



## From the Director's desk

This issue of *Disease WAtch* features two outbreak reports – Legionnaires' disease in travellers to Bali and an outbreak of salmonellosis linked to Vietnamese pork rolls, a fairly common vehicle for transmission of *Salmonella* infection.

There are also features on a new pertussis vaccination program for parents of newborns and an important new system for reporting adverse events following immunisation – the WA Vaccine Safety Surveillance (WAVSS) system. Other articles include tips for GPs on chlamydia testing and partner notification, and some information on an upcoming chlamydia campaign.

This is the final *Disease WAtch* in the current hardcopy format. To streamline publication times and ensure information is more up-to-date, future editions will be sent by email. If you have not already subscribed to the electronic format, you can do so online at

[www.public.health.wa.gov.au/2/1205/1/communicable\\_disease\\_control.pm](http://www.public.health.wa.gov.au/2/1205/1/communicable_disease_control.pm)

Dr. Paul Armstrong  
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## Pertussis vaccination program for parents, grandparents and carers of new born babies

Free dTpa vaccine (ADACEL) aimed at protecting newborns from the current rise in pertussis (whooping cough) infection was made available to all new parents in WA from 1 January 2011, in response to the increasing number of pertussis infections.

The free pertussis vaccine is available to parents of babies less than six months old as well as grandparents and other adult household carers. The vaccine is being administered through maternity hospitals and community health immunisation centres from 1 January 2011 to 30 June 2011, with the possibility of extension.

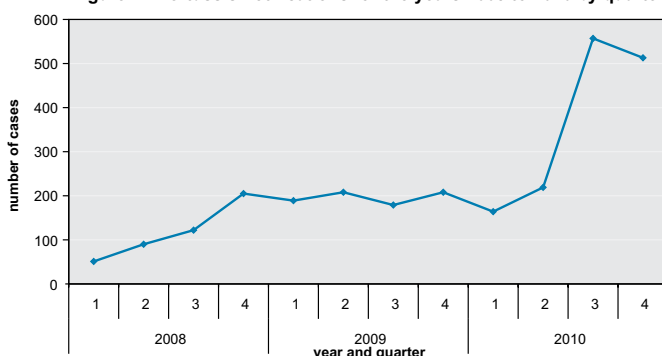
The vaccination program for new parents is intended to mitigate the threat to newborns during this period of increased risk (see Figure 1).

Pertussis (whooping cough) is a highly contagious respiratory illness with an estimated attack rate of 80 per cent among susceptible household members. Outbreaks of pertussis generally occur every three to five years and Western Australia has been experiencing a rise in the number of cases in 2010/11.

Infants are the most vulnerable to severe disease which can be complicated by pneumonia, hypoxic encephalopathy and can occasionally result in death. In order to prevent newborns from acquiring pertussis infection, the Australian Technical Advisory Group on Immunisations (ATAGI) recommends that household carers should be vaccinated as soon as possible after delivery of an infant.

The Communicable Disease Control Directorate has communicated with all Directors of Nursing and Midwifery at maternity hospitals in WA seeking their support in promoting pertussis vaccination to new

Figure 1 - Pertussis notifications for the years 2008 to 2010 by quarter



parents, and requesting that they offer the vaccine to mothers before hospital discharge. Maternity hospitals can also provide new fathers with the vaccination at the same time or provide a referral/consent form to the local council or community health immunisation centre in the Perth metropolitan area to receive their free dTpa vaccine. New mothers who were not vaccinated with dTpa while in the hospital may also present to these centres for vaccination.

While this program is principally focussed on parents, the program is also flexible enough to allow for the vaccination of grandparents or other household carers who will spend substantial time with the newborn. Grandparents and household carers can be referred to the local community health immunisation centre or the council-run immunisation clinics in the Perth metropolitan area to receive their free dTpa vaccine.

Information/consent forms have been developed for this initiative and contain important information for parents about the benefits of vaccination, pertussis illness, post-vaccination care, and possible vaccine side effects. Immunisation service providers are requested to fax a copy of the completed consent form to the Communicable Disease Control Directorate on 08 9388 4877 after administering the dTpa vaccine.

