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**Flu notifications peaked early in the north this year. We provide an update on flu cases in Far North Queensland (FNQ) in 2019 to date.**

The Rheumatic Heart Disease (RHD) Workshop was held in Cairns in May. The workshop was well received and will be delivered again next year. The new RHD Viewer Linkage Project highlights the importance of sharing medical records between treating clinicians and we introduce some of our nominated RHD Champions.

Our Environmental Health team investigated a Salmonella enteritidis outbreak in a regional FNQ community. The investigation led to the discovery of non-potable water at a food premises. This has led to the regular analysis of water samples for food premises in the region.

This year there have been high numbers of cases of Acute Post Streptococcal Glomerulonephritis (APSGN) in some FNQ communities requiring outbreak responses. APSGN can occur as a complication of heavy or prolonged infection with Group A Streptococcal bacteria. Other complications include Acute Rheumatic Fever.

The outbreak responses have highlighted the need for prevention and early treatment of skin sores and scabies.

Tropical Public Health Services (Cairns) regularly promotes the benefits of immunisation to our local communities. In May the Immunisation Team ran a ‘Teens Need Vaccines’ T-shirt completion which was a fun way to get young people engaged with this important public health message. Presenting prizes and certificates at school assemblies afforded an opportunity to further spread the immunisation message in high schools.

North Queensland continues to experience high rates of syphilis, other STIs and blood borne virus infection that disproportionally affect young Aboriginal and Torres Strait Islander people. A Queensland ‘Syphilis in Pregnancy’ guideline has been developed and a Healthy Baby Bumps project has been launched to empower Aboriginal and Torres Strait Islander women in decision making early in their pregnancy journey.

The health effects of climate change are becoming increasingly apparent. Following on from our article on heatwaves and health in Issue 10, we have an article on plastics and public health. Of concern is the increases in microplastics observed in food webs.

Two Tropical Public Health Services (Cairns) staff received the Humanitarian Overseas Service Medal from the Governor General earlier this month for their work in West Africa responding to the 2013/2014 Ebola crisis. Congratulations to these staff.

I hope you enjoy the latest edition of Tropical Public Health News.

Dr Richard Gair
Director
Numbers of confirmed cases this year are higher than usual, but this is partly due to increased testing.

In Far North Queensland (FNQ) there were 3,061 notifications of laboratory confirmed influenza as of 8 September 2019, with 82% of those for residents of Cairns and Hinterland Hospital and Health Service (HHS) area. As many cases of influenza are not laboratory confirmed, and many people with the virus do not present to services, the notification data represent only a proportion of the actual cases of influenza in the community.

Numbers of weekly influenza notifications in Cairns and Hinterland HHS have been stable in the two weeks to 8 September and are consistent with the average observed at this time of year.

Notifications of influenza B in Cairns and Hinterland HHS have increased notably, accounting for 58% of notifications in the two weeks to 8 September. Overall notifications for Cairns and Hinterland HHS to date (n= 2,506) remain 3.2 times the previous five-year to date average of 791 owing to the unusually high number of notifications received in March and April.

Notifications in Cape York are currently consistent with the number usually observed at this time of year.

In the Torres Strait and the Northern Peninsula Area (NPA), weekly notification numbers are slightly higher than usually observed for this time of year.

There were 142 admissions to public hospitals in FNQ with laboratory confirmed influenza this year (as of 11
August). Ninety per cent of these hospitalisations in the 4 weeks to 11 August were confirmed as influenza type B.

Children aged 0 to 14 years accounted for 26.9% of Cairns and Hinterland HHS notifications and 34.3% of Torres and Cape HHS notifications, highlighting the importance of vaccination in this age group.

