

TROPICAL PUBLIC health news.

Tropical Public Health Services (Cairns)

Introduction

Communicable diseases are in a constant state of change and evolution.

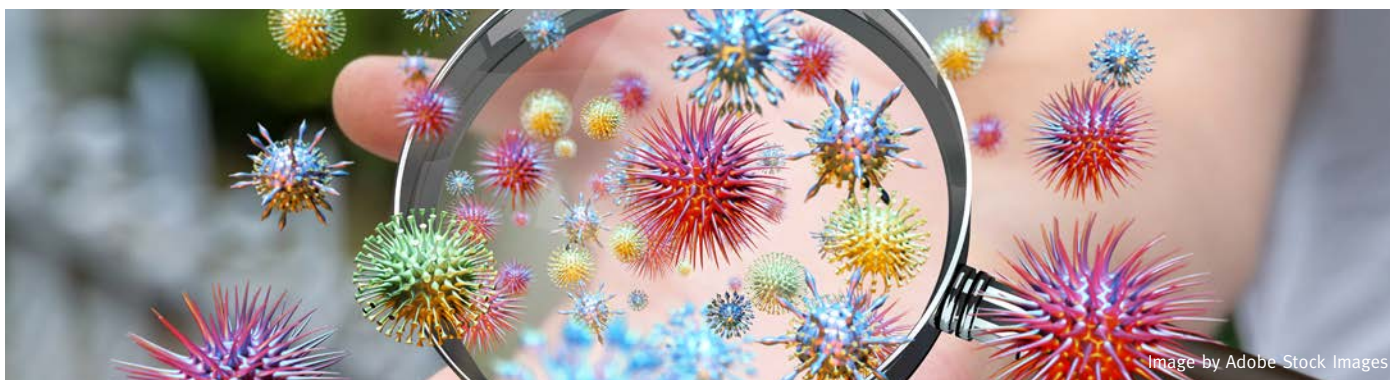


Image by Adobe Stock Images

The influenza virus changes each season; most years the change is a minor drift to slightly altered viruses to which the community retains some immunity from previous infection or vaccination. In some years however the virus shifts to a completely new strain to which no one has immunity. This strain can then rapidly spread through the community and a completely new vaccine is required to protect against it.

The introduction of an old virus to a new area can also lead to rapid spread amongst a susceptible community as happened with Zika virus in Brazil. In the period 2015-17, Brazilian health authorities reported 223,230 suspected cases of Zika and 133,527 confirmed cases. These numbers do not take into account the significant number of asymptomatic cases, up to 80%. There are estimates of several million real cases throughout the Americas, over a period of a year and a half - by far the largest recorded known outbreak of a Zika virus.

The majority of Zika infection cases do not result in symptoms. In these cases the only way that it can be detected is by blood or urine testing. The increasing number of flights to potentially infected areas has increased the risk of importation and transmission of Zika, Dengue and Chikungunya in North Queensland.

Sexually transmitted infections are particularly difficult to monitor as there are sensitivities around providing information on sexual contacts. For this reason outbreaks of sexually transmitted disease are difficult to control. Syphilis is a sexually transmitted disease and many people infected with syphilis do not realise that they have the disease, do not seek treatment and therefore continue to pose a risk of infection to others, including unborn fetuses. For this reason, health practitioners need to be proactive in seeking out and treating STIs by encouraging those at risk to be screened.

In order to detect outbreaks of disease, whether caused by new or already recognised viruses or bacteria, a surveillance system is required. This not only alerts us to the spread of disease but also allows us to monitor our progress controlling the resultant disease.

