Physical activity has recently become a prominent topic in NSW, boosted by the pre-Olympic fervour, and the recently published US Surgeon General’s Report on physical activity and health (1996). Physical activity has always been a part of human lifestyle, but in recent decades, sedentariness has become the norm for the adult population. Industrial urban society, television, the Internet and motor vehicles each play a central role in diversifying and extending inactivity in the population.

Over the past few decades clear scientific evidence has emerged, defining health benefits for moderate and vigorous regular physical activity for all adults. Research has been mostly from cohort (longitudinal) population studies, similar to the study designs used to describe the links between smoking and disease. The evidence has been slow to disseminate into the health community, in the absence of institutional advocates of physical activity promotion. Nonetheless, the evidence has been compelling, and the Surgeon General’s report has refocused the agenda over the past 12 months.

In NSW substantial and strategic efforts have commenced to define the problem, develop solutions and monitor the outcomes of physical activity-promoting efforts towards the year 2000. This issue and the next two issues of the NSW Public Health Bulletin focus on physical activity in the NSW population, and describe approaches to activate the sedentary.

An article in this issue describes Statewide and national initiatives and partnerships for physical activity. NSW is playing a leading role in catalysing interest in broad, intersectoral approaches to the promotion of physical activity. In the next issue of the Bulletin generic approaches and programs under development at Area Health Service level are described. Many Areas are developing local physical activity promotion plans.

The next issue of the Bulletin will also describe the role of the media in promoting physical activity (through community-wide intervention programs), the use of environmental change approaches to increasing physical activity, and the use of intersectoral planning to develop better physical activity programs at the local level. To establish a benchmark for physical activity and fitness for young people in NSW, a Statewide survey of school students from Grade 3 to Year 10 is currently underway. This will be described in the third issue of this series.
**Increasing physical activity**

*Continued from page 11*

**EVIDENCE FOR HEALTH BENEFITS**
The health benefits of physical activity are legion. The best epidemiological evidence is for the prevention of cardiovascular disease, and the reduction of all-causes mortality among those who are physically active, compared with those who are sedentary. Studies have repeatedly shown that those who are sedentary have 1.5- to twofold increase in the risk of incident or fatal cardiovascular events, compared with those who are at least moderately physically active\(^4\). It is well established that physical inactivity is at least as important a population risk factor for coronary heart disease as hypertension or high cholesterol levels\(^4\).

Consistently across studies, the maximum cardiovascular disease benefit occurred in moving from sedentary or low fitness groups in the population to moderate activity or moderate fitness levels. Evidence of a dose-response relationship exists, with more sustained activity conferring greater health benefit. There is consistency across research studies, and the effects of physical activity or fitness persist after statistical adjustment for the effects of other risk factors. If every NSW adult became physically active, more than 3,000 deaths might be prevented each year. However, if the more modest targets of 3-5 per cent increases in prevalence of physical activity participation were achieved, about 300 deaths a year might be prevented\(^5\).

Other areas where evidence is strong is in the prevention of colon cancer, reducing the incidence and complications from diabetes, and in having a positive effect on blood pressure, relative body weight, and HDL cholesterol levels among those who are active\(^6\). Other benefits probably include a benefit in stroke prevention, a possible role in the prevention of other cancers, osteoporosis prevention, and in fostering social and mental health. The promotion of physical activity may also be an adjunctive therapy for many with clinical depression or anxiety\(^5\). In line with the recent National Health and Medical Research Council (NHMRC) report on overweight and obesity in Australia\(^6\), physical activity has a role in weight maintenance, although more sustained and vigorous activity may be needed to achieve long-term weight loss among the overweight and obese.

Recent evidence points to the population need for all adults to undertake regular moderate physical activity, which can be accumulated during the day\(^6\). This differs from earlier recommendations that focused upon vigorous activity, at least three times a week, for 20–30 minutes a session. The evidence for more moderate activity is now compelling\(^6\) and strategies to encourage this across the population are now needed.