A revised fact sheet entitled *WA Pertussis Vaccination Program for New Parents* is available on the Department of Health website: [www.public.health.wa.gov.au/2/274/2/pertussis\\_whooping\\_cough\\_fact\\_sheet.pm](http://www.public.health.wa.gov.au/2/274/2/pertussis_whooping_cough_fact_sheet.pm)

Further information is available from the Prevention and Control Program, Communicable Disease Communication Directorate on 9388 4863.

## Chlamydia testing and partner notification: tips for implementation

Genital chlamydia is the most commonly notified infection in Western Australia and Australia. The number of chlamydia notifications in WA rose more than three-fold from 2,589 in 2000 to 8,883 in 2009.

Treatment of patients with chlamydia and their sexual partners is essential to prevent reinfection and/or further transmission in the community. However, although 97 per cent of WA GPs agreed that they had a professional duty to notify partners and/or trace contacts, this was done in only 29 per cent of patients with chlamydia.<sup>1,2</sup>

A Medical Forum e-poll found more encouraging results, with 42.4 per cent of Western Australian GPs responding that they always undertook partner notification.<sup>3</sup>

WA Health's 2011 chlamydia campaign aims to reduce the gap between ideal and actual practice by encouraging sexually active 15 to 29 year olds to get themselves and their sexual partners tested for genital chlamydia.

### Practice tips

Many GPs are reluctant to offer chlamydia testing because they fear it may embarrass the patient. However, surveys and focus groups conducted with young Australians and New Zealanders revealed high levels of support for GPs offering routine testing to all young people, thus 'normalising' testing.<sup>3</sup>

The vast majority of young people see a GP at least once a year.<sup>4</sup> This is a good time to offer opportunistic testing for chlamydia. Raise the issue by saying something like "It's a good idea to test for infections like chlamydia if you haven't been tested before. People can have infections without knowing about it". If the patient's presenting problem is related to sexual health, e.g. pap smear or contraception, it is easy to offer chlamydia testing as a routine part of managing the presenting issue.

Although some people react negatively after being informed by a partner that they should get tested for an STI, this can be turned into a positive by explaining that the partner has done the right thing by them because they can get tested and treated earlier rather than later when there is potential for complications to have developed (e.g. PID, infertility).

### Online chlamydia testing

This is another option for GPs and patients with chlamydia to encourage contacts of chlamydia to get tested. Since February 2010, on-line testing for chlamydia has been available in WA to asymptomatic, sexually active people aged 16 years and over (see [www.couldihaveit.com.au/onlineTesting.asp](http://www.couldihaveit.com.au/onlineTesting.asp)). People using the service complete a short questionnaire, then download and print a laboratory request form which they take to a PathWest collection centre where they are asked to provide a first-void urine sample. Testing is free and all results are followed up by Fremantle Hospital's Sexual Health Clinic. People who used this service reported they found it easy to use and appreciated the anonymity.

For more information and practice tips on partner notification and contact tracing see WA Health's Contact Tracing e-Learning Modules [www.ashm.org.au/default2.asp?active\\_page\\_id=341](http://www.ashm.org.au/default2.asp?active_page_id=341).

Information for GPs and patients about chlamydia and WA Health's 2011 chlamydia campaign is available at [www.couldihaveit.com.au](http://www.couldihaveit.com.au)

### References

1. Bangor-Jones RD, McCloskey J, Crooks AM L, Bastian LA, Mak DB, Dykstra C, Marshall LJ, Achitei SR. Attitudes of WA GPs to chlamydia partner notification - A survey. *Aust Fam Physician* 2009;38:448-52.
2. Bangor-Jones RD, Mak DB. Sexual health in General Practice: do practitioners comply with the STI Guidelines for management of suspected chlamydia infections? *International Journal of STD & AIDS*, in press.
3. Mak, D. Chlamydia testing and partner notification: tips for implementation. *Medical Forum* 2011; Feb ed: 39.
4. Lea T. Chlamydia and young people. *Social Research Briefs of the National Centre in HIV Social Research*. 2010;17:1-2.

Government of Western Australia  
Department of Health

# COULD I HAVE IT?

Chlamydia is a sexually transmitted infection that is common in 16–29 year olds. Most people won't know they are infected. See a doctor for a simple urine test or visit [couldihaveit.com.au](http://couldihaveit.com.au) to get information about a free chlamydia test.