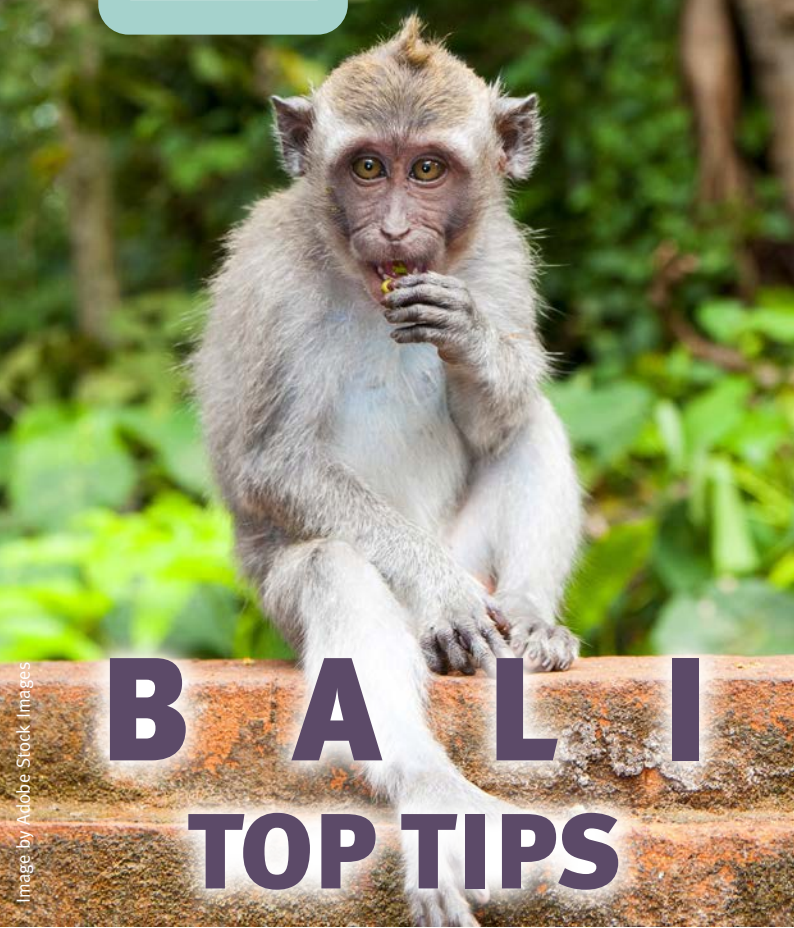
The public health unit receives and monitors surveillance data from a number of different sources including clinical notification of disease and reports of laboratory testing. There is a list of notifiable diseases for Queensland which can be accessed at <http://disease-control.health.qld.gov.au/>

*Dr Richard Gair, Director
Tropical Public Health Services (Cairns)*

In this issue:

- + Bali - Top Tips
- + Guide to offering STI testing to people under 16 years
- + Zika virus update
- + National Seasonal Influenza Program for 2017





BALI TOP TIPS

With cheap direct flights from Cairns, Bali remains a travel hotspot for Far North Queenslanders.

As a result, there has been a three-fold increase in imported dengue cases into our region from Bali (see figure 1), as well as an increase in travellers bitten by monkeys or dogs whilst in Bali, leading to a substantial increase in the use of costly post exposure rabies vaccines which are in short supply.

To ensure your patients make the most of their holiday and return home healthy, here are our top three public health messages for Bali travel:

1. Don't monkey around

- Tourists are often encouraged to interact with monkeys but monkeys may become aggressive, especially around food. All patients who have been bitten by a monkey will require a post exposure course of rabies immunoglobulin and 4 vaccinations. The same applies for dog bites in Bali. Contact TPHS to notify the exposure and arrange supply of immunoglobulin and vaccine.
- Travellers may choose to have a course of pre-exposure rabies vaccines prior to travel which means that they are already protected. This will also provide protection from the Australian Bat lyssavirus.

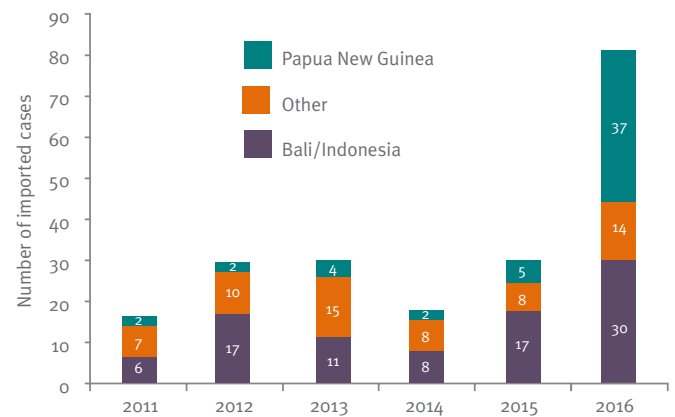
2. Spray them away

- Dengue is endemic in Bali and we often see imported cases of dengue from this region, which puts us at risk of a local dengue outbreak. Encourage patients to avoid mosquito bites at all times including applying repellent at regular intervals, especially during the day. Spraying surface spray in dark areas under furniture in hotel rooms will kill any mosquitos that may be present.
- All febrile returning travellers should have bloods taken for dengue and Zika testing and be notified on clinical suspicion to Tropical Public Health Services (Cairns).