Annual influenza vaccination is funded under the National Immunisation Program (NIP) for people aged ≥6 months who are at increased risk of severe influenza, including:

- All Aboriginal and/or Torres Strait Islander people aged ≥6 months (there was previously a gap in funding for children 5 years to 15 years old).
- All adults aged ≥65 years
- People with specified medical conditions:
  - cardiac disease
  - diabetes
  - chronic respiratory conditions
  - chronic neurological conditions
  - renal disease
  - haematological disorders
  - immunocompromising conditions
- long-term aspirin therapy in children aged 6 months to 10 years
- Pregnant women (during any stage of pregnancy)

**All states and territories also provide free influenza vaccine for children aged 6 months to <5 years.**

**Advice for clinicians**

Actively promote vaccination for all individuals at increased risk of severe complications from influenza, regardless of eligibility for a free vaccine, including the following groups:

- People with certain medical conditions (in additions to those funded by the NIP):
  - Down syndrome
  - obesity (body mass index ≥30 kg/m²)
  - chronic liver disease
- Residents and staff (including volunteers) of aged care and long-term residential care facilities
- Homeless people
- Carers and household contacts of those in high-risk groups
- Commercial poultry or pork industry workers
- Essential services providers
- Travellers

**Reminder:** If you are referring a patient with influenza like illness to the hospital emergency department, call ahead so they can decide whether to isolate.
On the 2nd and 3rd of May 2019 the Rheumatic Heart Disease Register and Control Program held a two-day workshop for health professionals at the Rydges Plaza in Cairns.

There were over 90 attendees at the event with presentations from local, state and interstate acute rheumatic fever and rheumatic heart disease specialists.

The workshop attendees learned about:
- Group A Streptococcal vaccine developments
- Triggers of Acute Rheumatic Fever (ARF) and Rheumatic Heart Disease (RHD)
- Diagnosis and management of ARF and RHD clients
- Dental care for clients with RHD
- Reducing pain and increasing compliance with Bicillin injections.

We are looking forward to delivering this workshop again in May 2020.

Rheumatic Heart Disease Viewer Linkage Project

Sharing medical records between treating clinicians is important to ensure:
- optimal patient care
- medication compliance
- reduced Acute Rheumatic Fever (ARF) recurrences
- reduced Rheumatic Heart Disease (RHD) severity
- reduced medication errors
- reduced risk of clients being lost to follow-up.

The Rheumatic Heart Disease Register and Control Program are excited to announce the Viewer Linkage Project.

The RHD Register is working closely with the Queensland Health Viewer to link the RHD Register with the Viewer. This will ensure the providers of all Queensland ARF and/or RHD clients will have access to their client’s current ARF/RHD status, requirement for penicillin prophylaxis and Bicillin administrations dates.

We are hoping the information from the Register will go live in the Viewer in the next couple of months.
The Queensland Rheumatic Heart Disease Register and Control Program recently worked with local Indigenous artist Arone Meeks to design an artwork that depicts the journey of Acute Rheumatic Fever and Rheumatic Heart Disease (RHD).

Parts of this artwork have been included in the new RHD Champion shirts that have been designed to identify and reward health professionals across the state who are working hard to end RHD in Queensland.

Currently Queensland has almost 4,000 patients on the RHD Register. Over 80 per cent of these patients identify as either of Aboriginal or Torres Strait Islander descent. The RHD Register and Control Program is hosted by Tropical Public Health Services (Cairns), and is a state-wide service that provides support, clinical advice and assistance to over 600 providers across the State, including General Practitioners, Aboriginal and Community Controlled Health Services and hospitals.

Pictured wearing their new shirts are RHD Champions; Dr Ben Reeves and Erin Ferguson from Paediatric Outpatients at Cairns Hospital. Thanks for all your hard work!
In late January, Tropical Public Health Services (Cairns) investigated a Salmonella enteritidis outbreak in a remote, regional community of Far North Queensland.

Australia’s foodborne disease surveillance network, OzFoodNet, had identified seven confirmed cases of Salmonella enteritidis, from a region which had not had a case for several years.

