publication Number HP 980086.

MAKING A NOISE ABOUT SUICIDE: A COMMUNITY DEVELOPMENT APPROACH

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Suicide is a significant problem in the Greater Murray Area, where there are approximately 35 suicides and 210 presentations to emergency departments as a result of self-injurious behaviours across all ages each year. In response, the Health Promotion Business Unit of the Greater Murray Area Health Service (GMAHS) has implemented a youth suicide prevention strategy. This report provides an outline of the main features of the program and the indicators of the program's reach within the Greater Murray community.

THE COMMUNITY DEVELOPMENT MODEL

A needs assessment determined that the most appropriate model for addressing the issue of youth suicide was one developed within a public health framework, with a focus primarily on community development. The limitations of two years of funding and an extensive geographic area, that included 29 local government areas with a large number of small towns where there is a greater risk of suicide, influenced the decision to employ community development strategies. Sustainability was regarded as an essential element in the planning and development of the strategy.

The community development model had two main target groups: young people aged 10 to 24 years and the wider community outside this age range. The *Make A Noise* project was developed as a central concept of the project, which aims to engage young people in early help-seeking behaviour. The project does not focus directly on suicide, but rather at early intervention before crisis.

PROJECT STRATEGIES

The project consists of a number of strategies both to encourage help-seeking by young people and to improve community and health sector response to young people at risk of self-harm. These strategies include:

The enhancement of peer support networks

This component of the strategy aims to provide young people with skills and resources so they can identify when a friend may be at risk and encourage young people to talk to their peers. This strategy has seen the Greater Murray Area Health Service, in partnership with the NSW Department of Education, become the site of a trial of the Resourceful Adolescent Program in local public high schools. This is an 11-session program that builds resiliency and problem-solving skills in young people.

Promoting help-seeking resources

A social marketing strategy has been developed to promote anonymous and 24-hour help-seeking resources such as:

- the Kids Help Line: a national telephone counselling service, a key partner for the project
- the Greater Murray Access Line: a phone counselling service specific to the Greater Murray Area
- the *Make A Noise* Web site: a large youth health Web site housed at <http://makeanoise.jsp.org.au> that provides information and referrals on a number of health topics relevant to suicide.

An online presence for the professional community

A Web site provides details of the planning and implementation of the project for the professional community. This site can be accessed at <http://project.jsp.org.au>.

Community education

Education has been provided for the wider community to ensure they are ready to listen to, and respond appropriately to, young people at risk. Community training through *Make A Noise* has focused on school communities, including teachers and parents, as well as other relevant adults, such as sporting coaches, service clubs, and youth workers. When in schools *Make A Noise* does not talk directly about suicide to students.

Attention to the Area Health Service's response to those at risk

Health Service staff have undergone training in suicide assessment and management provided by the Institute of Psychiatry. In line with circular 98/31, the GMAHS has developed and implemented a new policy on managing clients at risk of suicide. Strategic partnerships have been developed between those who manage suicidal clients, such as the NSW Police Service and the NSW Ambulance Service, to insure uniformity in the approach taken to people at risk.

MARKETING STRATEGY

Developing the *Make A Noise* concept has involved input from young people at all stages. This input is evidenced by the presence of *Make A Noise* across the Greater Murray Area at various youth events, forums and school promotions. A social marketing strategy has been deployed to promote the *Make A Noise* concept. It includes promotional resources (T-shirts, flyers, posters, stickers and postcards) and a television, radio and print campaign. This strategy highlights the use of famous 'ambassadors' who have grown up in the area to promote the message of help-seeking behaviour and referral points through mainstream media. These ambassadors include the rock band Spiderbait and rugby league stars Laurie Daley and David Barnhill.

PROJECT REACH

- Approximately 12,000 community members (including teachers, sporting coaches and parents) have received some level of training in suicide risk factors and warning signs since the beginning of the project;
- More than 500 nurses have received training in suicide assessment;
- Calls from young people in the Greater Murray Area to the Kids Help Line have increased dramatically since active promotion began in March 1998. An average of 39 young people from the Greater Murray

ring the Kids Help Line each day, compared to an average of 12 calls per day prior to the project;

- The *Make A Noise* youth health Web site has been visited by more than 60,000 people since its launch in mid-1998.

For further information about the project, or to obtain a copy of the *Make A Noise: Preventing Suicide Through Community Development Interim Report 1997-98*, contact the Greater Murray Health Promotion Business Unit on (02) 6058 1700.

SAFETY-FIRST IN RYDE

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The *Safe Communities* approach to safety promotion has been part of a World Health Organization (WHO) initiative to reduce injury since the mid-1980s. It is based on the experience of communities like Falkoping, Sweden, where it was found that community-based safety promotion reduced injury rates by 27 per cent over three years.¹ The first WHO accredited *Safe Communities* projects in Australia were the Illawarra and Hume City (1994), followed by Noarlunga, La Trobe and Parkes (1996). This report provides a description of the *Safe Communities* process undertaken in Ryde NSW that, along with similar processes in Manly, Warringah, Pittwater and Mosman, was accredited by WHO earlier this year. The report examines the structure of the project and provides a commentary on the intersectoral partnerships that have supported the process.

The city of Ryde falls within the Northern Sydney Area Health Service (NSAHS). In the NSAHS, injury accounts for nine per cent of all hospital admissions for males and six per cent for females, with about 14,000 injury-related admissions annually.² For the 1995-96 financial year, there were 2,014 injury-related hospital separations involving residents of Ryde (estimated population 96,429 in 1996). The NSAHS selected the WHO *Safe Communities* approach to address this injury problem.