Recommended testing schedule:

- Dengue NS1 (first 9 days of illness)
- Dengue and Zika PCR (first 5 days of illness)
- Dengue and Zika serology (from day 3 of illness)
 - Urine Zika PCR (first 2 weeks of illness)

Figure 1: Notifications of imported dengue cases in Far North Queensland by country acquired (onset date between 1 Jan 2011 and 31 Dec 2016)



*Direct flights between Cairns and Bali commenced early 2015

3. Peel it, cook it or chuck it

“Bali belly” is a common unwelcome souvenir for returning tourists and may be due to infection from food or water.

Travellers should only:

- Drink bottled water, including when cleaning their teeth.
- Consume freshly cooked food or consume factory-packed food from a reputable manufacturer
- Eat fruit and raw vegetables that have been washed in safe water or peeled by them.



Guide to offering STI testing to people under 16 years

A new “Guide to offering STI testing to people aged less than 16 years attending clinical services” is available.

This document clarifies issues for clinicians when considering testing an individual aged less than 16 years. Its aim is to reduce the risks of undiagnosed STIs and their complications, but with an awareness of potential social and emotional impacts of testing and/or a positive diagnosis.

The guide was developed in the context of an ongoing syphilis outbreak across Northern Australia, predominantly affecting young Aboriginal and Torres Strait Islander people as part of the *North Queensland Aboriginal and Torres Strait Islander STI Action Plan 2016-2021*. The guide has been endorsed for use in the following North Queensland Hospital and Health Services (HHSs): Torres and Cape, Townsville, Mackay, Cairns and Hinterland and North West HHSs. The new guide is available at: www.health.qld.gov.au/clinical-practice/guidelines-procedures/sex-health/guidelines

Any questions relating to the application of the guide, please contact Dr Annie Preston-Thomas on 4226 5556 or Joanne Leamy on 4226 3096.

ZIKA VIRUS UPDATE

Since mid-2016, a range of measures has been rolled out to prevent potential transmission of Zika in North Queensland.

Tropical Public Health Services (Cairns) has expanded the vector control activities of the Dengue Action Response Team (DART), developed local prevention and control strategies, held education sessions for health professionals, developed Zika testing guidelines and developed a range of Zika resources for the health sector and the general public.

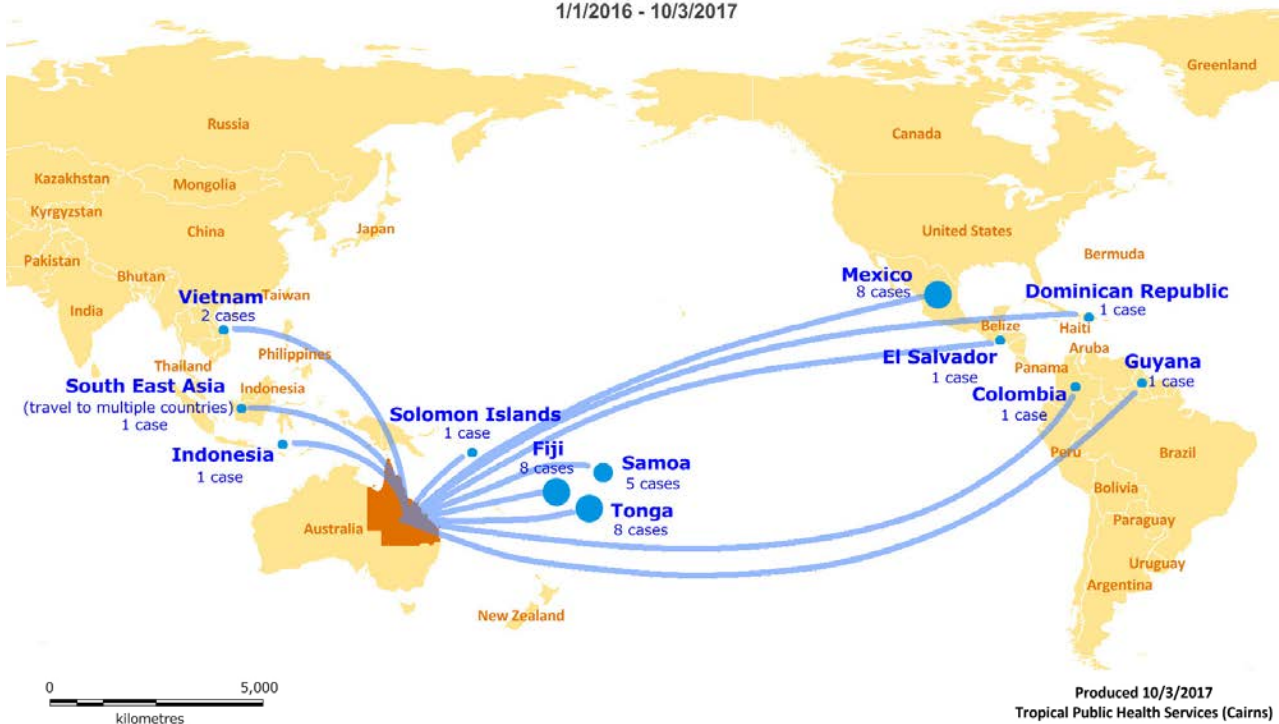
Since 1 January 2016, 38 cases of Zika have been imported into Queensland, with 10 of those cases imported into North Queensland, including 2 cases into Far North Queensland. Most of the imports into Queensland have

