



## From the Director's desk

This issue of *Disease WAtch* features articles on the changing epidemiology of hepatitis A infections in Western Australia, and the 2010 influenza season, twelve months on from the first influenza pandemic of the 21st century.

It includes an update on treatment of gonorrhoea in metropolitan Perth, the success of an immunisation reminder recall system and information on a new on-line resource for diagnosing and managing patients with hepatitis B.

This is the final *Disease WAtch* for 2010, a year that has been an eventful one for communicable disease prevention and control. I hope you have found *Disease WAtch* informative and useful. As always, we appreciate feedback from readers on how we can improve the bulletin.

The team at the Communicable Disease Control Directorate look forward to bringing you further editions in 2011.

Dr Paul Armstrong  
Director  
Communicable Disease Control

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## Hepatitis B on-line resource for health professionals

Edith Cowan University and the Department of Health are pleased to launch a new free online resource to assist general practitioners (GPs) in diagnosing and managing patients with hepatitis B.

In 2009, there were 738 cases of hepatitis B notified to the Department of Health in Western Australia – 39 of these were newly acquired and the remainder were unspecified.

An estimated one-third of people with chronic hepatitis B are undiagnosed, and late diagnosis can have a significant impact on morbidity and mortality.

Practitioner-initiated testing in primary healthcare settings, particularly general practice, is important for identifying undiagnosed chronic hepatitis B. GPs can also play a role in monitoring, supporting, treating and referring patients.

Developed to support the important role of GPs, the online hepatitis B resource includes two modules:

- Module 1 – covers the impact of and response to hepatitis B
- Module 2 – addresses the management of hepatitis B.

The resource is approved for continuing professional development by the Royal Australian College of General Practitioners (RACGP) and attracts Quality Assurance and Continuing Professional Development (QA&CPD) Program points.

The hepatitis B on-line learning program is free to access at: <http://hepatitis.ecu.edu.au>

Hepatitis C on-line learning modules can also be accessed at this site.

## Recalls for children with overdue immunisation show promise

Immunisation reminder recall systems can produce positive results for improving vaccination completion rates among children in general practitioner (GP) practices.

The Central Immunisation Clinic (CIC) in the Perth metropolitan area recently initiated a comprehensive vaccination recall system using data from the Australian Childhood Immunisation Register (ACIR) to identify children who are incomplete for their immunisations. Parents of children aged 24 months or older receive a phone call reminder and/or a letter advising them when their child is overdue for their jabs. At CIC, more than half of all the parents contacted subsequently returned their child to the clinic to complete their immunisation series.

Immunisation coverage rates in Western Australia indicate that approximately 90% of children are fully vaccinated for age. This is very good, however, it still indicates that 1 in 10 children are not fully protected. Also of concern is that vaccination completion rates among indigenous children at twelve months of age are generally six to eight percent lower than for non-Indigenous children. This disparity highlights the need for immunisation service providers to identify strategies to close the gap and improve immunisation rates for all children in WA.

The reasons children are not fully vaccinated can be multifactorial and include:

- both parents working and/or single parent families
- difficulty in accessing services during convenient times
- large family size; many children to care for
- out-of-pocket expenses at practices that do not bulk-bill for vaccinations
- concerns about vaccine safety
- language barriers.

An immunisation reminder system is one way to help busy parents recognise that their child may still be vulnerable to vaccine preventable diseases.

### The “three R”s

The reminder recall system is a strategy adopted by many immunisation providers in Australia. It is based on personalised positive reminders<sup>1</sup> known as the “**three R**” client recall system.

The “**three R**” principles are aimed at developing a “**recall habit**”.

**Record the immunisation encounter** – in a busy practice there is risk of not entering the immunisation encounter into the vaccination register. If the information is not recorded, providers and parents may not get notified if the child is later overdue for their vaccinations, or may get an overdue alert when none is required.

**Return information** – sufficient patient contact information needs to be recorded to allow providers to do an effective recall and have the patient return to the clinic. This data includes patient name and contact details, date of birth, vaccines administered, date vaccinations given and date of next planned immunisation visit

**Recall the patient** – when the system is checked monthly for children that are overdue, a friendly reminder option reminds the parent. This recall reminder can be in the form of a simple telephone or telex message, a letter, or even a home visit by a local community health nurse for those continual non-responders.

