



Government of Western Australia
Child and Adolescent Health Service



Stan Perron Immunisation Service



2019

Annual Activity Report



Healthy kids, healthy communities

Compassion

Excellence

Collaboration

Accountability

Equity

Respect

Neonatology | Community Health | Mental Health | Perth Children's Hospital



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Stan Perron Immunisation Service at Perth Children's Hospital

The launch of Western Australia's first dedicated immunisation service embedded in a tertiary children's hospital commenced initially at Princess Margaret Hospital for Children (PMH) in December 2017, followed by the expansion of the service at Perth Children's Hospital (PCH) on 11 June 2018. This current 2019 annual activity report covers the first complete year the immunisation service has been functioning and the second year of service delivery across the Child and Adolescent Health Service (CAHS).

The service aims to improve immunisation coverage rates for some of WA's most vulnerable medically at-risk children by ensuring equity of access to immunisation services for all families across the CAHS.

A dedicated and skilled multi-disciplinary team including specialist paediatricians, nursing staff, as well as an Aboriginal healthcare worker and clerical staff provide a highly visible focus and state-wide leadership in areas of immunisation delivery, education, research, and advocacy.

The Stan Perron Immunisation Centre was formally launched at PCH on 14 August 2018, by the Hon. Roger Cook, Deputy Premier; Minister for Health; Mental Health and the late Mr Stan Perron and Mrs Elizabeth Perron. The Centre has been generously supported by the Stan Perron Charitable Trust.



Front row, from left: Hon. Roger Cook, WA Minister for Health; Mr Stan Perron, Founder and former Chair of the Perron Charitable Trust; Ms Debbie Karasinski, CAHS Board Chair
Back row, from left: Dr Anita Campbell, Medical Lead Immunisation Service PCH; Assoc. Professor Christopher Blyth, Head of Department Infectious Diseases PCH; Mrs Elizabeth Perron, Director Stan Perron Charitable Trust; Ms Filomena Mascaro, Clinical Nurse Consultant Immunisation Service PCH (2017-2019); Ms Patricia Clifford; Immunisation Nurse PCH

Five-year key goals

Our mission is to provide every child and their family with the opportunity to benefit from a dedicated immunisation service at Perth Children's Hospital. This commitment is targeted to the following goals:

- 1** Provide free and timely immunisation for all children and their families attending Perth Children's Hospital, who are due or overdue routine vaccinations recommended on the national or state immunisation schedule.
- 2** Ensure children with individualised and complex immunisation requirements have their needs met through the nurse-led Stan Perron Immunisation Centre and or the medically-led Specialist Immunisation Clinic, including children with lowered immunity, underlying medical issues and families with vaccine hesitancy.
- 3** Provide the seasonal influenza vaccine for children at-risk, including those with underlying medical co-morbidities through a dedicated Influenza Immunisation Program.
- 4** Provide leadership and commitment to preventative child health through core activities, including immunisation research and providing evidence-based immunisation education, resources and guidelines.
- 5** Ensure surveillance of all adverse events following immunisation (AEFI) occurring in children and adults are reported, monitored and followed-up in real time through the state-wide and national adverse events reporting program and the Specialist Immunisation Clinic.

Core Activity 1

Stan Perron Immunisation Centre

The Stan Perron Immunisation Centre promotes accessibility for children to get their immunisation needs met with no appointment, fee or referral required. Led by a team of specialist immunisation nurses, the centre offers immunisations on the national and WA immunisation schedule and education on current evidence-based recommendations.

From January to December 2019 a total of 6153 vaccines were administered to 4348 individuals (Figure 1). On average 513 vaccines have been administered to 362 individuals per month. Compared with 2018, an overall 323% increase in attendance and 448% increase in the numbers of vaccines delivered in 2019 by the service (Figure 1). This includes immunisation

service delivery to siblings, parents and carers of vulnerable children attending the centre for scheduled vaccinations including influenza, pertussis and meningococcal vaccines.

The centre receives approximately an average of approximately 10-15 telephone calls per day and provide advice to clinicians and the public on best-practice immunisation recommendations.

The centre has also assisted, through partnership with the WA Department of Health, in the provision of immediate public health measures to families requiring post-exposure protection with immunoglobulin and or immunisations for notifiable vaccine preventable diseases including meningococcal disease, hepatitis A and measles.