PROJECT STRUCTURE

The *Safety-First in Ryde* project is a partnership of local organisations and community members whose purpose is to address known hazards and community concerns about safety in the city of Ryde. Like other *Safe Communities* projects, the Ryde project has a steering committee and a number of working groups, each of which addresses a specific safety issue. The working groups reflect the current priorities in Ryde, which are:

- community safety
- pedestrian safety
- falls prevention
- child safety.

These priorities were selected after extensive community consultation and analysis of available data.

Steering committee members represent Ryde City Council, the local police, the Northern Sydney Area Health Service, the NSW Department of Education and Training, the local divisions of general practice, a local member of Parliament, service clubs and community organisations. As a result of this wide representation, a variety of resources have been mobilised to support the project and a broad range of networks have been accessed. While the different groups have different priorities, there is now a greater degree of collaboration, with benefits for all stakeholders in terms of funding, staff, credibility, equipment and premises. Further, sharing responsibilities and ideas has led to some innovative initiatives. For example, the Community Safety Working Group has carried out

community-wide safety surveys and lobbied Standards Australia to make changes to building standards.

EVALUATING PARTNERSHIPS

In any partnership that involves a variety of agencies and individuals, it is necessary to manage the development of relationships carefully. The dynamics of the emerging partnership were the focus of an evaluation study conducted by the Department of Public Health and Community Medicine at the University of Sydney.³

The aims of the evaluation were to assess the degree to which the project had:

- established a viable safety network
- developed partnership capacity to promote safety
- influenced policies and structures
- established mechanisms for community involvement.

The study was conducted using an instrument developed for assessing the strength of coalitions.⁴ Some of the strengths highlighted by the study were:

- a high level of agency commitment
- a good range of community participation
- an increased capacity of participating organisations to undertake safety promotion initiatives
- new networks as a result of the project.

The evaluation also highlighted issues requiring attention:

- clarifying what type of coalition it wants to be
- clarifying the roles of the steering committee and working groups
- defining the roles and responsibilities of the coordinator and member organisations.

The process of providing feedback on the report served to focus the thinking of the steering committee. Since the WHO accreditation, the steering committee has moved to clarify its role and to take a more proactive approach, as opposed to being a loose alliance of interested parties.

Pressures to maintain the project's sustainability have made the participants work together more closely. Despite being only two years in the making, the *Safety-First in Ryde* project has addressed these challenges constructively and has now created a more ambitious strategic direction. In addition, the partners now have a stronger commitment to the issue of safety promotion.

In its initial stages, the project was quite dependent on the project officer who supported all the committees and moderated the impact of the cultural variability of the participating agencies and individuals. Through the results of the evaluation, the various committees and groups recognised the vulnerability of this situation and are now continuing to operate productively without a project officer.

CONCLUSION

The goal of enabling a local community to take more responsibility for safety cannot be transplanted easily from one community to another. In working within the *Safe Communities* framework, participants have realised that, while much can be learned from the experiences of other communities, it is not possible to simply apply others' solutions without understanding the local situation.

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A SMOKE ALARM CAMPAIGN IN ARABIC, CHINESE AND VIETNAMESE COMMUNITIES

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In 1997, the NSW Department of Health approached the NSW Multicultural Health Communication Service to develop and implement a campaign to increase the use of smoke alarms by the Arabic-, Chinese- (Mandarin and Cantonese) and Vietnamese-speaking communities in NSW. This report describes the research conducted to determine community attitudes to smoke alarms and obstacles to using them. It also describes the campaign strategies that were subsequently developed to increase the use of smoke alarms by these communities.

HOUSE FIRES, INJURY AND SMOKE ALARMS

Of the 133 deaths due to burns in Australia in 1995, 69 per cent were the result of house-fires.¹ Australian and international studies have provided strong evidence demonstrating the effectiveness of smoke alarms in preventing house fires, with a recent case-control study showing that houses without smoke alarms have more than five times the risk of fatal or injurious fires than homes with smoke alarms.^{2,3} The decision to target Arabic, Chinese and Vietnamese communities was prompted by preliminary data provided by the 1997 NSW Health Survey. These data showed that, while 58 per cent of households surveyed in NSW had a smoke alarm, only 39, 30, and 32 per cent respectively had smoke alarms in Arabic-, Chinese- and Vietnamese-speaking communities.⁴

COMMUNITY RESEARCH

Methodology

Questionnaires to identify the barriers to and reasons for purchasing alarms were administered at smoke alarm promotions held at major festivals specific to each of these three communities. Purchasers of alarms were followed up by telephone to monitor installation rates and the barriers to installation. Focus groups were then held to explore the community members' perceptions of smoke alarms and barriers to their purchase. Using the information gained, strategies were developed and implemented over an eight-week period in mid-1998.

Smoke alarm promotions

Stalls selling smoke alarms discounted by 30 per cent were set up at a festival day in each community. Bilingual community education workers provided fire safety information, alarm demonstrations and written instructions describing how to install the alarms in Arabic, Chinese and

Vietnamese. They also surveyed people at these festivals using a convenience-sampling method. The surveys aimed to identify barriers to purchasing and installing alarms. Two groups were surveyed:

- those who purchased a smoke alarm
- those who did not purchase a smoke alarm.