Thus the public health rationale for promoting physical activity is now impressive. Given the high prevalence of inactivity or low levels of activity, the population-attributable risk for physical inactivity is very high; it appears to be at least as important in CHD prevention as smoking or high cholesterol, and has a range of other health and social benefits beyond preventing heart disease. It appears that becoming active at any age confers a benefit, even when activity is started in older middle-aged adults\(^8\), with some risk reduction apparent within two years\(^8\).

**CURRENT STATUS OF PHYSICAL ACTIVITY IN NSW**
Only half of NSW adults are expending enough energy on leisure time physical activity for health benefit. Population groups at risk of being less active include women (especially those with children), non-English speaking residents, middle-aged adults (40–60 years) and those aged over 70, and those at educational disadvantage\(^5\). An equity perspective suggests these groups may have particular barriers to participation, and require innovative physical activity-promoting strategies.

Finally, youth health survey data shows that physical activity participation declines through adolescence, especially for girls\(^7\). Recommendations for adolescents include regular and more vigorous activity for all adolescents\(^8\), with the additional objective of developing a permanent active lifestyle.

**TOWARDS POLICIES AND PROGRAMS**
A summary of the process of developing and influencing physical activity policy is shown in Figure 1. This figure was first aired a decade ago\(^9\), when it was described as an 'incomprehensible force field', although it now seems almost simple. In essence, policy and program development is influenced by changing and clearer epidemiological evidence, better understanding of the determinants of activity (with knowledge of who is not sufficiently active in the population, using an equity approach to data), and by the broader social, economic and cultural conditions of a country. The public health relevance, even of decade-old models, remains important in the planning cycle.

Best practice in physical activity promotion may include theoretically driven, and individual change-focused

---

**FIGURE 1**

DEVELOPING PHYSICAL ACTIVITY PROGRAMS AND POLICIES: A CONCEPTUAL MODEL (PHA CONFERENCE 1988).

[Diagram showing a flowchart of the process involving social norms, economic prosperity and industrialisation, professional development, environmental change, facilities, programs, epidemiological evidence for benefits, physical activity policy/planning, and monitoring/prevalence.]

**Continued on page 17**
Towards Best Practice in the Promotion of Physical Activity

Bill Beilew
Centre for Disease Prevention and Health Promotion
NSW Health Department

This article outlines recent NSW initiatives to promote physical activity. These initiatives comprise:

- the establishment of a high-level intersectoral Physical Activity Task Force by the Premier of NSW;
- release of the booklet, Towards Best Practice for the Promotion of Physical Activity in the Areas of NSW (1), which was recently published on behalf of the Task Force by the NSW Health Department and the National Centre for Health Promotion; and
- the establishment of the NSW Physical Activity Demonstration Projects Grants Scheme.

The article also briefly describes “Active Australia”, a national collaborative venture involving the Australian Sports Commission, the Commonwealth Department of Health and Family Services, State Departments of Sport and Recreation, local government and the sport and recreation industry. “Active Australia” provides a framework for all physical activity promotion initiatives across the country.

The Physical Activity Task Force

The Physical Activity Task Force was set up by the NSW Premier in May 1996. It was charged with recommending a comprehensive strategic plan for physical activity in NSW for the period 1997-2002. Task Force members include representatives of the NSW Government Departments of Health, Local Government, School Education, Urban Affairs and Planning, and Sport and Recreation, as well as the National Heart Foundation, Australian Council for Health, Physical Education and Recreation (ACHPER), the fitness industry peak body Fitness NSW, and the National Centre for Health Promotion.

The Task Force's terms of reference are to:

- develop a comprehensive strategic framework for the promotion of physical activity in NSW in the light of available resources, with specific goals, targets, and delineation of roles and responsibilities;
- develop a joint action plan identifying lead agencies for the achievement of agreed targets;
- consider gaps in current knowledge and the means to address them;
- make recommendations for taking the plan forward and for monitoring progress in achieving the specific targets; and
- report to Cabinet Office within one year through the Deputy Premier, Minister for Health and Minister for Aboriginal Affairs, in his capacity as Deputy Premier.

The Task Force is chaired by Associate Professor Adrian Bauman, University of NSW, and is supported by a secretariat from the NSW Health Department.