Based on the experience of CIC and other practices across Australia, adopting a monthly reminder-recall system should result in improved immunisation coverage rates, ensuring that your young patients are appropriately protected from serious vaccine preventable diseases. Ask your local Division Immunisation Project Officers Network (DIPON) Officer or Regional Immunisation Coordinator (RIC) for more information.

1. Community Health Services – REMOTE RED BOOK issues December 2006 pp, 3-23



## Gonorrhoea treatment in metropolitan Perth

A recent survey of GPs in WA has revealed that more than a quarter (28%) of GPs use ciprofloxacin to treat gonorrhoea.<sup>1</sup> Due to an increase in resistance to ciprofloxacin from 10% of isolates in 2004 to 45% in the first quarter of 2010<sup>2</sup>, the antibiotic is not recommended for empirical treatment of gonorrhoea in WA.

Ciprofloxacin should only be used if the patient has severe penicillin hypersensitivity and where there is laboratory evidence that the organism is sensitive to ciprofloxacin.

The recommended treatment for uncomplicated gonorrhoea contracted in metropolitan Perth, interstate or overseas, is ceftriaxone 500 mg in 2 ml 1% lignocaine intramuscularly, as a single dose.<sup>3</sup> Ceftriaxone 500 mg is available on the PBS. The recommended treatment for gonorrhoea contracted in WA outside metropolitan Perth is amoxicillin 3g and probenecid 1g, as most isolates of the gonococcus outside the Perth metropolitan area remain sensitive to penicillin.

GPs in metropolitan and regional areas are advised to check the local pharmacy has a sufficient stock of ceftriaxone 500mg, particularly if a higher proportion of patients are from Perth or are interstate or international travellers.

Gonorrhoea is easily transmitted by oral, vaginal or anal sex. It is WA's fourth most commonly notified infectious disease, with 1324 notifications in 2009.

Of these, one third (425) occurred in the Perth metropolitan area and 70% were notified by general practitioners.

Gonorrhoea is asymptomatic in 80% of women and 10 to 15% of men. Patients may have:

- a urethral or cervical discharge
- anorectal infection (proctitis)
- pharyngeal infection
- pelvic inflammatory disease (PID)
- prostatitis (very rarely)
- epididymitis
- conjunctivitis

- skin lesions
- arthritis
- meningitis or endocarditis (rarely).

Cultures are the preferred way of diagnosing gonorrhoea so that antibiotic sensitivities can be obtained. First void urine and/or swabs should be taken for culture and/or nucleic acid amplification testing. The survey reported that 96% of WA GPs do take urine and/or swabs before starting gonorrhoea treatment.<sup>1</sup>

All sexual partners of patients with gonorrhoea need to be traced, investigated and treated. Untreated infections can lead to PID, epididymitis, disseminated infection, or neonatal conjunctivitis.

Ask your local [public health unit](#) for assistance with contact tracing gonorrhoea cases.

For further information, see [www.silverbook.health.wa.gov.au/](http://www.silverbook.health.wa.gov.au/) and/or seek specialist advice from a sexual health physician.