Barriers to purchasing smoke alarms

Two key barriers to purchase were identified across the language groups:

- a lack of awareness of the need for smoke alarms
- living in rental premises where the landlord was thought to be unsympathetic to the need for alarms.

These issues were explored further through focus groups with non-purchasers.

Focus groups exploring barriers

Subsequently, focus groups were held to explore community members' perceptions of smoke alarms and reasons for not purchasing one, and to canvas campaign strategies. Two groups each were held in Arabic, Vietnamese and Cantonese, and one was held in Mandarin. In line with the survey findings, the main issues to emerge in the focus groups were:

- a lack of awareness of the importance or need for alarms;
- living in rental accommodation;
- a tendency towards overestimating the cost of installing an alarm;
- fire not being seen as a serious risk;
- being unaware of the danger of smoke itself;
- a perception that fire is a hazard exclusively for wooden homes;
- not relating any benefits from smoke alarms to their personal circumstances. The older Chinese-speaking participants in particular believed they were better protected by being vigilant than by using a smoke alarm.

Concerns expressed in regard to rental accommodation included:

- being held liable by landlords for damage incurred during installation;
- frequent moving meant it was too difficult to keep installing an alarm;
- the alarm is a fixture and therefore should not be removed, and would be lost when they moved;
- landlords not providing permission for installation;
- the process of applying to real estate agents being too difficult or uncomfortable.

TABLE 2

CAMPAIGN STRATEGIES DEVELOPED TO ADDRESS IDENTIFIED BARRIERS

Barrier	Strategy
Lack of awareness of importance of lives	<ul style="list-style-type: none"> • Slogan: 'Smoke alarms wake you up if there is a fire' • Television advertisement illustrating function of smoke alarms in saving lives • Direct community talks • Sales promotions (alarm sales with discount pricing) • Promotional products (refrigerator magnets and posters) • Cash incentives to ethno-specific retailers to sell alarms • Bilingual workers and inquiry line
Renting	<ul style="list-style-type: none"> • 822 letters sent to real estate agents in areas of large of Arabic-, Chinese- and Vietnamese-speaking population from the NSW Fire Brigades Commissioner • Forms in Arabic, Chinese and Vietnamese giving permission from the landlord and encouragement to the tenant to install smoke alarms sent to 822 real estate agents
Installation	<ul style="list-style-type: none"> • Television segment demonstrating ease of installation • Free installation service, developed in partnership with ethnic organisations and existing installation service offered by NSW Fire Brigades Service • Multilingual instruction sheets

Installation rates

A follow-up survey of those who had purchased alarms was undertaken 10 to 15 days after the festivals. Purchasers were questioned about whether they had installed the alarm and, if so, if they had used the instructions that were provided in their language. Attempts were made to contact all Arabic and Vietnamese purchasers. However, only 65 per cent of Chinese purchasers were selected randomly for the follow-up because of the large number of Chinese purchasers (235, compared with 50 Arabic and 147 Vietnamese) and the need to allocate resources evenly across the three groups. Participation rates were high, with more than 92 per cent of those contacted (for all communities) agreeing to take part in the follow-up survey.

Installation rates varied between communities, from 65 per cent of the purchasers among the Vietnamese speakers to 52 per cent of the Arabic speakers and 35 per cent of the Chinese speakers reporting that they had installed their alarms. At least 52 per cent of the Arabic- and Chinese-speaking purchasers and at least 60 per cent of the Vietnamese purchasers indicated that they had used the instructions provided in their own language. The main reason given by all language speakers for not having installed the alarm was lack of time.

Chinese-speaking purchasers contacted in the follow-up survey were contacted again two months after the festival. By this time, the proportion of alarms installed had increased from 35 per cent to 50 per cent. In the NSW

community in general, eight per cent of households have purchased but not installed a smoke alarm.⁵

DISCUSSION

This research demonstrated that the community was unaware of the importance of smoke alarms. This suggested a need for an advertising campaign to raise the communities' awareness of alarms and their importance in saving lives (Table 2).

Although the strategy, which involved both speaking directly to the community and selling the smoke alarms, was resource intensive, it appears to have been successful in terms of raising the communities' interest and generating a number of sales. This was particularly so for the Vietnamese community. The campaign addressed the purchase, installation and maintenance of alarms; however, a longer time frame is necessary for strategies to support both the installation and maintenance of alarms.

The campaign was not subject to a formal evaluation, but the NSW Health Survey will monitor smoke alarm installation rates among these communities. Living in rental accommodation appears to be a barrier across communities in NSW and it can be expected that communication strategies will only have a limited effect on this. Therefore, the installation of smoke alarms in rental accommodation in NSW needs to be addressed within a wider public health policy framework.

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Reports on the *Smoke alarms wake you up if there is a fire* project can be obtained from the NSW Multicultural Health Communication Service by telephone on (02) 9382 8111 or by email on mhcs@sesahs.nsw.gov.au.

A NEW HEALTH RISK FOR CHILDREN?

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This article reports the results of two surveys of supermarkets in the Hunter area to determine whether poisonous products or products labelled 'keep out of reach of children' were displayed for sale within the stores in a location accessible to children.

BACKGROUND

The first survey in 1994 followed an incident in which a 21-month-old child, riding in a supermarket trolley, was able to take a bottle of insecticidal dog wash from a shelf, remove the child-resistant lid, and drink a quantity of the contents of the bottle. Active constituents of the dog wash were 50g/L diazinon (organophosphate insecticide) and 69g/L solvent (liquid hydrocarbon). The child was admitted into intensive care at a local hospital because of this life-threatening poisoning incident.