Salmonella enteritidis is most commonly linked to poultry and eggs. In this instance, the pathogen caused the identified cases to develop symptoms of diarrhoea, abdominal pain, nausea, and fever.

The investigations by the Environmental Health team identified that there were probably other cases of gastroenteritis in the affected communities that had not reported to the clinic or had a specimen taken.

Detailed questionnaires were used with the cases which identified several potential sources of infection, including commercial food premises.
While each food premises was inspected, one premises was common between all seven cases. Environmental Health Officers from Tropical Public Health Services (Cairns), along with Local Government, conducted an investigation at the food premises linked to the cases. Food and water samples were collected for analysis.

The investigation determined that the food premises did not have a potable water supply, instead using bore water and a 0.5mm particle filter. There was also an ultraviolet light attached to the water system however this had broken weeks prior to the investigation. The bore head and the water tank were found to be unsealed, with the water exposed to contamination from animals and other foreign matter.

A water sample taken from the kitchen sink tap of the food premises returned positive for *Salmonella enteritidis*. The water from the kitchen sink is used throughout the kitchen in food preparation; including washing produce, cooking, and cleaning. Queensland Health Forensic and Scientific Services analysed the bacteria taken from the water sample and found that the *Salmonella enteritidis* contained in the water sample had the same genetic makeup as the case samples and therefore belonged to the same source.

Due to the positive finding of *Salmonella enteritidis*, Local Government suspended the food licence of the food premises. The food premises was unable to sell unpackaged food until clear water samples could be provided from an accredited laboratory, and they could demonstrate that the food premises had appropriate treatment systems in place to make the water potable. During this time, the food premises flushed their entire water supply line twice with a chlorine dilution and all the tap fixtures were soaked for 12 hours in chlorine. After two weeks, the food premises were able to provide evidence of suitable water treatment and storage, as well as produce a clear water sample allowing them to reopen.

Since the outbreak, the Local Government has advised that they have amended their processes in relation to checking food premises water supplies. They now include a focus on the water supply in their food premises inspections, with food premises required to provide water samples for analysis as part of the inspection and provide evidence of water treatment. Where non-potable water is identified there are food licence restrictions implemented, with the Local Government assisting the premises to ensure a potable water supply.

Tropical Public Health Services (Cairns) has taken enforcement action with the owners of the premises in relation to this outbreak.
Far North Queensland has seen a high number of cases of nephritis in children over the last year, including outbreaks in several Aboriginal and Torres Strait Islander communities in the Cairns, Cape York and Torres Strait areas.

Acute Post Streptococcal Glomerulonephritis (APSGN) is an immune complex complication of prolonged and heavy infection with Group A Streptococcal bacteria (GAS). Group A streptococcal infections spreads person to person, mainly as skin or throat infections; and can cause severe invasive conditions such as necrotizing fasciitis, sepsis and septic shock in older people. In children, immune reactions can damage internal organs and cause Acute Rheumatic Fever (ARF, heart damage) or APSGN. Different circulating strains of GAS change the incidence of carditis or nephritis. Further episodes of ARF can destroy heart valves (RHD). Nephritis cases usually recover but are thought to contribute to high rates of chronic renal failure and dialysis in affected communities later in life.

High rates of ARF and APSGN in Aboriginal and Torres Strait Islander children result from widespread skin sores and scabies in communities impacted by socio-economic disadvantage.

A few cases of APSGN over a short period of time, in different households, suggest a community ‘outbreak’ of APSGN. Actually, it is a reflection of high rates of skin sores and GAS infection, leading to APSGN. APSGN is not itself transmissible from one person to another.

There have been several responses to outbreaks of APSGN recently in Far North Queensland with strong local efforts to inform and mobilise communities, child care and schools and involving close cooperation with local Aboriginal Community Controlled Health Services. These outbreak responses have delivered screening and preventative antibiotics and have involved a lot of dedicated hard work from local staff which has taken up significant amounts and staff time at significant financial cost.