[couldihaveit.com.au](http://couldihaveit.com.au)

**CHLAMYDIA**  
Most people haven't got a clue

## WA Vaccine Safety Surveillance (WAVSS): a one-stop shop for reporting and following up adverse effects following immunisation

The WA Vaccine Safety Surveillance (WAVSS) was launched in early March 2011. This service was established by the Western Australian Department of Health to help immunisation providers manage patients who have had an adverse event following immunisation (AEFI).

WAVSS is based on SAEFVIC, Victoria's vaccine safety surveillance system, which is recognised nationally as a best practice system for AEFI reporting.

### Who should report AEFIs?

Medical Practitioners in Western Australia have a statutory requirement to notify the WA Department of Health of AEFIs. Parents, guardians or any health professional caring for a person who has experienced an adverse event following immunisation, may also report. Reporting an AEFI to WAVSS is easy (see box).

### Which AEFIs should be reported?

An AEFI is 'an unwanted or unexpected event following the administration of a vaccine(s)'. Any AEFI felt to be significant following immunisation should be reported to WAVSS. In particular, any reaction which requires assessment by a doctor or nurse, or which has affected a family's confidence in future immunisation should be reported. Common/minor reactions, e.g. mild fever and local reactions need not be reported.

### What are the benefits of reporting an AEFI to WAVSS?

An immunisation nurse reviews all AEFIs reported to WAVSS.

WAVSS provides:

- A user-friendly way for immunisation providers and patients to report AEFIs.
- Clinical support to patients and immunisation providers.
- Individualised assessment of the suspected adverse event and options regarding future vaccinations.
- Referral to immunisation clinics for individuals with a history of a significant AEFI.
- Feedback to immunisation providers about the AEFIs they have reported.

Practitioners who report an AEFI to WAVSS need not report to the Therapeutic Goods Administration because this will be done by WAVSS staff.

The clinical back-up provided by WAVSS lets parents and vaccination providers know that their concerns are being taken seriously. This will increase the public's confidence in continuing the immunisation schedule even if they have experienced an AEFI.

### How to report an AEFI?

Report an AEFI at any time (24 hours a day, 7 days a week) by:

- Online report via: [www.wavss.health.wa.gov.au](http://www.wavss.health.wa.gov.au)
- Telephone: (08) 9321 1312 between 8.30am and 4.30pm
- Completing a WAVSS reporting form and returning it by fax or post:
  - Fax: (08) 9426 9408 (24 hours)
  - Post: Central Immunisation Clinic, PO Box 8172, Perth Business Centre, WA 6849

## STI guides for doctors and nurses now online

WA Health's *Guidelines for Managing Sexually Transmitted Infections*, commonly known as the "Silver Book", is available online at <http://silverbook.health.wa.gov.au/>