been from Pacific island nations. All identified imports have been followed up and, to date, we have avoided local transmission of the virus.

Zika is a mosquito-borne virus and is the only flavivirus known to be spread sexually, although this mode of transmission is far less common. People with Zika infection usually have mild or no symptoms. Those who are symptomatic may have fever, rash, headache, joint pain, non-purulent conjunctivitis or muscle pain.

The main risk associated with Zika infection is that infection during pregnancy can cause congenital Zika syndrome in the foetus, leading to a range of birth defects in babies. It should be noted that the majority of infections in pregnancy are not thought to lead to significant problems.

Notified Zika Cases, Queensland
Country of Source
1/1/2016 - 10/3/2017



Congenital Zika syndrome

Congenital Zika syndrome is described by the following five features:

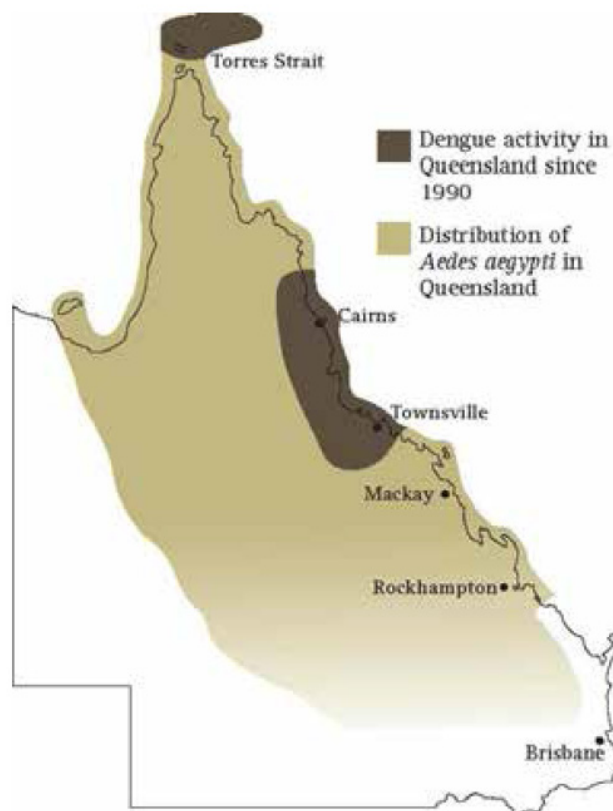
- Severe microcephaly where the skull has partially collapsed
- Decreased brain tissue with a specific pattern of brain damage
- Damage to the back of the eye
- Joints with limited range of motion, such as clubfoot
- Too much muscle tone restricting body movement soon after birth.

Not all babies born with congenital Zika syndrome will have all of these problems. Some infants with congenital Zika virus infection who do not have microcephaly at birth may later experience slowed head growth and may develop postnatal microcephaly (CDC, 2017). The majority of infections in pregnancy are not thought lead to significant problems.

The Zika public health challenge

Zika presents a range of challenges for detection and control. The rate of asymptomatic infection is up to 80%, meaning detection in the community is difficult. Recently, all requests for dengue PCR or dengue serology have had Zika PCR or Zika serology added. This is an important surveillance measure but means that only those who are symptomatic get tested.