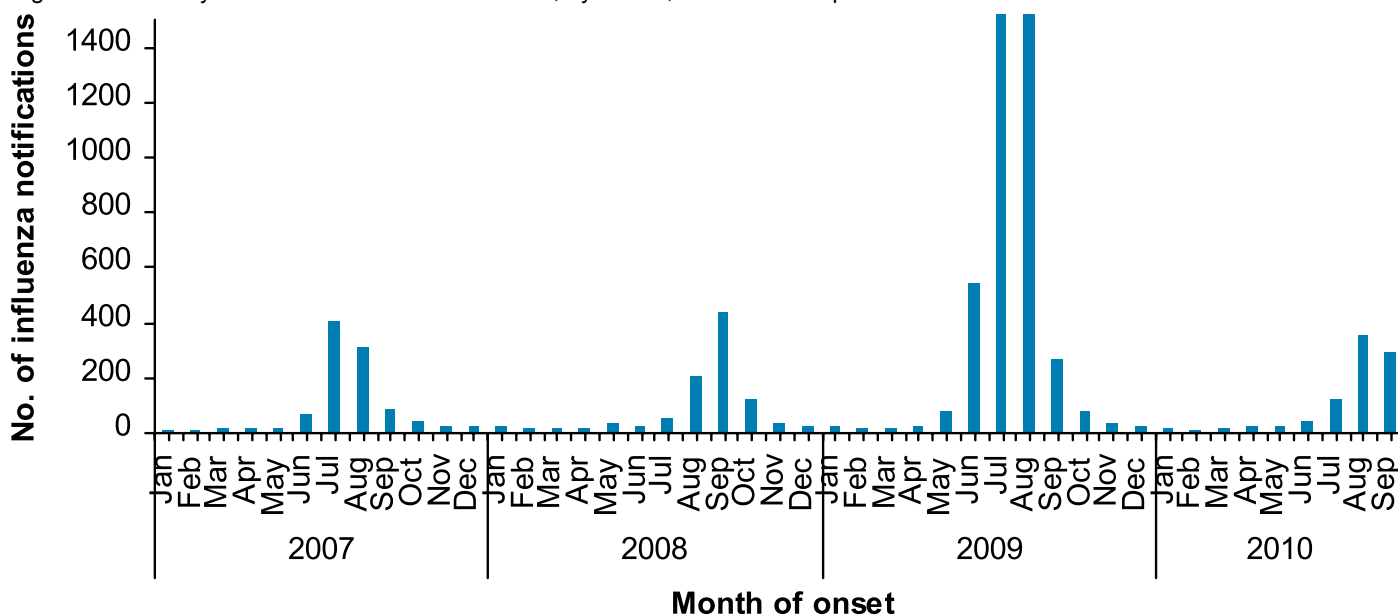
### References

- <sup>1</sup> Anon. GP E-poll: Gonorrhoea management. Medical Forum 2010 Sept:20.
- <sup>2</sup> Western Australian Gonococcal Surveillance programme. Quarterly report: WA isolates, January to March 2010.
- <sup>3</sup> Guidelines for managing sexually transmitted infections. Perth: Department of Health WA; c2010 [updated 2010 September 8th; cited 2010 September 13]. Available from: [www.silverbook.health.wa.gov.au/](http://www.silverbook.health.wa.gov.au/)

## The 2010 influenza season at a glance

Compared to the pandemic of 2009, the influenza season of 2010 was relatively late arriving and has been low in intensity. However, the number of influenza notifications received to late September 2010 is very similar to the numbers notified in 2007 and 2008, which were considered to be moderately severe influenza seasons (Figure 1).

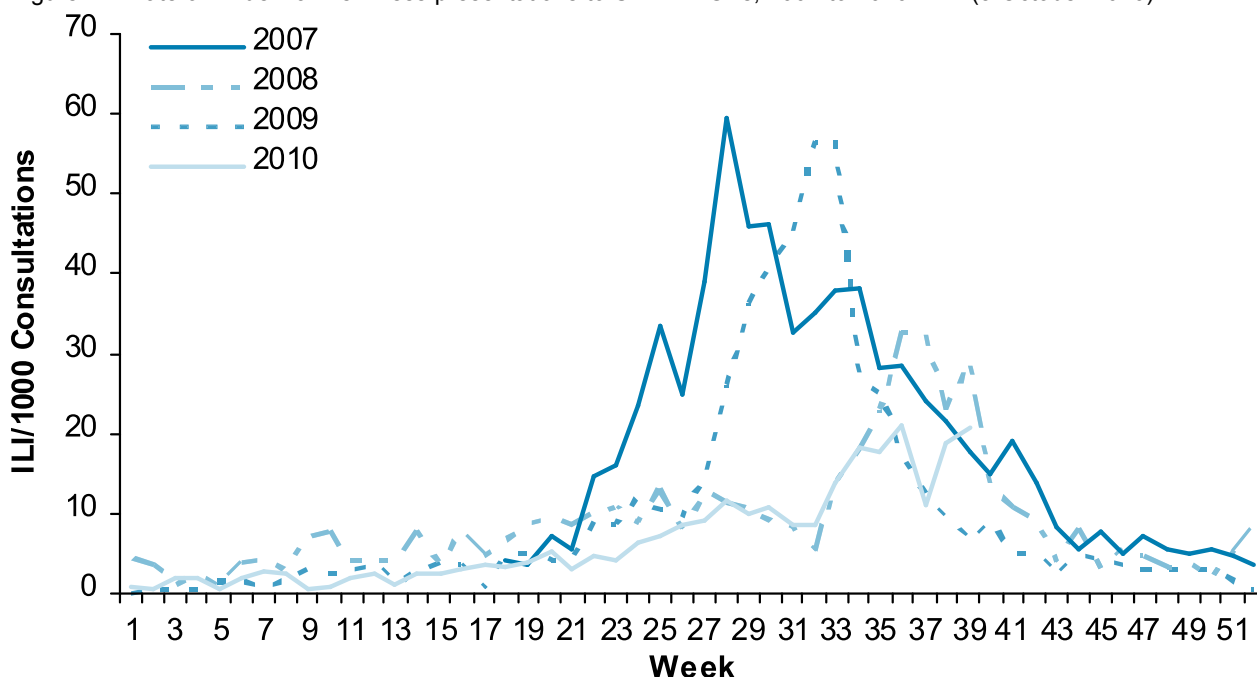
Figure 1 – Monthly influenza notifications to CDCD, by month, 2007 to 28 September 2010.