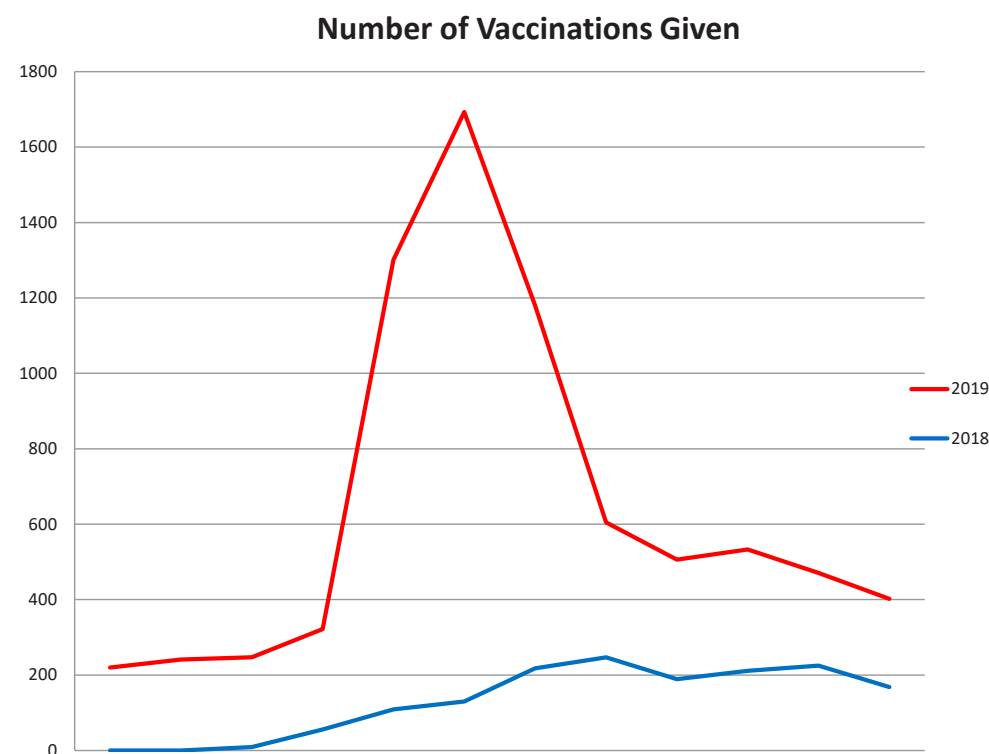


Figure 1. The number of vaccines given by month at the Stan Perron Immunisation Centre, PCH (The centre formally opened at PCH in June 2018)

Service delivery strategies

Partnership with healthcare providers

The Stan Perron Immunisation Centre collaborates with outpatient clinics to identify medically at risk children who are under-vaccinated using the Australian Immunisation Register. The treating medical and nursing teams are notified via the electronic hospital appointment system and this provides the opportunity for these children to attend the immunisation centre for catch-up vaccines.

Partnership with the community

For approximately 800-1000 daily outpatient appointments at PCH, automated text message appointment reminders are sent within days of the appointment. The Immunisation Service has developed a short text-message that follows, reminding parents of the immunisation facility. During the influenza season, availability of the influenza vaccination program at PCH was also included.

Vaccinations for children with needle aversion and needle phobia

The Stan Perron Immunisation Service has partnered with the KKind Program as well as the Acute Pain Service at PCH, to assist with immunisation service delivery for children with needle aversion and needle phobia. This collaborative approach involves a multidisciplinary team including psychologists, paediatricians and nurses with expertise in pain management and distraction techniques. Those with needle aversion who are unable to be vaccinated in the community can be referred to the Stan Perron Immunisation Service, enabling a step-wise approach in an environment that is suited to the patients' needs.

"My daughter is needle phobic and was visiting the Immunisation Clinic to receive her High School Immunisations. This was the second time that we had visited and both times I was so grateful for the patience and compassion towards myself and my daughter by Nurse Patricia Clifford. Her care has made a difference to our family, Thank you."