There is a clear recognition that many organisations other than those represented in the membership have an interest in the planning process. The Task Force is ensuring that extensive consultation is incorporated into the schedule of work. For example, in November 1996 a broad consultation retreat was convened with representation of stakeholders from the education, health, sport and recreation, urban and local environment sectors, as well as the fitness industry; inputs were analysed and followed up with core representatives from that consultation process. In February 1997 another consultation retreat was convened, with an explicit focus on the theme of equity and access. Five intersectoral consultation seminars were also planned, to be convened across NSW in March and April 1997. Meetings with other government and non-government stakeholders have been scheduled.

The Task Force has stipulated four generic strategic themes for the strategic planning framework:

- policy and guideline development;
- program development and implementation;
- information and education; and
- monitoring and evaluation.

Each of these themes is further subdivided to emphasise the areas where the plan is expected to achieve improvement:

- people (target group participation in active lifestyles);
- organisations (quality organisations, services and products); and
- environments (supportive environments and facilities - making it easier for people to be active).

A draft five-year strategic plan will be released for wide public consultation. Comments will be analysed by the secretariat and presented to the Task Force for consideration before the final report is submitted to the Deputy Premier.

Benefits from intersectoral collaboration in the Task Force have already accrued through clearer understanding among the partner organisations of each other’s capacity to take action. This has already led to a strengthening of collaborative approaches on specific projects. The final strategic plan will facilitate this collaboration in a sustainable and focused way. The work also links clearly with the new national strategic framework “Active Australia” (see below).

The Booklet, Towards Best Practice for the Promotion of Physical Activity in the Areas of NSW

The purpose of the booklet is to:

- provide data on the prevalence of physical activity in the NSW population at both Statewide and Area Health Service levels;
- identify priority populations in NSW for intervention; and
- identify best practice approaches to the promotion of physical activity for implementation at local level.

While the booklet recommends vigorous physical exercise for those who are willing and able to undertake it, it recognises that most people simply will not – or cannot – exercise strenuously. Therefore the case for moderate physical activity is clearly set out with a population perspective, re-emphasising the special communication and recommendation from the NSW Chief Health Officer that...
Towards best practice

Continued from page 13

"every adult in NSW should accumulate 30 minutes or more of moderate-intensity physical activity on most, preferably all, days of the week".

The data presented in the booklet derive from the 1994 Health Promotion Survey, conducted by telephone with 16,000 adults (aged 18 years and over) living in private households throughout 16 Area and then rural District Health Service clusters in the NSW health system. One component of the survey was designed to measure the prevalence of physical activity, assessing the frequency of participation in walking, light and moderate activity and vigorous physical activities. These data comprise a baseline against which trends in physical activity participation may be monitored in the NSW population.

Sixty-one per cent of males and 42 per cent of females in NSW reported physical activity of a level adequate to improve or maintain their health. There were clearly substantial differences in rates of adequate physical activity between males and females.

Almost half (49 per cent) of adults in NSW failed to attain adequate levels of physical activity; this proportion was higher in females (58 per cent) than in males (40 per cent) and was greater among older age groups than among those aged 18-29 (Figure 2). These differences persisted across socio-economic, regional and other demographic variables (Figure 3). Those who had completed secondary education (52 per cent) or some tertiary education (54 per cent) were more likely to have engaged in adequate physical activity than people who had completed primary or some secondary education. Only 41 per cent of people in the lower educational attainment category engaged in adequate physical activity (Figure 4).

An equity perspective suggests that certain groups may have particular barriers to participation, and require innovative physical activity promoting strategies. Priority groups in NSW include older people, women, people from non-English speaking backgrounds, Aboriginal communities and people with young children.

Prevalence data for Area Health Services are also presented in the report, with an analysis of regional variations and suggestions to assist Areas with the establishment of targets and performance indicators.

'Best practice' interventions for Area Health Services are outlined in the report, based on a thorough review of the literature. These are summarised here as seven overall recommendations:

1. Establish a clear strategic focus
   Promote moderate rather than vigorous intensity activities, concentrating on sedentary or insufficiently-active people rather than those who are already physically active.