CDCD has received a total of 905 influenza notifications up to 28 September 2010, compared to 1038, 1018, and 5575 for the entire year in 2007, 2008 and 2009, respectively. The overall rate of influenza notifications in WA in 2009 was 252 cases per 100,000 population compared to 40 per 100,000 YTD in 2010. Children aged 0 - 4 years have the highest notification rates, although the rate in 2010 is lower than in the comparable years 2007 and 2008.

Influenza-like illness (ILI) reporting from the Sentinel Practitioner's Network of WA (SPNWA) is shown in Figure 2. Overall, the rate of ILI for 2010 is very similar to 2008, but with a lower peak and late surge.

Figure 2 – Rate of influenza-like illness presentations to SPNWA GPs, 2007 to 2010 YTD (3 October 2010).

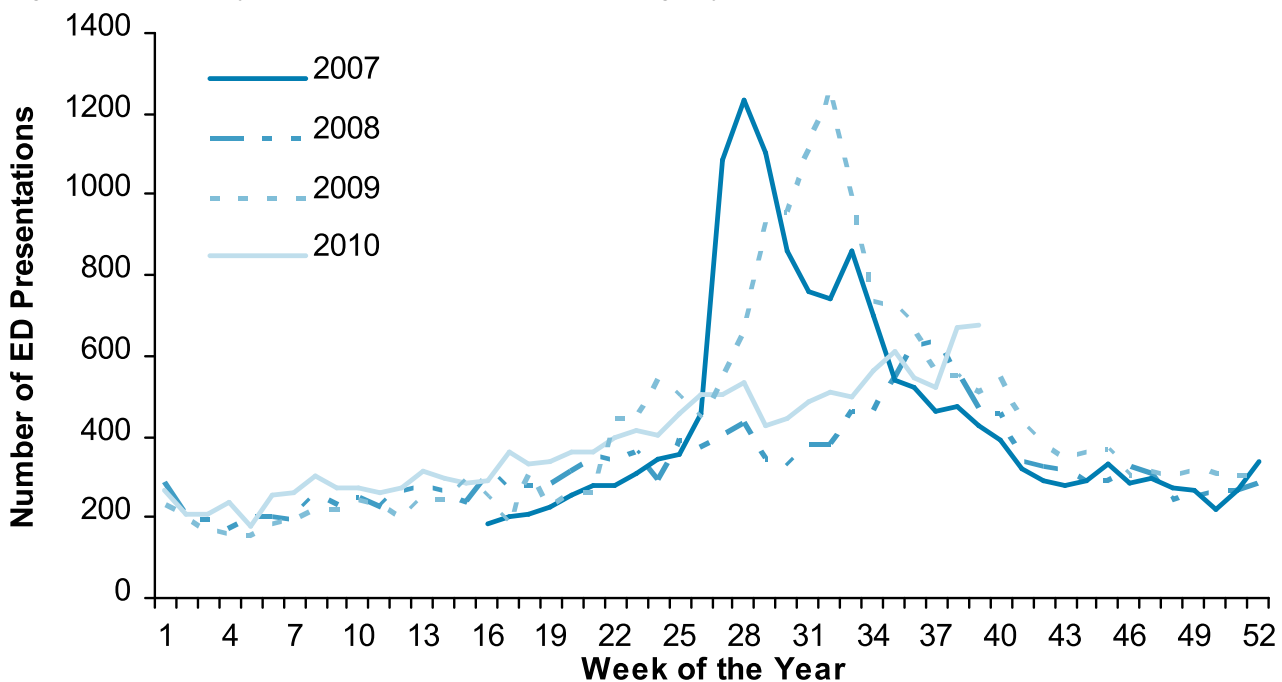




Respiratory viral presentations reported in nine Perth emergency departments have also reflected the pattern observed in 2008, without the high peaks observed in 2007 and 2009. However, in 2010 there has been more sustained late season activity than in 2008 (Figure 3).