Distribution of Aedes aegypti mosquito and dengue activity in Queensland



The main species of mosquito that can carry Zika is *Aedes aegypti* (the same mosquito that carries dengue, yellow fever and chikungunya). This mosquito is widespread in tropical countries as well as towns along the North Queensland coast. Another mosquito capable of spreading the Zika and dengue viruses is *Aedes albopictus*. Currently, in Australia, this mosquito is only present in some of the Torres Strait islands, but could invade other parts of Australia. The Commonwealth funds Tropical Public Health Service (Cairns) to conduct an ongoing *albopictus* control program in the Torres Strait.

Clinical advice

A tourist or traveller returning from a tropical country can bring Zika virus into North Queensland where it can spread via local mosquitoes causing an outbreak. If this scenario unfolds health professionals will need to ensure that they provide appropriate advice to pregnant patients and their partners as well as those planning on pregnancy.

Health professionals need to provide advice to couples planning pregnancy and to pregnant women and their partners about travel. This includes:

- delay pregnancy if travelling to a tropical country
- avoid travel to tropical countries whilst pregnant
- avoid bites from mosquitoes in North Queensland and in tropical countries
- avoid unprotected sex (without a condom) with a partner who has travelled to a tropical country.

This advice is particularly important given the popularity of travel to neighbouring countries in South East Asia and the trend of 'babymoons', holidays taken by pregnant women before the arrival of their baby.

General Practitioners should offer Zika testing to any pregnant woman who has travelled to a tropical country* during her pregnancy.

* For an up to date list of Zika affected countries you can visit the Commonwealth Department of Health's website: <http://www.health.gov.au/internet/main/publishing.nsf/content/ohp-zika-countries.htm>

As a general rule, all travellers to tropical countries, not just pregnant women, should:

- Stay in fully screened or air conditioned accommodation. An insecticide treated bed net may be useful (also helps against malaria)
- Use surface spray to kill any mosquitoes indoors
- Wear long sleeved, light-coloured clothing and cover your feet
- Use a strong insect repellent (containing DEET or Picaridin) regularly on exposed skin, including daytime
- See a doctor for testing immediately if ill on return to Australia.

Countries at risk of dengue and Zika - World Health Organisation 2014



Travelers who go to places with Zika can be infected with the virus and pass it to their partner sexually when they return home. Pregnant women and those wanting to get pregnant should avoid ‘unprotected’ sex with partners who may have been exposed to Zika by abstaining completely, or using condoms. Women who could get pregnant should use reliable contraception as well as condoms for the recommended period.

Recommendations for unprotected sex following Zika or possible Zika exposure:

- For male partners who were exposed to Zika, or had confirmed Zika - avoid unprotected sex for 6 months after leaving that area, or after diagnosis, and if your partner is pregnant, until she delivers the baby.
- For women who were exposed to Zika, or had confirmed Zika - avoid unprotected sex (and pregnancy) for 8 weeks after leaving that area, or after diagnosis. See above if the partner was also exposed.

Testing

Ask about recent travel to tropical countries. Zika has been confirmed in Pacific island nations and Singapore and may also be circulating in other countries where the dengue mosquito is found.

Time Since Onset of Symptoms	Tests to Request
Up to 9 days	Blood
	Dengue and Zika PCR (up to 5 days)
	Dengue and Zika serology
More than 9 days	Dengue NS1
	Urine
	Zika PCR
More than 9 days	Blood
	Dengue and Zika serology
	Urine
	Zika PCR (up to 14 days)

Further information

For comprehensive information on Zika, including testing guidelines for North Queensland and resources for patients, please visit the North Queensland Primary Health Network webpage <http://www.primaryhealth.com.au/zika-virus-advice-north-queensland/>. Resources for the general public are also available on the Queensland Government website, <https://www.qld.gov.au/health/conditions/all/prevention/mosquito-borne/advice/zika/index.html>

If you are a health professional who sees pregnant patients, you can contact the Zika Program at Tropical Public Health Services (Cairns) Tropical Public Health Service (Cairns) on 07 4226 5555 if you would like some Zika ‘showbags’ to give to these patients. The bags contain brochures, insect repellent and condoms.

Remember you must notify Tropical Public Health Services (Cairns) immediately on clinical suspicion of Zika.