Better than responding to outbreaks, from the point of view of reducing illness in the community and avoiding time consuming and expensive outbreak responses, is to focus on improving skin health via prevention and early intervention. The number of cases of scabies and GAS infected sores can be reduced and the complications of ARF, RHD and APSGN can be avoided by improving living conditions, particularly the availability of washing facilities, in communities, and by educating communities and health professionals about the importance of early identification and treatment of skin abrasions and skin sores.
Healthy skin stops germs from getting into your body

Skin sore germs can make you sick

Look after your skin!

Eat good food & drink water

Wash germs away

Wash clothes, sheets and towels

Protect skin from damage

Help skin sores to heal

Wash with soap

Cover with bandages

Use medicine

Go to the doctor or clinic if:
- sores are not healing or are spreading
- sores have pus or ooze
- sores are large or are getting bigger
- skin is red, hot or painful
- skin is itchy with a rash
- you have a fever or feel sick

For more information ask your doctor, nurse or health worker TODAY!
In May, the Tropical Public Health Services (Cairns) Immunisation Team, invited all Aboriginal and Torres Strait Islander students from Gordonvale High to Smithfield High to design a polo shirt to be worn by local Aboriginal and Torres Strait Islander Health Workers and other Vaccine Service Providers.

The aims of the competition were to increase the profile of immunisation for Indigenous high school students and their families, to reinforce the message of on time immunisations and to remind the community that catch up for these vaccines is available until 20 years of age.

Students were asked to submit an original design which reflected their history, culture and community with a short explanation of the design.

There was an excellent response from the students with 40 entries submitted. Twelve of these entries were shortlisted and presented to the Aboriginal and Torres Strait Islander Health Workers from Cairns and Hinterland HHS at the Introduction to Public Health Workshop on 11 June. The winning entry was chosen based on the students design and the story behind the design.

Our winner was Jarrah Flinders from Redlynch State College. She won a $250 voucher for her school for art supplies, a $400 voucher to spend at Cairns Central, A Northern Pride Prize pack and a copy of the shirt she designed.

Presenting prizes and certificates to the winner, the finalists and the participants at school assemblies, afforded an opportunity to further spread the immunisation message in the high schools.

Given the success of the competition, we are hoping to deliver it on an annual basis.
Syphilis in Pregnancy guideline

North Queensland continues to experience high rates of syphilis, other STIs and BBVs that disproportionately affect young Aboriginal and Torres Strait Islander people living largely in remote and regional areas.

Notifications of congenital syphilis and deaths in congenital cases have been recorded in areas of Northern Australia affected by the syphilis outbreak, including North Queensland.

As part of the strategy to reduce syphilis and other STIs in Queensland, the ‘Syphilis in Pregnancy’ Guideline has been developed through Queensland Clinical Guidelines, Queensland Health.

Staff from North Queensland contributed to the development of this guideline. This demonstrates the level of commitment of local services to work collaboratively and develop a ‘best practice’ guideline that supports practice to achieve the goal of zero notifications of congenital syphilis.

The ‘Syphilis in Pregnancy’ guideline is targeted at health professionals in primary care and Queensland’s public and private maternity and neonatal services. The guideline is endorsed for use by the Cairns and Hinterland HHS and Torres and Cape HHS.

The guideline provides information on:
- The syphilis outbreak in North Queensland
- Antenatal screening schedules for women based on risk (once to five times during pregnancy)
- Point of care testing for syphilis
- Management of syphilis requiring treatment during pregnancy
- Congenital syphilis
- Further resources and information.

The ‘Syphilis in Pregnancy’ guideline is freely available online through the Queensland Maternity and Neonatal Clinical Guideline webpage. The guideline is supported by a 45 minute education presentation that attracts CPD points, consumer information and links to additional resources.