WA influenza and ILI surveillance data are reported in the weekly newsletter Virus WAtch. To receive the weekly Virus WAtch email, send your details to [Virus.WAtch@health.wa.gov.au](mailto:Virus.WAtch@health.wa.gov.au). Current and past editions of Virus WAtch are also available at [www.public.health.wa.gov.au/3/487/3/virus\\_watch\\_homepage.pm](http://www.public.health.wa.gov.au/3/487/3/virus_watch_homepage.pm).

Figure 3 – Respiratory viral presentations to nine Perth emergency departments, 2007 to 2010 YTD (3 October 2010).



The influenza season of 2009 was dominated by the pandemic A-H1N1 2009 virus (91%: 4592/5067 of typed detections). The pandemic strain has again predominated in 2010, but to a lesser extent. To date the typed influenza notifications comprise:

- 74% (448) pandemic A-H1N1 2009 virus
- 21% (125) B virus
- 5% (28) A-H3N2 virus.

The remainder are made up of influenza type unknown or untyped influenza A viruses, most of which would be the pandemic strain. There has been a late season increase in influenza B activity in WA, comprising 29% of all typed detections in the period 1 September to 11 October 2010. This increase has not been experienced elsewhere in Australia.

This year's trivalent seasonal influenza vaccine has been well-matched to the circulating strains of influenza virus, providing good protection against the three prevailing strains of influenza A-H1N1, A-H3N2 and B virus.

While late season influenza activity continues in 2010, it is not too late to provide influenza vaccine to patients, particularly those at higher risk of more severe illness, including young children, the elderly, pregnant women, and those with chronic medical conditions. Visit [www.immunise.health.gov.au/](http://www.immunise.health.gov.au/) for groups eligible for free vaccine.

## Decline in Hepatitis A incidence in WA

Hepatitis A notification rates in WA have decreased significantly over the past decade. The vaccination program introduced for Indigenous children in 2005 appears to have had a dramatic effect, reducing hepatitis A notification rates for Indigenous people of all ages (Figure 1).

Hepatitis A infection has been a notifiable disease in WA since 1958. Infection is caused by the hepatitis A virus, which is transmitted by the faecal-oral route, with person-to-person contact and ingestion of contaminated food or water the most common means of infection.

In the 1990s there were large fluctuations in notifications of hepatitis A, ranging from 47 to 293 cases (rate 1.8 to 15.1 per 100 000 population) annually, with an average of 154 cases per year (6.5 per 100 000 population). Historically, only a small proportion of cases were infected overseas (e.g. 1% of cases in 1999).