The aim of the survey was to determine if poisonous products, or products labelled 'keep out of reach of children', were displayed for sale in retail outlets in locations easily accessed by young children.

METHODS

A sample of convenience of 16 supermarkets stores in the Lower Hunter area was selected. All major supermarket chains were included. For the purpose of this survey, it was considered that products stored less than one metre from the floor were accessible to young children, either walking within the aisles of the store or being pushed in a shopping trolley or pram. The location of products with label warnings such as 'poison' or 'keep out of reach of children' was noted in each store. The products surveyed were limited to the following categories:

- household cleaners and solvents (caustic substances, methylated spirits, disinfectants, household cleansers, stain removers)
- household pesticides (fly sprays, surface sprays, cockroach baits, rat poisons)
- gardening pesticides (snail baits, insecticide powders and sprays, fungicides, herbicides)
- veterinary products (dog wash, kennel wash, insecticide sprays, and veterinary medication).

Packages of all these products were examined to see if they were fitted with child-resistant lids, caps or enclosures. Where possible, child-resistant lids or caps were checked to see if they were properly engaged or operating as designed.

RESULTS

All stores surveyed had products labelled 'poison' or 'keep out of reach of children' on shelves less than one metre from the floor.

In the store where the poisoning incident that prompted this survey occurred, the screw-down plastic child-resistant locking lids on two out of five 200mL bottles of diazinon (organophosphate) insecticidal dog wash were not engaged. This was the same product consumed by the child in the poisoning incident.

The survey demonstrated that all supermarkets had poisonous products or products labelled 'keep out of reach of children' displayed for sale in locations that were within easy reach of children. The survey also showed that not all products labelled 'keep out of reach of children' had child-resistant packaging and, in some instances, child-resistant packaging was defective. In particular, poisons packaged in 250mL metal containers with screw-down plastic child-resistant lids were faulty and would not engage.

The findings of this first survey were communicated to the supermarket industry.

1999 SURVEY

A follow-up survey of four supermarket stores (again including the main supermarket chains operating in the Hunter area) was conducted in June 1999 to see whether changes had been implemented. The same methodology was applied.

Results

All stores had products labelled 'poison' or 'keep out of reach of children' on shelves less than one metre from the floor.

As with the first survey, a problem was identified with poisons packaged in 250mL metal containers fitted with screw-down plastic child-resistant locking lids. In the four stores resurveyed, the child-resistant locking lids on 48 per cent of these containers were not engaged. Poisons packaged in this type of container were organophosphate insecticides and paint stripper.

The second survey found 36 per cent of products labelled 'keep out of reach of children' were not presented in child-resistant packaging.

DISCUSSION

The provisions of the *NSW Poisons Act 1966* govern the listing and labelling of dangerous products. Under this Act, products designated as dangerous are required to show label warnings. The National Registration Authority based in Canberra registers product labelling and packaging of harmful substances. Some of the National Registration Authority inspectorial duties are delegated to various state departments of agriculture. In NSW, the State Department of Agriculture will investigate any specific incident relating to labelling or faulty packaging of scheduled poisonous products.

Only products labelled 'poison' are required by the Act to have child-resistant packaging. Safety packaging has had a dramatic effect on morbidity and mortality of accidental poisoning;¹ however, packaging should not be relied upon as the sole means of reducing exposures. Studies have shown that children gained access to the potential toxin by opening a properly closed child-resistant package in 20 per cent of poisonings.²

Both the 1994 and 1999 surveys identified a number of deficiencies in child-resistant packaging. In this regard, a review of the Australian Standard for Child-Resistant Packaging could improve quality control and ensure that enclosures operate as designed and are properly engaged prior to release to retail outlets.

All of the supermarket stores surveyed displayed products labelled 'poison' or 'keep out of reach of children' within easy reach of young children. The label warning 'keep out of reach of children' is required by legislation to be on certain products because death or injury could occur if the contents were either ingested or inhaled, or if contact were made with the mucous membranes, eyes or skin. In both surveys, the label warning 'keep out of reach of children' was not heeded in supermarkets or self-service type stores. This may pose a potential health risk to young children. This risk is magnified when combined with an absence of or faulty child-resistant packaging.

Discussion with retail industry representatives revealed that the major barrier to placing poisons on higher shelves is that product placement was determined by marketing priorities rather than by public health issues. In addition, there were insufficient data available describing childhood poisoning incidents in retail stores to support the rearrangement of product lines to higher shelves.

While there have been isolated reports of childhood poisoning in retail outlets throughout Australia, current surveillance is unable to estimate the true burden of illness from such incidents. A paediatric hospital in Western Australia reported five separate presentations to the emergency department between 1997 and 1998 following child poisoning incidents at retail outlets (unpublished data provided by Kidsafe Child Accident Prevention Foundation of Australia, Western Australian Division, July 1994). Data provided by the Victorian Injury Surveillance System, Monash University Accident Research Centre, showed 12 presentations to three Victorian hospital emergency departments between 1989 and 1993 following child poisonings in retail outlets. Because data are collected only from participating hospital emergency departments, other cases are probably unidentified. A standard national surveillance system for childhood poisoning—including information describing the setting where the poisoning occurred, where the poison was stored, and the presence or failure of any child-resistant enclosure—could assemble a profile of these incidents.