2. Establish clear and achievable goals
   Formulate Area goals, targets and indicators in line with local health needs assessments, addressing priority populations.

3. Forge key partnerships
   Collaborate with local councils, the Department of Sport and Recreation, and education and other sectors to ensure that environments and facilities support community participation in walking and other moderate forms of physical activity; and coordinate action with these key partners to avoid gaps or undesirable duplication of existing service, research or resource provision.

4. Support interventions in primary care settings
   Encourage provision of advice by general practitioners, other health care providers, and a wide range of other health and fitness professionals about the importance of regular, moderate physical activity.
5. Support interventions in youth settings
Encourage strategies designed to improve the quantity and quality of physical education for schoolchildren, particularly to increase overall the time children spend being active.

6. Use marketing and publicity strategies
Maximise the use of opportunities to generate unpaid or inexpensive publicity, helping to achieve favourable changes in awareness and attitudes.

7. Use key principles to guide action
The booklet identifies 11 key principles to guide local action in the promotion of physical activity.

Additional readings in physical activity are suggested, of which Physical Activity and Health: A Report of the Surgeon General, is perhaps the most important. (Professor Steven Blair, an editor of the US Surgeon General's Report, commented on a draft of Towards Best Practice. In July 1995 Professor Blair provided a special briefing on physical activity and public health for the Deputy Premier, Minister for Health and Minister for Aboriginal Affairs, the Director-General, and the Chief Health Officer of the NSW Health Department.)
PHYSICAL ACTIVITY DEMONSTRATION PROJECT GRANTS
The NSW Health Department's Physical Activity Demonstration Grants Scheme was designed to supplement and enhance the knowledge base required to specify best practice for the promotion of physical activity at Statewide and Area Health Service levels in NSW. Its first phase was implemented in 1996. Priorities for grants are disadvantaged groups, systems and settings, and environments. Each grant is available for a minimum of two years. First-round applications were received from a wide range of organisations in metropolitan and rural NSW, and two projects were funded in the first phase. These are described briefly below.

Evaluation of a general practice intervention – the physical activity prescription
A consortium of three Area Health Services working with local Divisions of General Practice and led by the South Western Sydney Area Health Service will implement a project entitled A controlled trial of physical activity promotion through general practice. The project is designed to evaluate two different physical activity prescription interventions, aimed at promoting physical activity among general practice patients. The project will concentrate on three Area Health Services - Illawarra, South Western Sydney and Western Sydney.

Working with local councils to modify environments
Overcoming the hurdles: removing barriers to women walking in Concord is a partnership project between the Central Sydney Area Health Service and Concord Council. The major aim is to increase by 4.5 per cent the number of women aged 20-50 in the Concord local government area who accumulate 30 minutes or more of walking on most days of the week.

ACTIVE AUSTRALIA
Active Australia is a collaborative venture between the Australian Sports Commission, the Commonwealth Department of Health and Family Services, State Departments of Sport and Recreation, local government and the sport and recreation industry. It provides a framework for all physical activity initiatives across the country, which are expected to include a major campaign on physical activity. Subject to Ministerial approval, the first phase of the campaign will begin in NSW in the spring of 1997. The concept of Active Australia was launched on December 11, 1996 by the Federal Minister for Health and Family Services, Dr Michael Wooldridge, and the Federal Minister for Sport, Territories and Local Government and Minister Assisting the Prime Minister for the Sydney 2000 Games, Mr Warwick Smith.

The aspiration of Active Australia is for all Australians to be actively involved in sport, community recreation, fitness, outdoor recreation and other physical activities.

For the health sector, this translates into three specific goals:

- increasing the proportion of Australians involved in regular physical activity;
- increasing overall the level of physical activity in everyday life; and
- encouraging the provision of quality infrastructure, opportunities and services to support participation in physical activity.