Parental feedback received from PCH consumer feedback, for the Stan Perron Immunisation Service

"In rheumatology, we care for many patients on immunosuppressive drugs. This means they are at increased risk of infectious diseases. Having a drop-in service that can review our patients immunisations history and provide recommended additional vaccines at the time of their clinic appointment means our patients are much more likely to be appropriately vaccinated than if we asked them to make extra appointments with their GP. This is also a much more patient-friendly approach, decreasing the number of healthcare visits and therefore decreasing time off school for patients/time off work for parents."

Emily Boulter, Consultant General Paediatrician and Rheumatologist at PCH



Immunisation Clinic Nurse Patricia Clifford with patient Stella De Nardi and mother Angela De Nardi

Core Activity 2

Specialist Immunisation Clinic

This service is conducted by a team of experienced paediatricians with expertise in immunisation, an immunisation registrar and specialist immunisation nurses. This medically-led clinic has expanded to a weekly multidisciplinary clinic at PCH, including telehealth services.

The Specialist Immunisation Clinic provides clinical care for:

- Children with complex immunisation requirements, including those with high-risk medical conditions such as an absent or low functioning spleen and those with lowered immunity requiring individualised immunisation plans.
- Education and consultation for vaccine-hesitant families
- Children who have experienced or are at risk of an adverse event following immunisation and management of future immunisations.

- Children and adolescents with needle phobia including those who are unable to be vaccinated in the community.
- Children with medical comorbidities requiring travel health advice and immunisations.

In 2019 a total of 44 clinics were held with 255 patient consultations undertaken, averaging 5-6 patients per clinic. These occasions of service included 86 encounters for vaccine hesitancy, 79 for complex immunisation requirements for children medically at-risk of vaccine preventable diseases, 59 encounters for possible adverse events following immunisation, 33 for needle phobia, and 6 for travel health and vaccination advice for those with medical comorbidities. In 2019 the Specialist Immunisation Clinic provided three times the number of outpatient consultations for families with vaccine hesitancy and twice the number of consultations for those with needle aversion or phobia, in comparison to 2018.

Core Activity 3

Immunisations for Aboriginal and Torres Strait Islander children

Aboriginal children in metropolitan Perth continue to remain below the national benchmark of 95% immunisation coverage for the recommended vaccines in the first and second year of life.

In September 2019, the PCH Immunisation Service in partnership with the WA Department of Health, Communicable Disease Control Directorate launched the first dedicated immunisation Aboriginal Health Worker (AHW) position in a Western Australian tertiary hospital setting. The aim of this role is to build a culturally secure environment for immunisation service delivery through capacity building and partnership with the Western Australian Aboriginal Immunisation Network. This partnership will assist with capacity building and establishment of further initiatives to increase immunisation rates amongst metropolitan Aboriginal children.

The newly appointed Aboriginal Health Worker has provided a culturally secure approach to catching up under vaccinated Aboriginal children by yarning with families about immunisations and helping with wayfinding to the Stan Perron Immunisation Centre.

An average of 110 Aboriginal children visit PCH outpatients each week, providing an ideal opportunity to catch-up children with their

immunisations. In the month pre- and post-establishment of the AHW role at PCH there was a 68% increase in Aboriginal children attending the Immunisation drop-in-centre (21 of which were directly referred by the AHW). This highlights the value of providing a culturally appropriate immunisation service through the AHW role, ensuring engagement, and understanding for families, with the provision of holistic healthcare.



Left: Kylie Hart, Aboriginal Health Worker, Stan Perron Immunisation Service. Right: Jacinta Breen Immunisation Nurse, Stan Perron Immunisation Service

Core Activity 4

Targeted influenza immunisation program

Influenza vaccination is the most effective strategy for preventing influenza-associated hospitalisations. Influenza immunisation is strongly recommended and funded by both state and national programs for children, Aboriginal and Torres Strait Islander people and those with underlying medical comorbidities. In addition, it is also strongly recommended for the families of medically at-risk children. Almost 40% of children admitted to Perth Children's Hospital have been identified with medical risk factors for vaccine preventable diseases including influenza, highlighting the vulnerability of the paediatric cohort transiting through PCH (Tarca et al, 2020). In addition, ongoing research has demonstrated poor uptake in patient groups recommended to receive influenza vaccine including preschool children, Aboriginal children and children with underlying medical conditions.