Other initiatives to promote syphilis testing for Aboriginal and Torres Strait Islander women include the ‘Healthy Baby Bumps’ project which is a collaboration between Cairns and Hinterland HHS, Aboriginal and Torres Strait Islander Community-Controlled Health Organisations and local elders. This campaign (#HealthyBabyBumps) is designed to empower Aboriginal and Torres Strait Islander women in decision-making early in their pregnancy journey through resources that support conversations about the services and support available to them during pregnancy. Early and regular antenatal care includes testing for STIs including syphilis, which once detected can be easily treated.
Plastics: A Public Health Problem!

Plastic-Free July has come to an end, but it reminded us of the effects single-use plastics have upon the planet, and consequently, our health.

Since their commercial development in the 1930s and 1940s, the modern world has become hugely reliant on plastics (1). Considered disposable with inconsistent efforts to recycle, plastic waste has grown exponentially (2). In 2012, there were 280 million tons of plastic produced across the globe and less than half of this was recycled (3)!

Plastics do not generally biodegrade, creating a growing environmental, political and public concern. Plastic waste comes from many sources; packaging, carrier-bags, synthetic clothing and cosmetic products. Once dispersed into the environment it breaks into smaller pieces, termed microplastics and defined as plastic particles smaller than 5mm (4). One of the biggest culprits is the cosmetic microbead which represent a significant proportion of plastic debris within the oceans (2, 5). As plastic disintegrates it makes its way into oceans via storm drains, rivers, sewage disposal and flooding and then into food-webs (3) as a result of ingestion by marine animals (2).

Once in the ocean, larger plastics may float and converge into ‘islands’ or sink to the sea-bed. Around 10% of all waste is plastic, however, around 80% of waste that accumulates in the oceans and seabed is plastic (2) (4). Videos of plastic islands in the oceans and flowing rivers of plastic flood the media, and yet despite public outcry, seemingly little is being done about this crisis. Plastic pollution, both macro and microplastic, is causing significant adverse impact on marine ecology to the point of emergency. Ingestion of macroplastics by marine life can cause blockage of the intestinal tract and subsequent starvation. Indeed, Plastics have been found inside most marine biota, from large marine mammals to tiny zooplankton (6).

The presence of microplastic in zooplankton is particularly concerning; they are a vital component of marine food-webs as primary consumers, and of ecological systems as the juvenile life-stage of many commercial species (6). Thus, we’re seeing not only increases microplastics in food-webs, but also impacts upon the health of many vital species in marine ecology. If the oceans die, the remainder of planetary life will quickly follow.

Sea-food, alcohol and plastic-bottled-water are the greatest sources of microplastic ingestion in humans (7). Whilst investigation of the toxic effects of microplastics in food-webs is complex and ongoing (8), evidence suggests that ingestion of these microplastics in humans is associated with infertility, obesity and suspected hormone dysfunction including oestrogen mimicking, which in women has been associated with breast cancer (11).

The United Nation’s Globally Harmonised System of Classification and Labelling of Chemicals considers components in over half of plastics to be hazardous and some of these have been observed accumulating in human blood (3).

Human health-risks from plastics stem from their component monomers such as bisphenol A (BPA). Around 95% of humans have detectable serum and urinary levels of BPA. The health risks of BPA are still under debate and are by no-means fully understood. It is currently classified as an oestrogen mimic and hormone disruptor and it is argued that any level of exposure is unacceptably harmful (8). Animal studies suggest the effects of BPA are enhanced postnatal growth, early sexual maturation, sex hormone imbalances, immune system dysfunction, hyperactivity and more (9)!

While the risks of plastic-related toxin exposure need further investigation, more extensive and integrated safe recycling and disposal of plastics must increase significantly on a global scale to prevent potential harms. Events such as Plastic-Free July need to be a part of a much bigger policy response; they are sentinel events to draw attention to the problem and offer people solutions.