Further information:
Information on Demonstration Project Grants, contact e-mail: prita@doh.health.nsw.gov.au
The Publication Towards Best Practice for the Promotion of Physical Activity in the Areas of NSW, contact e-mail: bbell@doh.health.nsw.gov.au
For copies of the NSW Physical Activity Task Force Newsletter contact e-mail: bbell@doh.health.nsw.gov.au
Alternatively, for all the above contacts, use facsimile (02) 9391-9579
The US Surgeon General's Report Physical Activity and Health may be found at Web site http://www.cdc.gov/nccdphp/sgr/sgr.htm
Infectious Diseases

**Trends**

With summer ending, reports of *arbovirus* infections have risen sharply (Figure 5), particularly *Ross River virus* infections in the Greater Murray Area (in the south west of NSW) (Table 1). *Hepatitis A* cases doubled in January 1997 throughout the State, due largely to an outbreak traced to the consumption of contaminated oysters from Wallis Lake (see *NSW Public Health Bulletin* issue for January-February 1997). Reports of *pertussis* are still pouring in, continuing an upward trend that began in mid 1996. Despite an effective vaccine, cases of *Q fever* continue to occur with little sign of abatement from (what should be) historical levels (Figure 5).

**Outbreak of Hepatitis A within a family**

Keira Morgan
South Eastern Sydney Public Health Unit
Jeremy McAnulty
AIDS/Infectious Diseases Branch, NSW Health Department

A routine investigation by South Eastern Sydney (SES) Public Health Unit (PHU) of a reported hepatitis A case in February 1996 uncovered a cluster of cases in an extended family. All cases had attended a family function and had close contact with an infectious case, yet none had received normal human immunoglobulin (NIGH). The investigation was hampered by incomplete and delayed notifications.

Hepatitis A is an infectious disease with symptoms including fever, malaise, anorexia, nausea and abdominal pain, followed by jaundice. Infection can be mild or asymptomatic, especially in children, and illness is almost always followed by full recovery. The incubation period averages 28-30 days. Hepatitis A is transmitted by the faecal-oral route, and is most infectious during the two weeks before, to one week after, onset of jaundice. Prevention involves early counselling of the patient and advice on good hand washing, food hygiene, and mode of transmission. NIGH given to close contacts within two weeks of exposure may prevent or lessen severity of the symptoms. The NSW Public Health Act requires laboratories to notify cases on serological confirmation and medical practitioners to notify cases on provisional diagnosis of acute viral hepatitis.

**Case reports**

On February 7, 1996 a laboratory notified SES PHU of a 36-year-old man with hepatitis A (Case A). The blood sample had been collected on January 25. Case A reported that he had become ill on January 20 with nausea, fever and vomiting, and developed jaundice on January 30. His doctor arranged for his close contacts to receive NIGH.

One week later, a neighbouring PHU reported having been contacted by a second case (Case B) who had been diagnosed with hepatitis A by her doctor. Case B stated that other members of her family had also developed hepatitis A, including her brother, who was Case A.

On February 13, 1996 we were notified by a neighbouring PHU of a case of hepatitis A in a female (Case C) with the same family name as Case A. The date of the specimen collection was January 29. The names of the patient and the referring doctor were the only information available.

Continued on page 18...
Infectious diseases

Continued from page 17

Case investigations
Case A reported that his younger sister (Case D) had serologically confirmed hepatitis A two days after Christmas, with symptoms including fever, rigors and vomiting. Case D, her husband, and children were staying with her mother (who was Case C) while she was ill. Two of Case D's three children (aged 2, 4 and 6 years) had been unwell in November 1996 with general malaise, and one "looked yellow", but no diagnosis had been made.

Cases A, B, C and D and a family friend had attended a family gathering on Christmas Eve at the home of Cases C and D. Cases A, B and C developed hepatitis A about one month after the family gathering. It is unclear whether Case D had prepared any of the food eaten that night. The only adult household members not to get sick were the husband of Case D and the family friend, both of whom reported having had a previous history of hepatitis.

Case D's doctor decided not to recommend NIGH for any of her contacts because he was concerned about possible risks from this blood-derived product.

Discussion

Although Case D was diagnosed with hepatitis A a few days after the family gathering, none of the contacts received NIGH. Had they received NIGH within two weeks of exposure, the outbreak may have been prevented.