There is no legislation that regulates the placement of harmful substances or poisons in retail outlets; however, shoppers or visitors to stores in NSW are protected in a general way under the provisions of the *NSW Occupational Health and Safety Act 1983*, which is administered by NSW Workcover Authority. Employers are required under occupational health and safety legislation to provide a safe workplace for employees and visitors to the workplace. The NSW Workcover Authority will investigate a particular incident in any workplace and take appropriate action if there is a breach of the

Occupational Health and Safety Act.

In the absence of specific legislation requiring products labelled 'poison' or 'keep out of reach of children' to be placed on higher shelves in retail outlets, stores do have a duty of care to protect the safety of visitors to their stores. In this regard, self-service type stores would minimise the risk of toxic exposure to children as well as mitigate their legal liability if the stores heeded the warning on the label and kept products out of reach of children.

CONCLUSION

These survey results highlight a need for standardisation of packaging of poisons or products labelled 'keep out of reach of children' as well as better quality control of child-resistant packaging. The true burden of illness caused by childhood poisoning in retail premises may not be recognised because of the lack of specific surveillance data kept by Australian health authorities. However, accidental child poisoning injuries would be reduced if the label warning 'keep out of reach of children' was heeded in all settings.

ACKNOWLEDGMENTS

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THE DELIVERY OF POISONS INFORMATION IN AUSTRALIA: NATIONAL MEETING JULY 30

Pam Albany
Principal Policy Officer
Injury Prevention Policy Unit

A national meeting of pharmacists, toxicologists and representatives from the State departments of health and the Commonwealth Department of Health and Aged Care was held to examine the current ability of poisons information centres in Australia to deliver quality poisons information to clinicians and the public in a cost-effective manner.

The major objective of this meeting was to seek a national consensus on the best model for delivering poisons information services nation-wide, including providing professional toxicological advice and disaster response. This national model will need to consider potential significant increases to service usage caused by new labelling requirements and an increased capacity for response to disaster. The meeting sought agreement on the most appropriate mechanism to insure that funding arrangements are secure and responsive to changes in the demand for services.

It is anticipated that the report emanating from this national level planning for poisons services will be considered by the Australian Health Ministers Advisory Council (AHMAC). There was agreement on a preferred model for delivering those services. Other significant issues discussed included the need to ensure appropriate remuneration for clinical toxicologists participating in the service and formulating an identified body of work to be undertaken to ensure that the clinical reporting system delivers useful information to an agreed set of users. Adopting national standards for workforce development, and employment opportunities for poisons information centres and professional support staff, are also perceived as critical to ensuring the continuation of adequate levels of staffing for all poisons information services in Australia.

For further details or for information concerning the outcomes of this meeting, please contact Ms Pam Albany, Principal Policy Officer, Injury Prevention Policy Unit, NSW Department of Health, by telephone on (02) 9391 9679, or by email at palba@doh.health.nsw.gov.au.

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INFECTIOUS DISEASES, NSW: OCTOBER 1999

TRENDS

Reports of notifiable diseases to the end of August were largely unremarkable for this time of year (Figure 2, Table 3). However, 27 cases of meningococcal disease were reported for August, part of the expected late-winter, early-spring peak for this disease.

NSW INFLUENZA SURVEILLANCE ACTIVITY UPDATE

Summary

Influenza activity reached a plateau in early September. In August, influenza A declined sharply, and influenza B emerged as the dominant strain. However, this activity has since declined. While the influenza season arrived earlier in 1999 than in the previous few years, activity has not exceeded the peaks recorded in recent years.

Clinical activity

Rates of reported influenza-like illness varied during August and early September but remained below the peak reached in early July (Figure 3). Reports were received from more than 30 sentinel general practitioners (GPs) through four Public Health Units, including more than 4,000 consultations. However, this source of data may include illness due to causes other than influenza.

Virological activity

The laboratory reporting rate for influenza A continued to decline during August and early September. Reporting of influenza B increased and peaked in mid-August (Figure 4). In the second week of September 9 cases of influenza A were reported (7 virological, 2 serological), 18 cases of influenza B (13 virological, 5 serological) and 39 of respiratory syncytial virus (RSV). In the same week last year, there were 18 cases of influenza A, no cases of influenza B and 55 cases of RSV. This data source tends to include a high proportion of hospitalised patients, particularly children, and may not accurately reflect the effect of these diseases on other sections of the community.

Directed virological surveillance

The number of samples submitted for viral examination as part of this special surveillance program decreased markedly from 34 (3 positive for influenza A, 6 for influenza B) in the first week of August to 5 (none of which were positive for any respiratory virus) in the second week of September. This probably reflects a decrease in the number of patients presenting with influenza-like illness to participating sentinel GPs. This trend is consistent with the other data sources discussed previously; that is, the influenza isolation rate has been variable during August and early September, influenza A decreased markedly in early August, and influenza B remained higher and decreased in September.

The sentinel GPs participating in the scheme this year are from Central Sydney, South Eastern Sydney, Western Sydney, Wentworth, Central Coast, Hunter, Illawarra, Greater Murray and Southern Areas.

International surveillance

Few reports of influenza were received by the World Health Organization during August. Activity in the Southern Hemisphere this winter has varied considerably between countries, but high levels have rarely been reported. New Zealand reported a decline in cases since the first two weeks of July, with more influenza A than B reported. Argentina reported influenza A activity at the level of 'widespread outbreak' for the month of July. South Africa continues to report sporadic influenza activity for the week ending 17 August, with more cases of influenza B than A; and Chile and Paraguay both reported 'sporadic' activity of influenza A.

