

# HANDS UP FOR HANDS-ON!

Infection Prevention & Control Newsletter

## LEGIONNAIRES' DISEASE IN BALI

Hands Up for Hands-On

Spring 2010

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The Department of Health WA has issued a warning to travellers who have recently returned from Bali to be alert for symptoms which are consistent with Legionnaires' Disease.

Two Western Australians and one Victorian who recently returned from Bali have been diagnosed with severe pneumonia due to infection caused by *Legionella pneumophila*. Communicable Disease Control Director Dr Paul Armstrong said all three people were most likely infected in the central Kuta area of Bali.

Legionnaires' Disease is a serious and potentially life threatening lung infection that is caused by the bacteria *Legionella*. The most common species associated with causing human disease in Australia are *Legionella pneumophila* and *Legionella longbeachae*.

*Legionella pneumophila* can be transmitted through the air by

inhaling fine droplets of water contaminated with the organism, and are associated with warm water environments such as:

- cooling towers
- evaporative air-conditioners
- showers
- warm water systems
- spa pools
- misting or droplets sprays and
- fountains.

*Legionella longbeachae* is the most common strain of *Legionella* in WA and is associated with breathing in aerosols from:

- potting mixes
- gardening soils
- mulches
- composts and
- soil conditioners.

### Symptoms

The early symptoms of Legionnaires' Disease are often like a severe 'flu' infection, and include some or all of the follow-

ing symptoms:

- Fever (up to 40°C)
- Chill
- Aching muscles/joints
- A dry cough
- Headache (often severe)
- Tiredness
- Loss of appetite
- Shortness of breath.

### Risk Factors:

*Legionella* infections are more common in middle aged and older persons and those whose immune system is weak. Men are affected more commonly than women. Factors that increase your risk include:

- Smoking
- Lung disease
- Diabetes
- HIV/AIDS
- Cancer
- Steroid use or other immunosuppressive medication
- Renal disease
- Being over 50 years of age.

## Hypervirulent *Clostridium difficile* Infection in Healthcare Facilities and Alcohol Based Hand Rubs

The situation regarding use of Alcohol Based Hand Rubs (ABHR) when caring for people who have *Clostridium difficile* Infection (CDI) has been clarified in the recently released position statement from ASID/AICA.

Although ABHR is ineffective against spores it is highly effective against the vegetative state of *C. difficile*.

Effective hand hygiene is imperative and point of care hand hygiene has greatly increased compliance.

In summary, ABHR remains the agent of choice for hand hygiene in accordance with the 5 moments of hand hygiene. Gloves should be used during the care of a person with CDI, to minimise spore contamination. If hands become soiled, or gloves have not been used, then hands

must still be washed with plain soap (or an antimicrobial soap) and water. Hands should then be dried thoroughly with a paper towel.

Ref: ASID/AICA. (2010). Position statement: Infection control guidelines for patients with *Clostridium difficile* in healthcare settings.

Available from: <http://www.aica.org.au>



HANDS-ON INFECTION CONTROL

## Vaccination Update

### *Pertussis*

*(Whooping Cough)*

#### Are you up to date with the current Pertussis guidelines?

Vaccines for Pertussis are only available in Australia in combination with Diphtheria and Tetanus:

*DTPa (paediatric) and dTpa (adult )*

The current vaccination schedule is:

- 2, 4 and 6 months of age
- 4 years of age
- 12-17 years of age
- 50 years of age unless given within 10 years.

A single booster dose of dTpa is recommended for the following groups provided that no documented dTpa booster has been previously received (unless contra-indicated):

- Adults planning a pregnancy or both parents ASAP after delivery of an infant.
- Adults working with young children.
- All healthcare workers.
- Any adult expressing interest in a booster dose of dT should be encouraged to do so with dTpa.

For more details or further information see:

[www.immunise.health.gov.au](http://www.immunise.health.gov.au)

### *What am I?*

I am a virus found in certain mammals endemic throughout much of Africa, Asia, the America's and Europe.

Infection occurs following wounds proximal to the central nervous system and richly innervated sites.