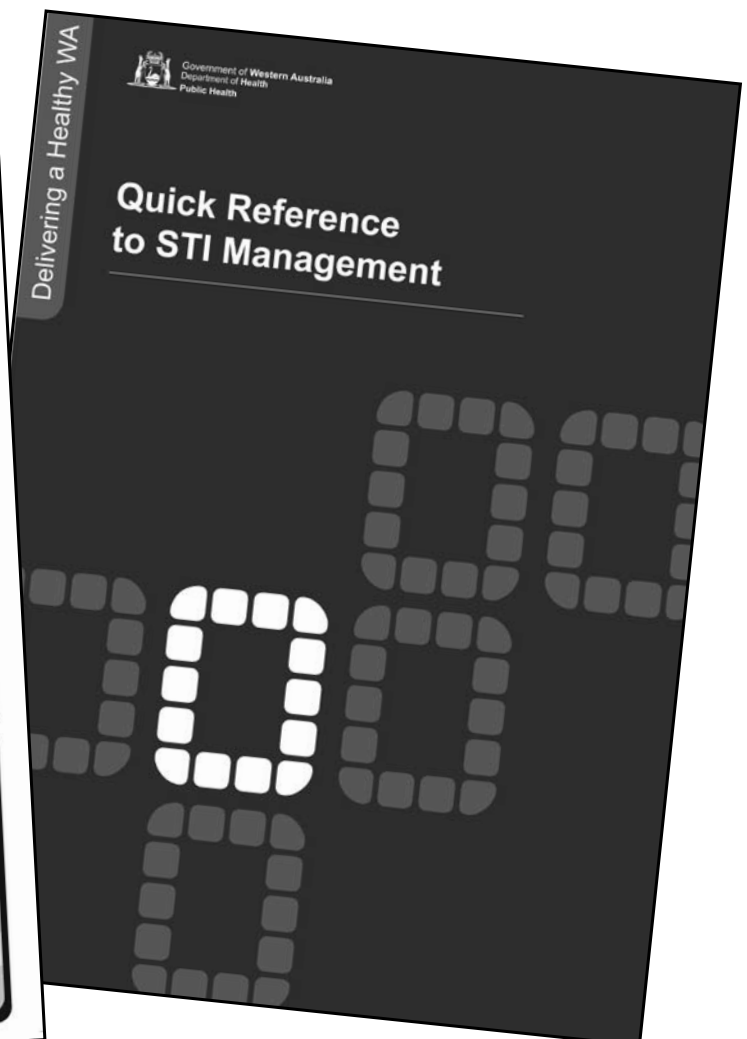
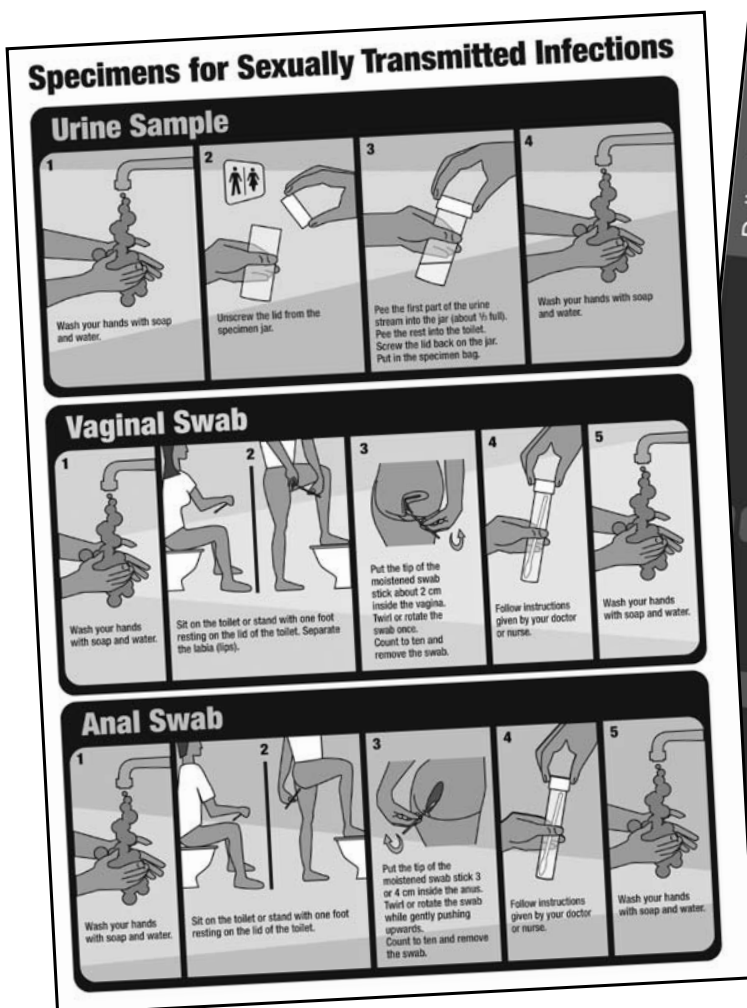
The guidelines include links to three new desktop resources. These assist health professionals with specimen collection, STI testing and STI management. The resources were developed in consultation with health care providers throughout WA.

- Specimens for Sexually Transmitted Infections\* - HP11946 [http://silverbook.health.wa.gov.au/toolbox/resources/sti\\_self\\_testing\\_card](http://silverbook.health.wa.gov.au/toolbox/resources/sti_self_testing_card)
- Quick Guide to STI Testing\* - HP11948 [http://silverbook.health.wa.gov.au/toolbox/resources/sti\\_testing\\_tool](http://silverbook.health.wa.gov.au/toolbox/resources/sti_testing_tool)

- Quick Reference to STI Management - HP11947 [http://silverbook.health.wa.gov.au/toolbox/resources/sti\\_management\\_quick\\_reference](http://silverbook.health.wa.gov.au/toolbox/resources/sti_management_quick_reference)

Print versions of the resources will also be produced and distributed to all general practitioners and other health care providers in early 2011.