National Seasonal Influenza Program 2017

Funded influenza vaccine stocks are now available. For 2017, the Influenza vaccines are all Quadrivalent vaccines containing one new strain - B/Phuket/3073/2013-like virus.

The 2017 Influenza Program is funded for:

- ✓ Pregnant women (in any trimester)
- ✓ Indigenous children aged 6 mths to <5 yrs
- ✓ Indigenous people aged ≥15 years
- ✓ Any person aged >65 years
- ✓ Any person aged ≥6 months with a medical condition that places them at increased risk of complications from influenza.

There is an emphasis on encouraging vaccination for pregnant women, Indigenous children (6 months to 5 years) and persons medically at risk.

This year there is a new ATAGI requirement to ensure ALL vaccinations are recorded on the Australian Immunisation Register (AIR). You can do this via the following options:

- Vaccination Record Forms – VIVAS
- AIR encounter form – <http://www.humanservices.gov.au/sites/default/files/imoo1-1609en.pdf>
- Direct entry onto Australian Immunisation Register (AIR) – record encounter

Before administering check you have the correct vaccine for the person's age (see Table 1).

- AFLURIA Quad® – Not for use under 18 years
- Only FluQuadri Junior™ can be used for children aged 6 months to <3 years of age. Adult (0.5mL) doses CANNOT be halved to make a paediatric dose.
- Influenza vaccines are NOT registered for use in any infant under 6 months of age.



Table 1: VACCINES REGISTERED FOR USE BY AGE GROUP

Age Group	FluQuadri Junior™ 0.25mL Sanofi Pasteur	FluQuadri™ 0.5mL Sanofi Pasteur	Fluarix Tetra™ 0.50mL GSK	Afluria Quad™ 0.50mL Seqirus
<6 months	NB: No influenza vaccine is registered for use in this age group			
6 months to <3 years	✓	No	No	No
≥3 to 18 years	No	✓	✓	No
≥18 years	No	✓	✓	✓

Whooping cough vaccine for pregnant women

The Whooping Cough Vaccine Program for pregnant women is still funded.

- Vaccine to use – Adacel®
- Funded for ALL pregnant women in EVERY pregnancy in their third trimester (ideally from 28 - 32 weeks onwards)

Getting your **FREE influenza & whooping cough vaccines** during pregnancy protects both you and your baby

Millions of pregnant women receive flu & whooping cough vaccines worldwide

A **FLU** shot during pregnancy protects your baby for 6 months

A **WHOOPIING COUGH** vaccine protects your baby until their first vaccines at 6 weeks

Influenza vaccine can be given at any time during **each** pregnancy. The **whooping cough** (pertussis) vaccine is recommended in the **third trimester** of each pregnancy.

Talk to your doctor, nurse or midwife.
For more information go to qld.gov.au/vaccinate



Shingles vaccines - Zostavax® contraindications

Zostavax® is contraindicated in patients who are immunocompromised. Administration where contraindicated has resulted in a death in Australia.

Zostavax® contains live attenuated varicella-zoster virus, containing 14 times more virus than childhood varicella vaccines. Administration to people who are immunocompromised is associated with risk of disseminated disease from the vaccine virus. It is vital all medical practitioners are aware of the following **contraindications** which include, but are not limited to:

- **Haematological or generalised malignancies (including those not on treatment)**, e.g. lymphoma, acute or chronic leukaemia, Hodgkin’s disease.
- **Solid organ or bone marrow transplant recipients** (with exceptions as advised by specialists).
- **HIV/AIDS** (with exceptions as advised by a specialist) or other congenital/acquired **immunodeficiencies**.
- **Current or recent high-dose systemic immunosuppressive therapy**, e.g. chemotherapy,

radiation therapy, oral corticosteroids, disease modifying anti-rheumatic drugs.

- previous anaphylaxis to the vaccine or its components.

If someone is on a combination of medications or if there is any doubt whether Zostavax® is safe for your patient, defer vaccination and seek specialist advice.

Inadvertent administration of an immunocompromised person: Urgently contact the treating specialist or infectious disease specialist for advice on use of antivirals.

Further information

National Centre for Immunisation Research & Surveillance fact sheets:

[Zoster vaccine for Australian adults](#)

[Zoster vaccine - FAQs](#)

Or contact your local public health unit for Far North Queensland: Tropical Public Health Services (Cairns), telephone (07) 4226 5555

Meningococcal ACWY

Why is Queensland Health offering this program?