In the Northern Hemisphere, Israel reported two cases of influenza in the last week of July, one each of influenza A and B. Brazil reported a 'local outbreak' of influenza A activity during the first week of August, Thailand reported 'sporadic activity' of influenza A from May to the end of July.

MANAGEMENT OF MULTI-DRUG-RESISTANT TUBERCULOSIS IN NSW

Australia is fortunate to have one of the world's lowest tuberculosis rates. This has been achieved and maintained by the success of the post-World War II national tuberculosis campaign; continued commitment of dedicated tuberculosis services by state and federal governments; and the worldwide downward trend in tuberculosis incidence this century.

The National Health and Medical Research Council (NH&MRC) Tuberculosis Working Party identified the main threats to the control of tuberculosis in Australia to be inappropriate or inadequate approaches to tuberculosis treatment in persons born overseas and an increase in the rate of multi-drug-resistant tuberculosis (MDR TB).¹

MDR TB is defined as bacilli that are identified *in vitro* as resistant to at least isoniazid and rifampicin, the main drugs used to treat tuberculosis.² MDR TB represents an important public health concern for the effective control of tuberculosis.

The development of drug-resistant bacilli relate directly to error in the:²

- prescription of chemotherapy
- management of drug supply
- inappropriate management of cases
- ineffective administration of drugs to the patient.