The prodromal stage lasts up to 10 days and patients may experience non-specific symptoms such as anorexia, cough, fever, headache, myalgia, nausea, sore throat, tiredness and vomiting. Anxiety, agitation and apprehension may also occur.

The neurological status of the patient deteriorates over a period of up to 12 days.

I am almost invariably fatal.

## Pet Therapy

In 2009 AICA released a position statement on Pet Therapy. In summary, the benefits of animal assisted intervention, facility pets and personal pet visitation is well established and documented.

The risk of zoonotic infections can be minimised with the implementation of guidelines regarding:

- Animal health and hygiene
- Restricted animals
- Patient/resident/client health and hygiene
- Restricted areas within the facility/service.

**All facilities with assisted animal intervention programs, facility and personal pets should have guidelines in place addressing animal hygiene, patient hygiene, and restricted animals and areas within the facility.**

- Assisted intervention animals, facility pets and personal pets should be screened for parasites, skin problems and fully vaccinated (evidenced by veterinary immunisation certificate).
- Animals entering a healthcare facility should be washed and groomed within the previous 24 hours
- Facility pets housing should be kept clean (e.g. aquarium with filter, bird cage litter tray routinely cleaned).

For further information refer to: AICA Position Statement - Pet Therapy and Pet Visitors in Healthcare Facilities (approved 20 February 2009)

Retrieved from : <http://www.aica.org.au>



## Education Matters

## Measles

### National AICA 2010 Conference in Perth from 4 to 6 October 2010

Have you registered yet?

For information and details see

[www.aicaconference.org.au](http://www.aicaconference.org.au)

Infection Prevention Study Day Series (No. 2) for Residential Care Staff 13 October 2010 (Perth)

Infection Prevention Study Day for Day Hospital/

Procedure Facilities 19 November 2010 (Perth)

Graduate Certificate Infection Prevention & Control 2011 (Perth)

Our study days have been endorsed by APEC No 070523701 as authorised by Royal College of Nursing, Australia (RCNA) according to approved criteria. Attendance attracts RCNA CNE points as part of RCNA's Life Long Learning Program (3LP).

All education topics and Study Day information is available on our website

Following the Measles alert mentioned in our last newsletter, we can confirm a cluster of 9 cases, all adults, from the index case acquired in SE Asia.

Measles is a highly infectious, acute viral illness spread by respiratory secretions, including air-borne transmission via aerosolised droplets.

It is infectious from the beginning of the prodromal period and up to 4 days after the appearance of the rash.

Incubation period: usually 10–14 days.

Symptoms: Measles is characterised by a morbilliform, non-pruritic rash (usually beginning on the head or neck), cough and fever. Other symptoms include sore throat, fatigue, conjunctivitis and coryza.

Complications: Measles is often a severe disease, frequently complicated by otitis media (9%), pneumonia (6%) and diarrhoea (8%). Acute encephalitis occurs in 1 per 1000 cases, and has a mortality rate of 10–15%, with 15–40% of survivors suffering permanent brain damage. Subacute sclerosing panencephalitis (SSPE) is a late complication of Measles, occurring on average 7 years after infection, in approximately 0.5–1 per 100 000 measles cases. SSPE causes progressive brain damage and is always fatal.

Complications from Measles are more common and more severe in the chronically ill, in children <5 years of age, and in adults.

Further information is available from: <http://www.public.health.wa.gov.au/3/336/3/measles.pm>

*AS/NZS 4187:2003 Cleaning, disinfecting and sterilizing reusable medical and surgical instruments and equipment, and maintenance of associated environments in health care facilities.*

After submission of a successful application for Standards Australia to fund and resource the revision of AS/NZS 4187:2003, committee HE-023 has recently been informed that the revision process is likely to recommence in the near future and once started the revision must be completed within a two year timeframe. This means that a new edition of AS/NZS 4187 should be available no later than early 2013 or hopefully much sooner.