With the influenza season arriving earlier than expected and record numbers of



children admitted to hospital, the Stan Perron Immunisation Centre was responsive to the needs of children in the state, mobilising staff to ensure vaccine was delivered to some of our highest risk children. In 2019, the Stan Perron Immunisation Centre had a 230% increase in influenza vaccinations in comparison to 2018, with a total of 3109 vaccines administered to young children from April to August (Figure 3). This rise in influenza vaccine delivery at the Stan Perron Immunisation Centre, significantly exceeded the overall state-based increase in WA in 2019 compared with 2018, which was 167%. This expansion can be attributed to a multitude of activities including:

- An influenza awareness week implemented during the first week of the program
- Volunteer service assistance in all outpatient waiting areas
- WA Immunisation mascot Immy the Echidna providing educational support material including influenza health fact sheets for families
- Fun incentives for children including colouring in activities and stickers
- PCH TV display screens and pull up banners with visual education and promotion of influenza immunisations for families
- Automatic SMS flu vaccination reminders for parents with every outpatient appointment attendance
- Social media support (Facebook, Twitter)
- PCH healthcare professional updates and materials to promote and assist with patient discussions regarding the influenza vaccine



PCH Immunisation Service Team with Immy the Echidna: Back: Jan De Groot, Josh Collins, Dr Chris Blyth
Front: Dr Krist Ewe, Katarzyna Okraj, Patricia Clifford, Filomena Mascaro, Dr Anita Campbell.