These solutions are well-known: reduce, repurpose, reuse and recycle. Few plastics are actually re-cycled; in 2016-17 in Australia, a mere 12% of generated
plastics were recycled. This poor yield is often due to poor public understanding regarding the suitability of different plastics for recycling. Consequentially, strong policy, advocacy and education are important to address plastic pollution. It is imperative that solutions are developed and accelerated now, for if plastic pollution rates continue as they are, it is likely there will be 33 billion tons of plastic present globally by 2050 (3). Inaction is arguably an action in and of itself and one that could be catastrophic for the health of the planet and all its inhabitants. Natural disasters or calamities cannot be avoided, but man-made blunders can be stopped or terminated (10).

HIV increase in Aboriginal and Torres Strait Islander people in Far North Queensland

There has been some good news about HIV in Australia, with the latest Kirby Institute annual surveillance report (https://kirby.unsw.edu.au/report/hiv-viral-hepatitis-and-sexually-transmissible-infections-australia-annual-surveillance) noting that in 2017 there were the lowest number of HIV notifications in Australia since 2010. However, an increase has been seen in Aboriginal and Torres Strait Islander people; between 2013 and 2016, the age-standardised rate of HIV notification increased by 41% in the Aboriginal and Torres Strait Islander population compared with a 12% decline in Australian-born non-Indigenous people.

In Far North Queensland there has been an increase in the number of HIV notifications in Aboriginal and Torres Strait Islander people since 2014. Most of the cases have been in men, the majority of whom have male sexual partners – though may not identify as gay or bisexual. Two thirds of these diagnoses have been made in primary care.

All primary care clinicians are asked to offer STI and HIV testing as part of comprehensive primary health care and provide information to patients about risk reduction (including condoms, pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP)) and regular testing if they change partners.

- Offer HIV testing to all Aboriginal and Torres Strait Islander people aged 15 to 39 years as part of a routine annual health check
- Ensure that Aboriginal and Torres Strait Islander people aged 40 to 49 years have been tested for HIV at least once in the past five years
- Offer testing more often than annually if the person is at increased risk, e.g. gay men and men who have sex with men, people who inject drugs
- All pregnant women should be offered HIV testing as part of routine antenatal care
- Ensure all people diagnosed with chlamydia or gonorrhoea are tested for HIV and syphilis
- Do not make assumptions about your patient’s lifestyle or STI/ blood borne virus risk
- If you want to know more about STI and blood borne virus testing and management, we recommend these links: https://www.health.qld.gov.au/__data/assets/pdf_file/0025/726523/sti-bbv-testing-tool.pdf and http://www.sti.guidelines.org.au/sexually-transmissible-infections/hiv
- There are national guidelines for offering STI/ HIV testing to men who have sex with men. These are available at: https://stipu.nsw.gov.au/stigma/sti-hiv-testing-guidelines-for-msm/
- Advice and information about HIV can also be obtained from Cairns Sexual Health Service ph. 4226 4769 or from Colette Cashman – HIV Public Health Nurse, Tropical Public Health Services, Cairns ph. 4226 5607

His Excellency General the Honourable David Hurley AC DSC (Retd), Governor-General of Australia, recently awarded the Humanitarian Overseas Service Medal (HOSM) to 66 health professionals and support staff for their efforts during the West Africa Ebola crisis.

Two recipients of this award were our very own Siân Ashton, Senior Public Health Officer and Clayton Doye, Senior Environmental Health Officer, employed at Tropical Public Health Services (Cairns).

The Humanitarian Overseas Service Medal (HOSM) honours members of Australian charitable or humanitarian groups providing emergency humanitarian service overseas in hazardous circumstances. “These Australians are outstanding – in a moment of real danger, a humanitarian crisis, they used their training and expertise to save lives,” the Governor-General said.

The West African Ebola crisis started in Guinea in late 2013 and was declared a Public Health Emergency of International Concern in August 2014 following its rapid spread to Sierra Leone and Liberia.