## Brain Teaser—what disease am I ?

Unscramble me using the clue:

- |                    |  |
|--------------------|--|
| 1. Lalmsupiviropa  | Several hundred species exist. They replicate exclusively in the basal layer of the body surface tissues.  |
| 2. glotvoycuarisme | a herpes virus that causes a small but significant possibility of foetal damage in pregnancy.  |
| 3. stietrnargetiso | term for a group of viral or bacterial infections causing diarrhea.  |
| 4. eptidrhhai      | A gram +ve, non-sporing, non-capsulate bacillus. The exotoxin produced acts locally on the mucous membrane of the respiratory tract to produce an adherent membrane. |

Answers page 4

## Infection Prevention & Control - The Responsibility Is In Our Hands

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HANDS-ON INFECTION CONTROL

## Scarlet Fever Outbreak - Confirmed in WA Mid-West

The Health Dept of WA has confirmed a small outbreak of Scarlet Fever around the Geraldton region following publicity regarding the recent death of a teenager who was not diagnosed.

**Cause:** *Streptococcus pyogenes*, or group A beta-hemolytic streptococcus, causes scarlet fever. This is the same bacterial infection that causes strep throat, but the strain of bacteria causing scarlet fever releases toxins that produce the rash, Pastia's lines, flushed face and red tongue.

**Transmission:** Strep bacteria that cause scarlet fever spread from one person to another by fluids from the mouth and nose. If an infected person coughs or sneezes, the bacteria can become airborne, or the bacteria may be present on things the person touches – a drinking glass or a doorknob. If you're near an infected person, you may inhale airborne bacteria. Scarlet fever strep bacteria can also contaminate food, especially milk, but this mode of transmission isn't as common.

**Symptoms:**

- Red rash that looks like a sunburn and feels like sandpaper
- Red lines (Pastia's lines) in folds of skin around the groin, armpits, elbows, knees and neck
- Strawberry-like red and bumpy appearance of the tongue, often covered with a white coating early in the disease
- Flushed face with paleness around the mouth
- Fever of 101 F (38.3 C) or higher, often with chills
- Very sore and red throat, sometimes with white or yellowish patches
- Difficulty swallowing
- Enlarged glands in the neck (lymph nodes) that are tender to the touch
- Nausea or vomiting
- Headache.

The sore throat, enlarged lymph nodes and fever are likely to appear first, while the "scarlet" signs and symptoms of scarlet fever usually appear on the second day of illness. If your child has scarlet fever, the rash and flushing will likely begin on his or her face or neck, later spreading to the chest, trunk, arms and legs. The rash won't appear on the palms of the hands or soles of the feet. The rash and the redness in the face and tongue usually last about a week. After these signs and symptoms have subsided, the skin affected by the rash often peels.

**Incubation period:** is usually two to four days. If scarlet fever isn't treated, a person may be contagious for a few weeks even after the illness itself has passed. And someone may carry scarlet fever strep bacteria without being sick. Therefore, it's difficult to know if you've been exposed.

**Complications:** Scarlet fever rarely results in serious complications, particularly if promptly and appropriately treated with antibiotics. But post-scarlet fever disorders may occur. These include:

Rheumatic fever, Poststreptococcal glomerulonephritis, Pediatric Autoimmune Neuropsychiatric Disorders (PANDAS), Bacteraemia, Ear infection (otitis media), Meningitis, Mastoiditis, Endocarditis, Pneumonia, Sinusitis, Arthritis, Pus-filled sac (abscess) in the throat, Skin infections.

## Puzzle Answers:

### What am I (page 2): *Rabies*

Along with the Australian bat lyssavirus (ABL), rabies is a member of the family Rhabdoviridae. Although Australia is free from endemic Rabies, 2 cases of fatal Rabies like illness caused by ABL were reported in 1996 and 1998. Evidence of ABL infection has since been identified in all 4 species of Australian fruit bats and several species of Australian insectivorous bats. It should therefore be assumed that all Australian bats have the potential to be infected with ABL.

### Brain Teaser (page 3)

1. Papillomavirus
2. Cytomegalovirus
3. Gastroenteritis
4. Diphtheria

This newsletter's purpose is to provide information only. Every effort has been taken to ensure it contains accurate and up-to-date information at the time of publication. While our advice and information is professionally sourced and provided in good faith and all care has been taken in preparation