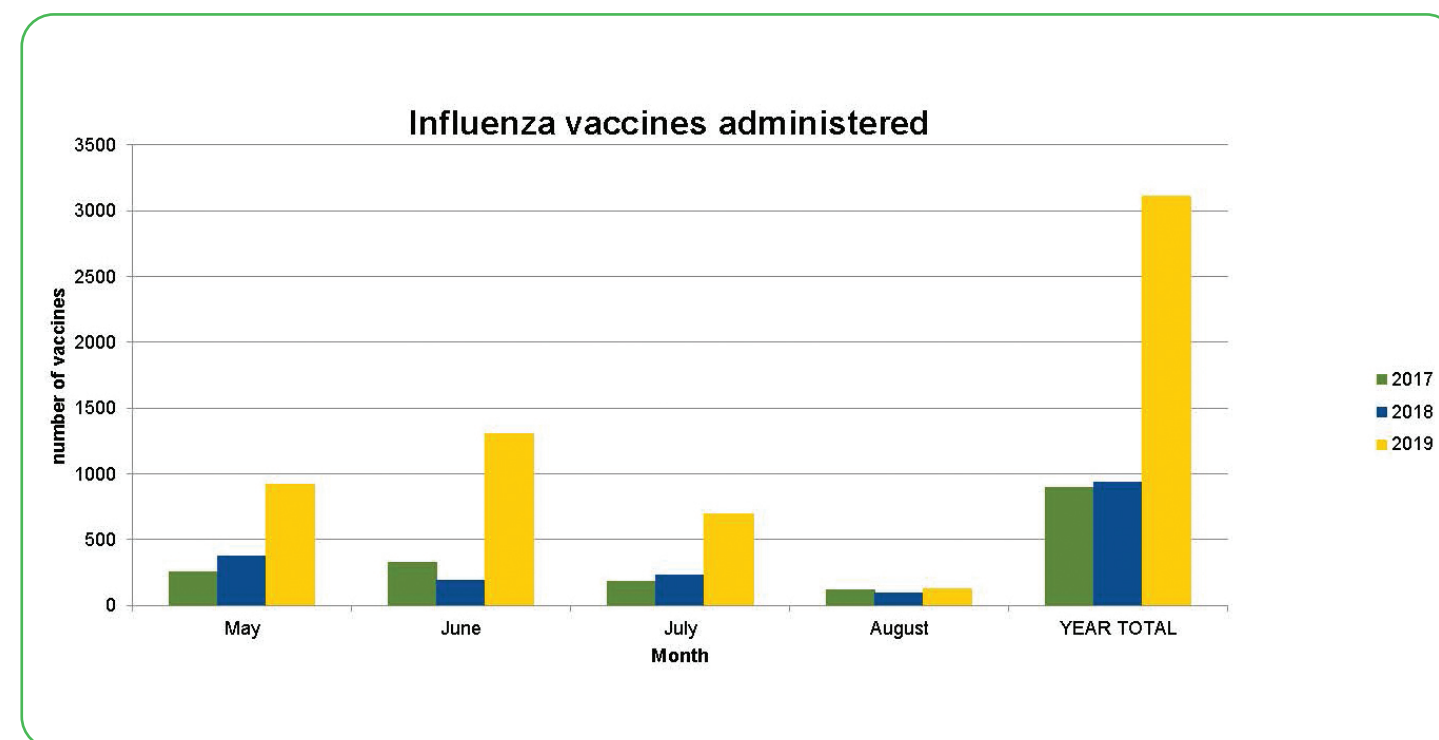


Figure 2. Influenza vaccines administered in 2017 (PMH), 2018 & 2019 (PCH)

Core Activity 5

Immunisation safety surveillance and research

West Australian Vaccine Safety Surveillance (WAVSS)

WAVSS was established in 2011 by the WA Department of Health to monitor vaccine safety by facilitating a 24-hour reporting system for the public and healthcare providers for suspected adverse events following immunisation (AEFI) and access to appropriate clinical services.

In 2019, the Immunisation service at Perth Children's Hospital was asked by WA Health to lead the WAVSS service, providing monitoring, support and clinical review for those reporting AEFI.

Utilising the skills of a specialist immunisation nurse and the medically-led Specialist Immunisation Clinic, the WAVSS program now runs out of PCH in collaboration with the WA Communicable Disease Control Directorate. Key aims include providing early detection and appropriate and timely response to adverse events following immunisation for both adults and children.



The Stan Perron Immunisation Service is part of the SmartVax active safety surveillance system (www.smartvax.com.au). This state-based program uses smartphone technology to send an SMS message inquiring if patients have experienced an adverse event following immunisation. Medically attended reactions are flagged and monitored in real-time and act as an early warning signal, ensuring optimal vaccine safety.

Local Immunisation software (WinVacc)

Dedicated computer software, WinVacc, has been installed at PCH to record and manage immunisation activity accurately. It allows for comprehensive reporting on operational and financial activities and links to SmartVax. This software has the ability to track vaccine stock and supports uploading of vaccines administered to the Australian Immunisation Register (AIR).

Quality improvement research

The following clinical audits are completed or currently underway, to improve immunisation service delivery and patient outcomes:

- Tarca AJ, Lau GT, Mascaro F, Clifford P, Campbell AJ, Taylor E. *Pre- and post-intervention study examining immunisation rates, documentation, catch-up delivery and the impact of a dedicated immunisation service at a tertiary paediatric hospital. J Paediatr Child Health. 2020 Oct 14. doi: 10.1111/jpc.15217.* The Stan Perron Immunisation Service in partnership with the PCH General Paediatric Department conducted a pre- and post- intervention study to explore immunisation rates and catch-up delivery to children admitted to hospital before and after the immunisation service was commenced. Directions for optimising immunisation delivery for children in a hospital setting are provided.
- Oral presentation by Verissimo V. *Optimising infection prevention in at-risk children with asplenia or hyposplenia, CAHS Research Symposium, Perth Children's Hospital, October*

2019. This clinical audit identified a significant proportion of children with asplenia (without a spleen or functioning spleen) who were not up-to-date with additional recommended vaccinations. These children are now offered an opportunity to optimise infection prevention and immunisation catch-up through the Specialist Immunisation Clinic.

- Oral presentation by Campbell AJ. *Catching up children with cochlear implants, CAHS Research Symposium, Perth Children's Hospital, October 2019.* This clinical audit conducted in partnership with the PCH Ear Nose and Throat Department, identified both retrospectively in 2018 and prospectively in 2019 which children with cochlear implants who are medically at risk of pneumococcal disease, were due immunisations. A nurse-led clinical pathway to address this unmet area of need was then developed in the Specialist Immunisation Clinic.
- *Examining prescribing of immunisations for inpatients. Poster presentation at the CAHS Research Symposium, Perth Children's Hospital, October 2019.* Martino V, Mascaro F, Natasha Andres N, Ng L, Jalili M, Emmerton L, Campbell AJ. The Stan Perron Immunisation Service partnered with the Pharmacy Department to investigate the adherence of inpatient immunisation prescribing at a tertiary paediatric hospital against the best practice national safety and quality prescribing standards.