Investigation of this cluster was hampered by incomplete and delayed notifications. Laboratory notification was never received on Case D, and none of the cases was notified by the doctors. Case C's details were omitted on the laboratory request, leading to delays in the investigation. If PHU staff had been aware of the first case (Case D), she could have been counselled about preventive measures for her contacts.

NIGH is prepared from human plasma which has tested negative for HIV, hepatitis B and hepatitis C. It is prepared by Cohn's cold ethanol process of fractionation and has never been implicated in the transmission of viral infectious diseases.

Recommendations

Similar outbreaks of hepatitis A could be prevented if:

- suspected cases of hepatitis A are notified by telephone to the Public Health Unit by both laboratories and doctors;
- doctors provide all patient details on laboratory request forms;
- PHU staff counsel the patient about the value of NIGH to allow them to make an informed choice;
- the laboratory notification process is streamlined, either by encouraging PHUs to pass on hepatitis A notifications to the relevant PHU by telephone, or by laboratories notifying the relevant PHUs directly of cases of hepatitis A; and
- doctors are made aware of the safety of NIGH.

ACTIVE AIDS SURVEILLANCE REPORT 1996

Under the Medicare Agreement, the Commonwealth Government provides about $33,000 to State Health Departments for HIV services for each reported person living with AIDS in NSW as at November 1 each year.

Active case finding throughout NSW late in 1996 tracked down 239 unreported AIDS cases. After adjustment for those known to have died, a total of 1,202 people were recorded as living with AIDS in NSW on November 1, 1996. Active case finding recorded an additional 80 cases in 1993, 258 cases in 1994 and 210 cases in 1995.

Infectious diseases surveillance has been an Area responsibility since 1991. During 1994-96 each Area Health Service strengthened active surveillance activities, with assistance and support from the NSW Health Department's AIDS/Infectious Diseases Branch.
Due to data collation problems, historical rubella data are unavailable, and figures printed in previous Bulletins may have been inaccurate.

- Feb 96-Jan 97
- Mean Feb 93-Jan 96
### TABLE 1

Infectious Disease Notifications for NSW Received in February 1997, by Area Health Services

<table>
<thead>
<tr>
<th>Condition</th>
<th>Area Health Service</th>
<th>Period</th>
<th>Total for Feb**</th>
<th>Total to date**</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Blood-borne and sexually transmitted</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIDS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIV infection*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis B – acute viral*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis B – other*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis C – acute viral*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis C – other*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis D – unspecified*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis acute viral (NOS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gonorrhoea*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syphilis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vector-borne</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arboviral infection*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malaria*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brucellosis*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leptospirosis*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q fever*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respiratory/other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legionnaires’ disease</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meningococcal (invasive) infection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leprosy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mycobacterial tuberculosis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mycobacteria other than TB</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Vaccine-preventable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adverse event after immunisation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H. influenzae (invasive) infection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measles</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mumps*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pertussis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rubella*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Fecal-oral</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cholera*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foodborne illness (NOS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gastroenteritis (inst)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listerial*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salmonellosis (NOS)*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Typhoid and paratyphoid*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*lab-confirmed cases only

** includes cases with unknown postcode

Abbreviations used in this Bulletin:
CSA Central Sydney Health Area, SED South Eastern Sydney Health Area, SWS South Western Sydney Health Area, WSA Western Sydney Health Area, WEN Wentworth Health Area, NSA Northern Sydney Health Area, CCA Central Coast Health Area, ILL Illawarra Health Area, HUN Hunter Health Area, NRA Northern Rivers Health Area, MNC Mid North Coast Health Area, NEA New England Health Area, MAC Macquarie Health Area, MWA Mid West Health Area, FWA Far West Health Area, GMA Greater Murray Health Area, SA Southern Health Area, OT/ Other. U/K Unknown, NOS Not Otherwise Stated.

Please note that the data contained in this Bulletin are provisional and subject to change because of late reports or changes in case classification. Data are tabulated where possible by area of residence and by the disease onset date and not simply the date of notification or receipt of such notification.