For further information please contact: Sue Laing, Senior Policy and Planning Officer, Sexual Health and Blood-borne Virus Program (email: [susan.laing@health.wa.gov.au](mailto:susan.laing@health.wa.gov.au))



\* Adapted from the New South Wales STI Programs Unit's resources.

## Salmonella Typhimurium outbreaks in Western Australia associated with Vietnamese pork rolls

WA Health has investigated two *Salmonella* Typhimurium (STM) outbreaks associated with the consumption of Vietnamese pork rolls in recent years. Typically the rolls are crusty bread filled with cooked pork belly slices, fresh coriander and cucumber with a raw egg butter. Outbreaks due to these rolls are not unique to Western Australia – several large *Salmonella* outbreaks associated with Vietnamese pork rolls have also been investigated in other Australian states.

### 2009 Outbreak

In July 2009, an emergency department doctor alerted WA Health that a person of Vietnamese background with *Salmonella* gastroenteritis had implicated a “meatball sandwich” (later identified as a Vietnamese pork roll) as the cause of their illness. The doctor also reported a Vietnamese family with gastroenteritis was in the emergency department at the same time. Given this apparent link, the Communicable Disease Control Directorate interviewed people who had been diagnosed and notified with infections due to *Salmonella* (prior to speciation) in the same period, including the cases first reported. The outbreak strain was subsequently identified as STM and typed as pulsed-field gel electrophoresis (PFGE) type 0279. Sixteen cases were identified who had eaten Vietnamese pork rolls within a 10-day period. A labelled food container from a case identified the store where the Vietnamese pork rolls were manufactured and these rolls were positive for the same type of *Salmonella*.

A local government environmental health officer found the food business had satisfactory food handling and storage, with no staff illness. The manufacturer supplied Vietnamese pork rolls to six other food businesses and Vietnamese pork rolls were at room temperature while they were transported and displayed for sale.

### 2011 Outbreak

The second outbreak was investigated in January 2011 after PathWest alerted WA Health about four people with *Salmonella* infection who had Vietnamese names. The outbreak *Salmonella* strain was later typed as STM PFGE type 001. Interviews revealed that nine people with this *Salmonella* type had eaten Vietnamese pork rolls within a nine-day period. The Vietnamese pork rolls were traced back to a single food business, which was found to have deficient food hygiene practices, including poor food-handling knowledge among staff. The Vietnamese pork rolls prepared at the food business were supplied to at least three other food businesses. At one of these food businesses, rolls were kept in a bain-marie at 37°C. One staff member was ill with the outbreak strain. Food samples were negative for *Salmonella*.

### Conclusion

In both outbreaks the mechanism that led to the contamination of rolls was not clearly identified. However, possible contributing factors to both outbreaks were the use of raw egg butter and the fact that rolls were not refrigerated, either during transport from the place where they were made to retail shops or during storage at these shops. For each outbreak, local government authorities worked with the food businesses to improve food-handling and hygiene practices.

These outbreaks highlight the importance of obtaining laboratory diagnosis in cases of food-borne gastroenteritis. If general practitioners suspect a patient has food poisoning, it is important that they request stool testing as this is the main method of detecting these outbreaks and preventing further illness in the community.

## Outbreak of Legionnaires' disease associated with a resort hotel in Kuta, Bali

### Introduction

*Legionella* bacteria can cause either pneumonic ("Legionnaires' disease") or non-pneumonic ("Pontiac fever") illnesses, although the pneumonic form appears to predominate in Australia. In Western Australia, CDCD has received between 50 and 92 notifications of legionellosis annually in the period 2006–2010.

*Legionella longbeachae*, which is associated with exposure to gardening soils, potting mixes and mulches, is the predominant cause of legionellosis notified in WA, comprising 84 per cent to 97 per cent of cases annually in the past five years, with most of the remainder being sporadic cases of *Legionella pneumophila* infection. However, in the eastern states of Australia and internationally, *Legionella pneumophila* serogroup 1 is the most common cause of disease, and often presents as clusters of cases associated with exposure to warm water aerosols containing the bacteria from environmental sources such as air conditioning cooling towers, showers, spa pools, fountains and mist systems.

Unusually, in late August 2010, two cases of *Legionella pneumophila* serogroup 1 infection in Perth residents were notified to CDCD within a period of two days. Interviews revealed that both had stayed at the same resort hotel in Kuta, Bali, prompting heightened surveillance for further cases.