Telethon Kids Institute

Numerous vaccine research projects utilise the Stan Perron Immunisation Centre to facilitate immunisation delivery to research participants, demonstrating the benefits of ongoing collaboration across the Telethon Kids Institute, Wesfarmers Centre of Vaccines and Infectious Diseases and the Child and Adolescent Health Service. In January 2019, the first immunisation registrar joined the Stan Perron Immunisation Service team and has been involved in vaccine research across CAHS and the Vaccine Trials Group at the Telethon Kids Institute.

Core Activity 6

Education and resources

The education of health care professionals and families is an area of ongoing focus for the service, to ensure delivery of the highest quality of preventative health care for the community.

A-Z Immunisation resources

A comprehensive online A-Z immunisation information resource repository has been developed providing 64 resources including 12 guidelines and policies, 8 health fact sheets.

Contribution to Immunisation training programs, resources, and education

The Stan Perron Immunisation Service provides ongoing review and key stakeholder contributions for education of health care professionals and the public through:

- State immunisation schedule & program resources
- WA Health Department Healthcare Provider Immunisation Certification
- Immunisation Education update day: This event was hosted by the PCH Stan Perron Immunisation Service in partnership with the

WA Department of Health and Telethon Kids Institute, Wesfarmers Centre for Vaccines, and Infectious Diseases in February 2019. This was attended by over 200 healthcare providers and researchers, 10 regional sites (through telehealth services) and over 500 people have subsequently watched the online immunisation webinar series created from the day.

- Royal Australian College of General Practitioners (RACGP) accredited lectures on immunisation

*“Excellent venue, content and speakers. I hope it will become an annual event”.
“I loved the content and the access to specialist health professionals”.
“Thought it was a fantastic day with great speakers”.*

Feedback from PCH Immunisation Education Update Day, 8 February 2019.

Core Activity 7

Community and key stakeholder engagement

Internal communication and collaboration

This core activity plays an important part in ensuring all staff and the community are aware of the service. This has been achieved through:

- Directions and information on the service at PCH at the wayfinding kiosks, digital information screens, dedicated pull-up banners, as well as health fact sheets available on the internet.
- Forming partnerships with medical and surgical services at PCH and ongoing collaboration with Ambulatory Care Coordination and Koorliny Moort (Aboriginal health) to enhance immunisation service delivery for specific patient cohorts.

External communication and collaboration

This approach optimises service delivery via the following avenues:

- Linking in with WA health networks including WA Health Pathways, Public Health Units, metropolitan and rural hospitals and other community immunisation providers.
- Utilising communication channels including health magazines such as GP Connect, and social communication platforms such as PCH Facebook and Community News.

- Forming partnerships with community immunisation advocacy groups including the Immunisation Foundation of Australia, Immunisation Alliance WA and the Meningitis Centre of Australia.

- Partnering with the Western Australian Aboriginal Immunisation Network

Representatives from the service also form part of the WA Immunisation Strategy Implementation Steering Committee (WASISC) and the Australian Technical Advisory Group on Immunisation (ATAGI) to develop, shape and advise the minister for health on the National Immunisation Program. In addition, the service forms part of the national Adverse Events Following Immunisation – Clinical Assessment Network (AEFI-CAN).



This report was compiled in August 2020 by the Stan Perron Immunisation Service, Perth Children's Hospital

Staff

Associate Professor Christopher Blyth	Head of Department Infectious Diseases
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Kylie Hart.....	Aboriginal Health Worker; Stan Perron Immunisation Centre
Nicole Yates.....	Immunisation Nurse; Stan Perron Immunisation Centre
Jacinta Breen.....	Immunisation Nurse: Stan Perron Immunisation Centre
Jan De Groot	Clinical Nurse – Immunisation Service and WAVSS from May 2019
Anne Staude.....	Clinical Nurse – Immunisation Service and WAVSS from May - August 2019
Dr Ushma Wadia	General Paediatrician; Specialist Immunisation Clinic
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