Australian health professionals from organisations including Red Cross, Médecins Sans Frontières and Aspen Medical deployed to West Africa to support the response to the Ebola crisis.

Siân and Clayton provided a range of environmental health services for the Australian managed Ebola Treatment Centres (ETCs) in Sierra Leone and Liberia, including ensuring all staff were cognisant of the highly infectious nature of the virus, establishing clear infection control protocols and training staff on the safe use of Personal Protective Equipment (PPE), sanitation of equipment, water chlorination, safe disposal of contaminated materials, transfer of patients from ambulances and the safe and dignified disposal of bodies.

Siân deployed to the Hastings Ebola Treatment Centre (ETC) in Freetown, Sierra Leone, on Christmas Eve 2014. She helped set up the triage...
and treatment areas and commenced rapid training of a local workforce of up to 250 hygienists, Environmental Health Officers and maintenance staff.

Siân explained that it was a “baptism by fire” as they had to hit the ground running. “It was a real privilege to assist the people of Sierra Leone fight the Ebola virus and it was a pleasure working and making friends with the local staff. The best part was witnessing a patient clear the virus and emerge from the ‘red zone’ (patient treatment area) through the happy shower into the ‘green zone’. Everyone came together and sang and danced in celebration and the Ebola free patient put a hand print on the Wall of Hope”.

Clayton deployed to Liberia on Boxing day 2014 and was part of the management team that oversaw the construction and commissioning of the Bopolu Ebola Treatment Centre. Clayton said “It was a challenging role, you had oversight in the red zone but you could only advise international contractors in other areas. Sometimes you had to let people make mistakes and then be ready with a solution”.

In February 2015 Clayton transferred to the Hastings Ebola Treatment Centre in Sierra Leone. “This was very much a hands-on role. You had to teach by showing, so donning full PPE and retrieving a patient from an ambulance or fixing a leaky pipe was just part a day’s work. You needed to be confident in your training and the systems in place. That helped with more challenging aspects, such as moving the deceased to the morgue or helping with family viewing of the deceased”.

As the crisis was winding down Clayton oversaw the decommissioning of the ETC. “It was a great experience to establish, work in and decommission an ETC”.

Siân and Clayton commented that the experience provided them with the opportunity to utilise the fundamental principles of environmental health and share skills and knowledge with local staff. Experiences that you don’t normally get in Australia. 

*Congratulations Siân and Clayton!*
### Count of notifications for selected conditions for Far North Queensland

**TOTAL**  
(1 January 2019 - 30 June 2019)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Cairns &amp; Hinterland</th>
<th>Torres Strait &amp; Cape York</th>
<th>TOTAL</th>
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<tr>
<td>Acute rheumatic fever and rheumatic heart disease</td>
<td>10</td>
<td>8</td>
<td>18</td>
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<tr>
<td>Acute rheumatic fever</td>
<td>20</td>
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<tr>
<td>Rheumatic heart disease</td>
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<td>Barmah Forest Virus</td>
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<td>Dengue Fever</td>
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<tr>
<td>Malaria (All)</td>
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<td>Gastrointestinal diseases</td>
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<td>Sexually transmissible infections</td>
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<td>Chlamydia (STI)</td>
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<td>Blood borne viruses</td>
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<td>Vaccine preventable diseases (other)</td>
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<td>Influenza (lab confirmed)</td>
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<td>Mumps</td>
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<td>Pertussis</td>
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<td>Rubella</td>
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<tr>
<td>Varicella</td>
<td>221</td>
<td>13</td>
<td>234</td>
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<tr>
<td>Zoonotic diseases</td>
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<td>Potential rabies/lyssa exposure</td>
<td>32</td>
<td>2</td>
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<tr>
<td>Q Fever</td>
<td>14</td>
<td>0</td>
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<tr>
<td>Other diseases</td>
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<tr>
<td>Melioidiosis</td>
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<td>10</td>
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</table>

Data extracted and correct as of 23/8/2019

*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:  