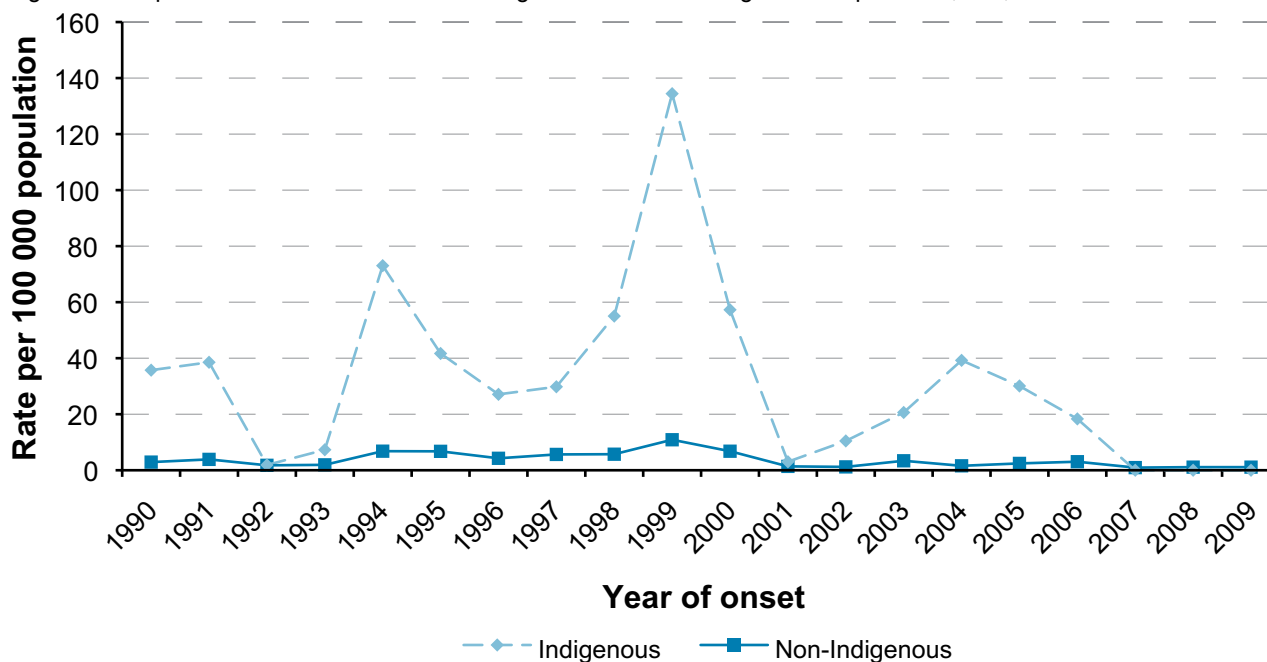
For the years 1990 to 1999, the notification rate was higher for Indigenous compared to non-Indigenous people (average rates of 45.9 and 5.1 per 100 000 population, respectively, for this time period).

### Introduction of hepatitis A vaccine

In 1994, hepatitis A vaccine was licensed for use in Australia. From 1997 onwards vaccination was recommended but not funded for travellers to endemic areas overseas; people working in child care, pre-school, food handling, paediatric areas or with intellectually disabled people; men who have sex with men; and people with chronic liver disease (The Australian Immunisation Handbook. 6<sup>th</sup> Ed. Canberra: Commonwealth of Australia 1997; 121 – 127).

In 2000, vaccination recommendations were extended to people visiting Indigenous communities or working with Indigenous children, injecting drug users, and people with an intellectual disability. Following this, WA started to see a decline in hepatitis A notifications, but rates remained higher for Indigenous compared to non-Indigenous people. From 2000 to 2005, the average notification rate in WA was 26.7 per 100 000 population in Indigenous people and 2.8 in non-Indigenous people.

Figure 1 – Hepatitis A Notification Rates for Indigenous and Non Indigenous Populations, WA, 1990 to 2009





In 2005, a funded hepatitis A vaccination program was introduced for Indigenous children at 12 and 18 months of age. The first WA children were fully vaccinated in 2006, and since 2007 there have been no cases of hepatitis A infection notified in Indigenous Western Australians.

Since the program was introduced, there has also been a significant reduction in the number of non-Indigenous cases notified from remote areas, resulting in the overall WA notification rate reducing to an average of 1.0 per 100 000 population for the years 2007 to 2009.

With the reduction in locally-acquired cases, the proportion of cases acquired overseas increased to 46% (34 of 74) of notified cases in the period 2007 to 2009 (Figure 2). Of these, 38% (n=13) were Western Australians who were born in countries with 'moderate' endemicity such as Indonesia, Iraq, Korea, the Philippines, Czech Republic and Burma, and had returned there for short stays, where they were likely to have acquired the infection.

As hepatitis A infection rates have declined in WA, the proportion of people with immunity