### Epidemiology of the outbreak

Following the alert regarding the first two WA Bali-associated cases of Legionnaires' disease, two further cases were notified in residents of WA and Victoria who had also holidayed in Kuta during August 2010. All three WA cases had stayed at the same hotel in central Kuta, as had a Western Australian who had reportedly died from an undiagnosed pneumonia in Bali at that time. Subsequently, a further confirmed case was reported in

Victoria in October, and then a cluster of eight new cases (six WA and two Victoria) were notified, all with disease onsets between mid December 2010 and 22 January 2011, making a total of 13 Bali-associated cases, nine from WA and four from Victoria.

Cumulatively, 12 of the 13 cases with *Legionella pneumophila* infections (identified as serogroup 1 organisms in 10 cases) had stayed at the Ramayana Resort and Spa hotel in Kuta during their respective incubation periods (typically two to 10 days) preceding illness onset, while the initial Victorian case had stayed at a different Kuta hotel. In addition, nine cases reported visiting one large shopping centre located near the Ramayana, although this is much less likely to be the source given that many thousands of persons staying in other hotels also frequent this shopping centre each week. All but one case was hospitalised with severe pneumonia, and most required intensive care treatment. Cases were aged between 41 and 82 years (median 54 years), and males (85 per cent) predominated.

In addition to the Australian cases, European health authorities reported two cases of Legionnaires' disease in middle-aged travellers who had been in Kuta in October – one had stayed at the Ramayana hotel and the other had shopped in the near vicinity.

Eleven of the Australian cases had one or more risk factors for Legionnaires' disease, with current or past smoking (n=8) reported most frequently. Two cases had type 2 diabetes, one was post organ transplantation, and one had thyroid disease. The two cases without recognised medical risk factors for legionellosis both had hypertension, and were aged in their early 50s.



## Investigation and response

Alerts were issued to WA GPs, hospitals and laboratories following identification of the initial cluster of cases in late August, and the public was warned via a media alert. In addition, disease control units in other states and territories were advised, and an alert posted on ProMED, an international electronic reporting system for infectious disease outbreaks. These various alerts were updated over time as further cases were identified.

The Indonesian Ministry of Health was notified officially of all cases via the mechanisms outlined in the World Health Organisation's (WHO) International Health Regulations. Indonesian authorities, with assistance from WHO, investigated the implicated hotel and adjacent sites in late October 2010 and again in mid-January 2011, and disinfection of potential sources of *Legionella* organisms was undertaken on both occasions. It is understood that initial suspicion focused on air cooling towers at a site adjacent to the hotel, but that following the second cluster of cases in December/January, the investigation centred more closely on potential sources at the hotel itself.

## Environmental testing

As far as is known, testing in Indonesia did not identify the source for the organisms causing the outbreak. However, determining environmental sources for *Legionella* bacteria is difficult: negative tests do not necessarily indicate that there is no contamination, and nor do they indicate that there is no ongoing risk to health. Conversely, detection of *Legionella* organisms in environmental samples may not indicate the actual source, and molecular techniques are necessary to match patient and environmental bacterial isolates to definitively identify the source.

## Clinical aspects

Both the pneumonic and non-pneumonic forms of legionellosis typically present with fever, myalgia, headache, malaise, and anorexia. Diarrhoea and confusion may also occur. The pneumonic form of the disease additionally causes a dry cough and shortness of breath and not infrequently progresses to respiratory failure.

Cases are typically aged above 50 years and most also have identified risk conditions, which include smoking, diabetes, chronic respiratory disease, renal disease or impaired immunity. Chest X-ray findings are variable and include patchy or focal areas of consolidation or bilateral involvement. A positive urinary antigen test is specific for *Legionella pneumophila* serogroup 1 organisms. Other diagnostic options include acute and convalescent serology and PCR/culture of respiratory specimens.

Appropriate therapy for legionellosis includes macrolides (erythromycin or azithromycin), doxycycline or ciprofloxacin.

## Current situation

At the time of writing (early April 2011), the last reported outbreak case was in Bali in mid-January, and had onset of illness on 22 January, the day after returning to Perth. While it is reassuring that there have been no further cases since then, it remains unclear whether the disinfection procedures undertaken have successfully mitigated the risk – only time will tell. Certainly, it remains important that WA doctors consider the diagnosis in middle-aged and elderly persons recently returned from Bali who have illnesses consistent with an atypical pneumonia.

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

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