continued on page 143

FIGURE 2

REPORTS OF SELECTED INFECTIOUS DISEASES, NSW, JANUARY 1994 TO AUGUST 1999, BY MONTH OF ONSET

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

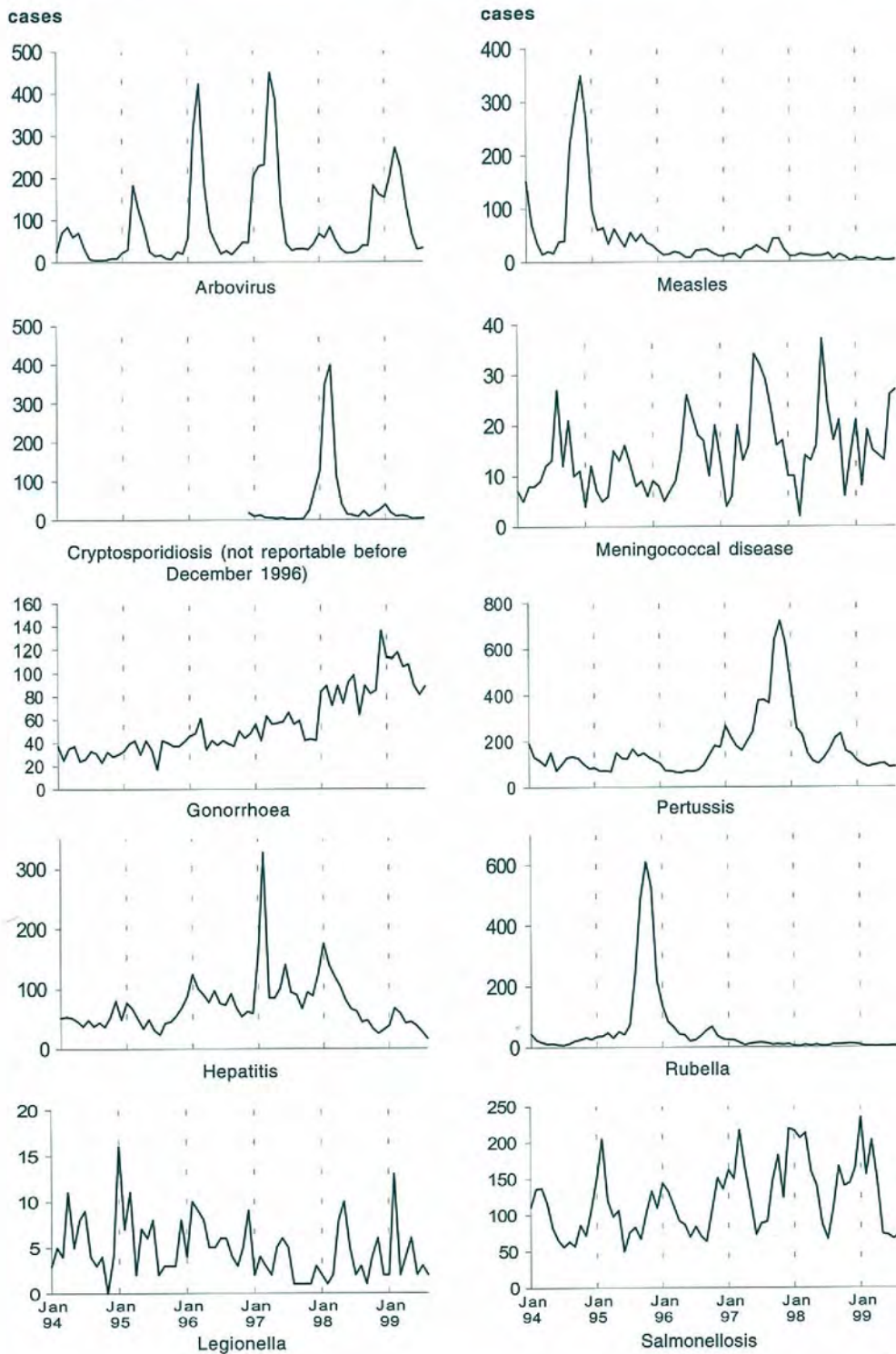


TABLE 3 REPORTS OF NOTIFIABLE CONDITIONS RECEIVED IN AUGUST 1999 BY AREA HEALTH SERVICES

Condition	Area Health Service (1999)																	Total			
	CSA	NSA	WSA	WEN	SWS	CCA	HUN	ILL	SES	NRA	MNC	NEA	MAC	MWA	FWA	GMA	SA	for Aug†	To date†		
Blood-borne and sexually transmitted																					
AIDS	-	-	-	-	-	-	3	-	3	1	7	-	-	-	-	-	-	15	95		
HIV infection*	-	-	Reported every two months																	-	194
Hepatitis B: acute viral*	1	-	2	1	-	-	-	-	1	1	-	1	-	-	-	2	-	9	43		
Hepatitis B: other*	71	41	-	7	2	4	4	9	64	4	1	4	1	-	3	3	1	120	2,176		
Hepatitis C: acute viral*	-	-	-	1	-	-	1	3	-	1	1	-	-	-	1	-	-	8	37		
Hepatitis C: other*	78	54	13	40	2	48	56	24	99	43	47	22	4	27	6	17	34	621	5,173		
Hepatitis D: unspecified*	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	2	10		
Hepatitis, acute viral (not otherwise specified)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Chancroid*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1		
Chlamydia (genital)*	15	2	-	5	1	10	19	8	58	12	8	15	4	11	16	7	2	194	1,510		
Gonorrhoea*	20	5	-	4	-	1	1	2	51	2	-	5	2	1	5	-	2	102	851		
Syphilis	16	2	-	1	-	-	-	4	9	3	2	2	4	3	3	-	-	52	403		
Vector-borne																					
Arboviral infection (BFV)*	-	1	-	-	-	-	-	3	-	3	7	-	-	-	1	1	-	16	208		
Arboviral infection (RRV)*	1	-	1	-	1	1	2	4	-	4	2	-	1	-	4	1	1	23	1,006		
Arboviral infection (Other)*	-	2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	3	14		
Malaria*	3	9	2	-	1	2	1	-	5	2	3	-	1	-	-	1	-	30	137		
Zoonoses																					
Brucellosis*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3		
Leptospirosis*	-	-	-	-	-	-	-	-	-	1	-	1	1	-	-	-	-	3	34		
Q fever*	-	-	-	-	-	-	2	-	1	1	2	-	1	-	1	-	4	12	98		
Respiratory and other																					
Blood lead level*	6	2	-	-	3	1	6	8	1	-	-	2	-	-	68	1	-	99	462		
Legionnaires' Longbeachae*	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	10		
Legionnaires' Pneumophila*	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	2	20		
Legionnaires' (Other)*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5		
Leprosy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Meningococcal infection (invasive)	-	2	3	5	5	-	-	3	-	1	3	1	1	3	-	-	-	27	140		
Mycobacterial tuberculosis	5	5	9	-	-	1	3	1	7	1	-	-	2	-	-	-	2	38	270		
Mycobacteria other than TB	1	2	-	1	-	1	5	1	2	2	1	-	-	-	-	1	2	19	269		
Vaccine-preventable																					
Adverse event after immunisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21		
<i>H. influenzae</i> b infection (invasive)*	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	2	9		
Measles	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	3	27		
Mumps*	1	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	4	18		
Pertussis	8	14	5	5	9	5	29	5	9	1	5	1	2	2	-	7	3	110	840		
Rubella*	-	2	-	-	1	-	-	-	1	1	-	-	-	-	-	-	-	5	28		
Tetanus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Faecal-oral																					
Botulism	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Cholera*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2		
Cryptosporidiosis*	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-	3	103		
Giardiasis*	7	12	-	3	-	5	12	2	15	5	1	2	3	2	4	1	-	74	768		
Food-borne illness (not otherwise specified)	-	-	-	-	-	-	-	-	1	-	-	-	-	3	-	-	-	4	23		
Gastroenteritis (in an institution)	16	-	-	-	-	-	-	7	-	-	-	-	9	-	-	-	-	32	251		
Haemolytic uraemic syndrome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8		
Hepatitis A*	4	-	16	1	-	1	-	-	4	1	-	-	-	-	1	-	-	28	341		
Hepatitis E* <i>coli</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5		
Listeriosis*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11		
Salmonellosis (not otherwise specified)*	6	8	5	1	3	3	12	7	9	10	-	3	-	-	1	2	-	75	1,098		
Typhoid and paratyphoid*	1	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	3	23		
Verotoxin producing <i>E. coli</i> *	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

* lab-confirmed cases only

† includes cases with unknown postcode

CSA = Central Sydney Area
NSA = Northern Sydney AreaWSA = Western Sydney Area
WEN = Wentworth Area
SWS = South Western Sydney AreaCCA = Central Coast Area
HUN = Hunter Area
ILL = Illawarra AreaSES = South Eastern Sydney Area
NRA = Northern Rivers Area
MNC = North Coast AreaNEA = New England Area
MAC = Macquarie Area
MWA = Mid Western AreaFWA = Far West Area
GMA = Greater Murray Area