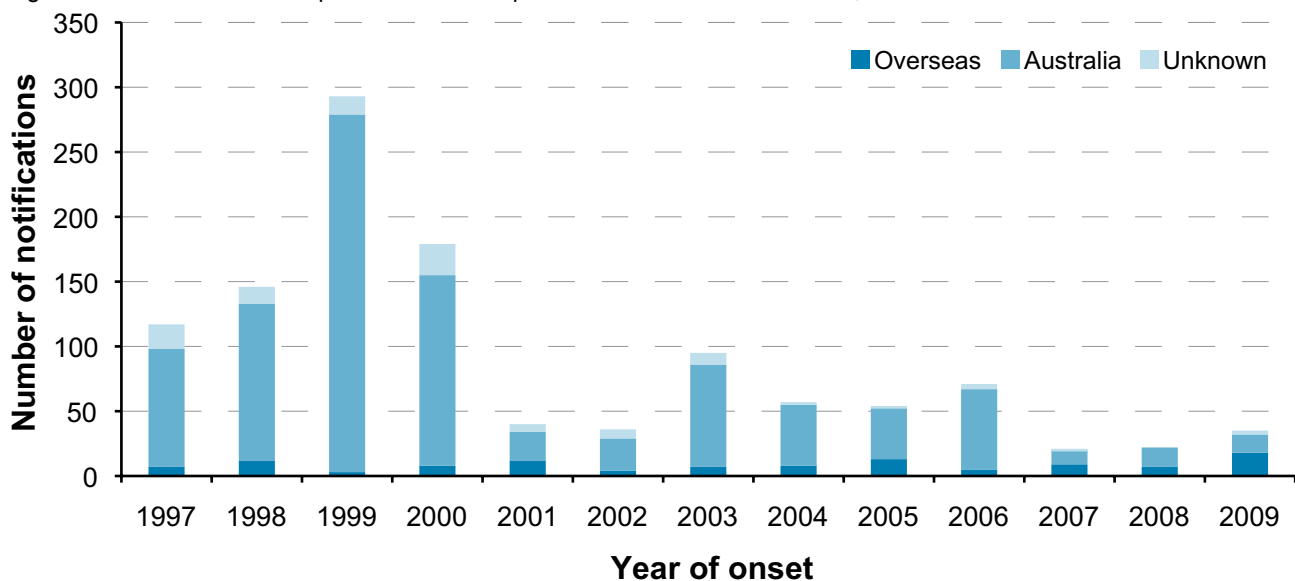
to hepatitis A has also declined, making them more susceptible to infection, particularly when transmitted through contaminated food or when travelling in endemic areas overseas.

### Foodborne outbreaks

In 2009 there were two suspected foodborne hepatitis A outbreaks in WA. The first outbreak affected five people, all of whom lived in the Great Southern area. The suspected source was frozen berries imported from Chile, with hepatitis A genetic material detected in a sample of leftover berries.

A second outbreak in November 2009 affected 11 people. These cases were linked to a larger national outbreak that was attributed to semi-dried tomatoes imported from Turkey. These outbreaks demonstrate that foods imported from hepatitis A endemic countries, without a microbiological kill step in production, and which are then eaten without cooking, are a potential risk for hepatitis A infection in Australia. Foodborne outbreaks in other states of Australia have also implicated infected food handlers.

Figure 2 – Number of WA Hepatitis A cases acquired in Australia and Overseas, 1997 to 2009





## Decline in Hepatitis A incidence in WA (continued)

### Public health response

Although WA now has low rates of hepatitis A infection, public health actions to prevent cases and further transmission are still important. These include:

1. Vaccination of people in high risk groups, as described in the Australian Immunisation Handbook, [www.health.gov.au/internet/immunise/publishing.nsf/Content/Handbook-hepatitisa](http://www.health.gov.au/internet/immunise/publishing.nsf/Content/Handbook-hepatitisa). As for Australian-born people travelling to hepatitis A endemic countries, those people who were born in endemic regions and then migrated to Australia should also be considered for hepatitis A vaccine when travelling.
2. Ensuring that hepatitis A cases in high risk occupations, such as food handling, health care and child care, are excluded from work as soon as their infection is diagnosed.
3. Rapid notification of cases to the Department of Health, so that cases can be interviewed concerning possible sources of infection, and susceptible contacts can be identified and, if appropriate, receive post-exposure hepatitis A vaccine (or Normal Human Immunoglobulin if vaccination is not recommended) to help prevent the spread of infection.

For further information on public health follow-up for hepatitis A infections, see the Communicable Disease Control Directorate Operational Directive: *Hepatitis A: National Guidelines for Public Health Units* [www.health.wa.gov.au/circularsnew/pdfs/12564.pdf](http://www.health.wa.gov.au/circularsnew/pdfs/12564.pdf)

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**Disease WAtch** is the newsletter of the Communicable Disease Control Directorate.

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