During 2016 in Australia, there was a substantial rise in the number of meningococcal W cases, with more cases of this strain reported than meningococcal B cases.

In Queensland during 2016, there was a rise in the numbers of meningococcal W cases, and also meningococcal Y cases. The total number of notifications of meningococcal disease in Queensland in 2016 was 45. Of these, 17 were meningococcal B, 13 meningococcal W and 13 meningococcal Y.

As there is a safe and effective vaccine that covers strains A, C, W and Y, the Meningococcal ACWY Vaccination Program is being introduced. It is designed to protect young people and also reduce risks for the community as a whole by decreasing the proportion of people carrying the bacteria in their nose and throat.

What is the Meningococcal ACWY Vaccination Program?

The Queensland Government is offering free meningococcal ACWY vaccination to all Year 10 students through the School Immunisation Program and is also offering free vaccine for young people aged 15 to 19 years of age through their doctor or immunisation provider. While the vaccine is provided free by the Queensland Government, the doctor may charge a consultation fee.

Why is this program targeting 15 to 19 year olds?

Some of the highest rates of meningococcal carriage occur among 15 to 19 year olds and this age group can transmit the meningococcal bacteria to people who are at increased risk of infection, including young children.

The reason we are vaccinating 15 to 19 year olds is to reduce the risk of meningococcal disease caused by strains A, C, W and Y in this age group, and to reduce the spread of meningococcal disease caused by these strains. Vaccinating this group will protect individuals immediately and the wider community over time.

- Targeted School Immunisation Program for all Year 10 students in the SIP in 2017.
- Also funded for all persons aged 15 – 19 years from June 2017 – May 2018.

Where can 15 to 19 year olds get the vaccine?

15 to 19 year olds will be able to get the meningococcal ACWY vaccine either through the School Immunisation Program if they are in Year 10, or from their usual immunisation provider, such as their GP. The vaccine is free, however the doctor may charge a consultation fee.

When will the program start?

The school immunisation program will commence in some schools in school term 2, 2017 with progressive implementation throughout the 2017 school year. GPs and other immunisation providers will have vaccines available from June.

Who will be eligible?

Individuals in either of the following two groups are eligible:

- Students in Year 10 in 2017
- Young people aged 15 to 19 years at time of vaccination.

Count of notifications for selected conditions for Far North Queensland

TOTAL

(1 January 2017 – 31 March 2017)

	Cairns & Hinterland	Torres Strait & Cape York	TOTAL
Acute Rheumatic Fever	3	7	10
Barmah Forest Virus	8	0	8
Campylobacter	144	10	154
Chlamydia (STI)	585	137	722
Cryptosporidiosis	15	0	15
Dengue Fever	20	4	24
Gonorrhoea (STI*)	135	33	168
Group A Streptococcal Infection	11	4	15
Hepatitis A (All)	1	0	1
Hepatitis B (All)	20	9	29
Hepatitis C	39	1	40
Influenza (Lab Confirmed)	208	14	222
Leprosy	0	1	1
Leptospirosis	30	2	32
Melioidosis	17	8	25
Meningococcal Infection (Invasive)	2	0	2
Pertussis	10	3	13
Pneumococcal Disease (Invasive)	6	0	6
Q Fever	8	0	8
Ross River Fever	58	6	64
Rotavirus	17	3	20
Salmonellosis (All)	120	9	129
Syphilis (Infectious)	63	9	72
Varicella (Chicken Pox and Unspecified)	107	15	122
Yersiniosis	8	0	8
Zika Virus	0	0	0

Data extracted and correct as of 07/04/2017

NOTE figures for Gonorrhoea and chlamydia are for number of positive tests not number of individuals with the disease (one person may have multiple tests)

Weekly notifiable conditions reports are available at:

www.health.qld.gov.au/clinical-practice/guidelines-procedures/diseases-infection/surveillance/reports/notifiable

Phone: (07) 4226 5555

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Useful web links:

- [Travel Vaccination advice for GPs](#)
- [Communicable Disease Control Guidance and Information](#)
- [Immunisation information for health professionals](#)
- [RHD and ARF guidelines](#)
- [Clinical guidelines for sexual health](#)
- [Homepage for Tropical Public Health Services \(Cairns\)](#)