FIGURE 3

NSW GP SENTINEL SURVEILLANCE—INFLUENZA-LIKE ILLNESS, BY WEEK OF CONSULTATION, WITH HISTORICAL COMPARISONS

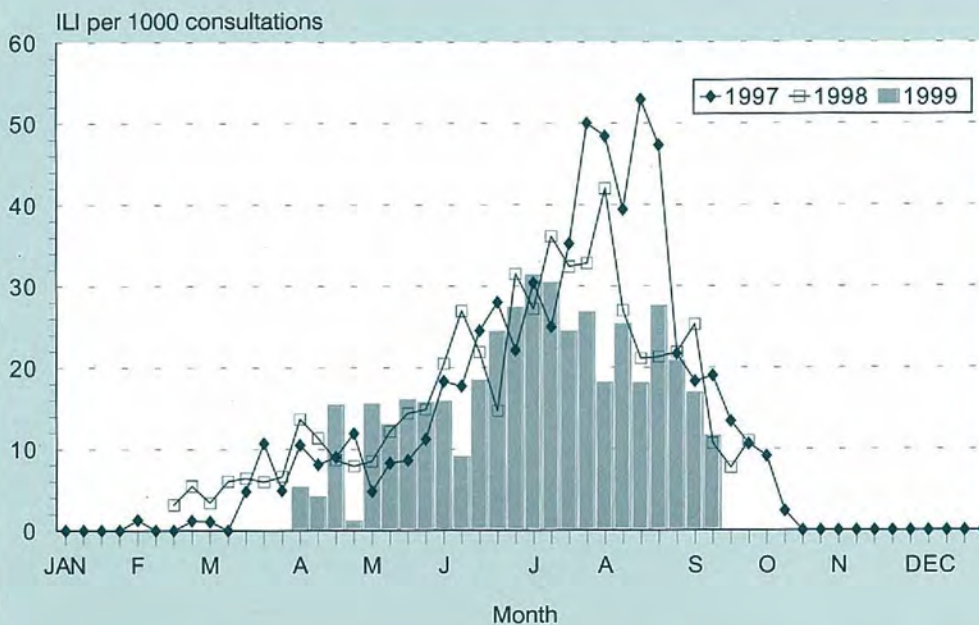
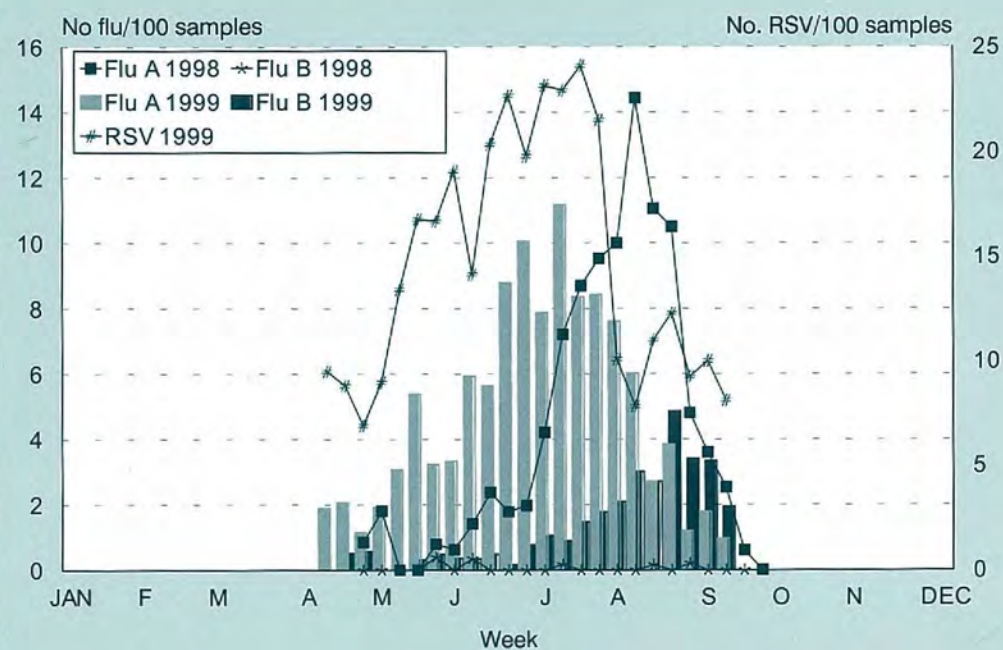


FIGURE 4

RESPIRATORY VIRUS ISOLATION RATES, NSW, 1990–1999



continued from page 139

To ensure that there is not an increase in the incidence of MDR TB and to promote best-practice management of MDR TB, an expert panel will be convened to review all cases identified as MDR TB in NSW. The panel will develop a case-management plan and will report to the Chief Health Officer.

Referring MDR TB cases

Cases can be directly referred to the panel via the State Tuberculosis Coordinator on receipt of bacteriological culture and sensitivity reports. The State Tuberculosis Coordinator can be contacted on (02) 9391 9277 at the NSW Department of Health.

In addition, clinicians can refer 'difficult to manage' cases of active tuberculosis to the panel for peer review and discussion. Once again, referral to the panel can be made via the State Tuberculosis Coordinator.

The MDR TB panel

The recommended composition of the panel includes:

- the attending physician and Area Tuberculosis Coordinator

- an infectious diseases physician
- a representative from the Institute of Clinical Pathology and Medical Research
- another physician expert in tuberculosis nominated by the Chief Health Officer
- a public health practitioner
- a NSW Health Department representative
- other relevant persons as defined by the panel chair.

To maintain Australia's excellent position in controlling tuberculosis, continuing improvements are needed in program management, disease surveillance and consistent control strategies, both within and between states.

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Submission of articles

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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