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BEST WISHES FOR A SAFE, HAPPY AND RESTFUL
HOLIDAY SEASON

FROM THE TEAM AT NCIRS

2017 Immunisation Coverage and 2018 AIR Data Transfer Study Reports

Two new reports released by the National Centre for Immunisation Research and Surveillance (NCIRS) shine a bright new light on immunisation coverage in Australia.

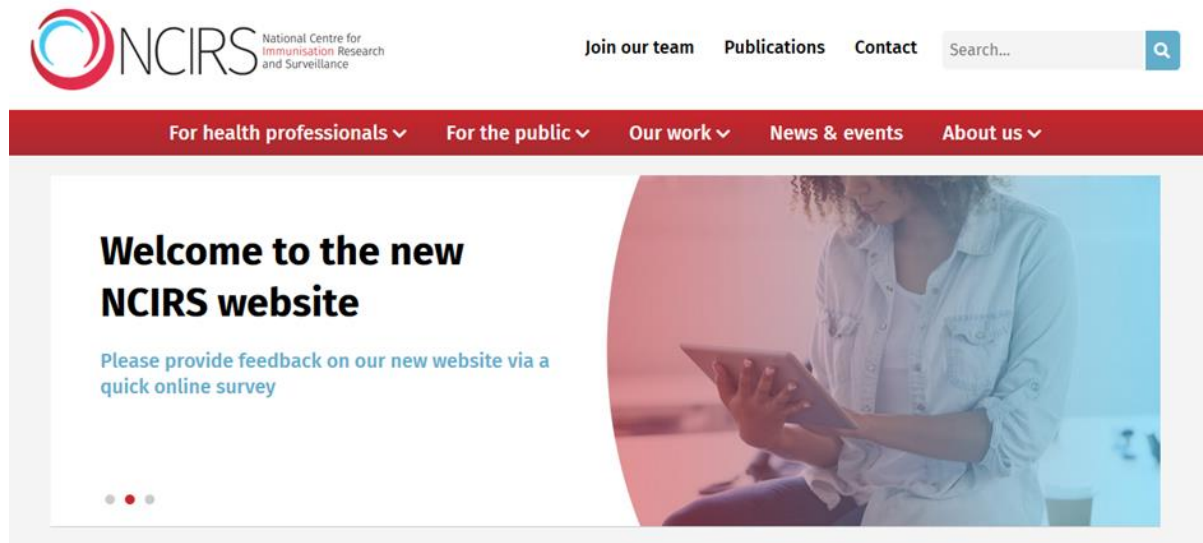
Detailed analysis in the *NCIRS 2017 Immunisation Coverage Report* shows that vaccine coverage in Australia is climbing to new highs.

The other report – the *NCIRS Australian Immunisation Register (AIR) Data Transfer Study Report* – is the first since 2001 to systematically audit the accuracy of children’s immunisation records held on the AIR at a national level.

[Read more...](#)

New NCIRS website

In December we launched our new website, check it out at ncirs.org.au.



Through our new website, we hope to provide an information hub for immunisation professionals and the public by hosting relevant and useful content, and links to a range of resources related to immunisation in Australia and globally. We have also made changes to improve the usability and functionality of our website.

We welcome feedback on our new website. Please contact us via our website [contact form](#) or fill out our [short survey](#).

Exciting changes planned for the NCIRS-AIP discussion forum in 2019

Now that we have launched our new NCIRS website, the next exciting change will be the launch of a new online discussion forum to replace the current NCIRS-AIP email discussion group. The online forum will offer our NCIRS-AIP members an improved platform for communication and discussion, and minimise unwanted emails. The Weekly Jab will continue to be circulated to NCIRS-AIP members via email. We look forward to sharing more information with you in early 2019.

NCIRS Seminars/Webinars October – December 2018

[Immunisation through an equity lens: New Zealand and global](#)

International guest speaker Associate Professor Nikki Turner, Director Immunisation Advisory Centre New Zealand, discussed equity challenges in immunisation, presenting data on the programs that have been implemented in New Zealand and globally to address gaps for at-risk groups such as indigenous, migrant and refugee populations, and those who are medically at risk.

The Australian perspective was discussed during the questions and answer session of this thought-provoking seminar/webinar. [Watch the webinar here...](#)

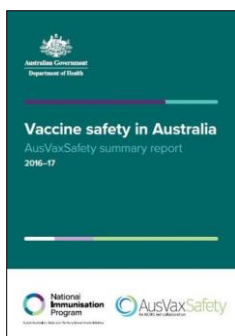
[Australian Immunisation Register & Handbook update](#)

Tracy Hibbard, Director Australian Immunisation Register Department of Human Services and Dr Helen Quinn, Senior Research Fellow NCIRS provided an update on the Australian Immunisation Register (AIR) and The Australian Immunisation Handbook.

The presentation slides and webinar video recording are now [available on the NCIRS website](#).



Vaccine safety in Australia AusVaxSafety summary report 2016-17



The *Vaccine safety in Australia AusVaxSafety summary report 2016-17* is now available [on the Department of Health website](#). The report shows how parents and carers responded to an SMS about their child's health a few days after their vaccination, and includes infographics providing a visual representation of the results at each schedule point in the National Immunisation Program (NIP) in Australia in 2016-17.

Using automated [SmartVax](#) or [Vaxtracker](#) software, AusVaxSafety conducts active, participant-based surveillance via automated SMS for the early detection, analysis and investigation of potential vaccine safety signals at sentinel immunisation provider sites nationwide. [Current vaccine safety results are available on the AusVaxSafety website](#).

[Read the AusVaxSafety summary report 2016-17 here.](#)

AusVaxSafety reports world-first active vaccine safety data for new HPV vaccine

Data from AusVaxSafety confirm the safety of new human papillomavirus (HPV) vaccine Gardasil9® in Australian adolescents. Over 8,000 parents of vaccinated 11- to 14-year-olds provided feedback to an SMS-based survey after the jab. Gardasil9® vaccine was added to the National Immunisation Program this year for adolescent males and females and prevents HPV-related cancers, such as cervical, and head and neck cancer. [Read more...](#)



[PAEDS](#) wraps up another year with 7 sites participating across the network in surveillance activities. We are able to breathe a sigh of relief following a quiet influenza season though other conditions such as encephalitis, invasive group A streptococcus and meningococcal disease have stood in the spotlight somewhat. Work continues on a NHMRC partnership grant looking at prevention strategies for childhood pertussis and influenza. PAEDS is happy to welcome new conditions commencing in the new year including Kawasaki Disease and Gram Negative Blood Stream Infections. We are also very pleased to announce that our new ethics framework for PAEDS known as a 'program of research' is nearly operational following a painstaking 12 months involving ethics and individual site governance approvals. A huge thanks to Nicole Dinsmore for seeing this through to the end. We have a number of PhD and Masters students working with PAEDS at the moment including Jocelyne McRae, Samantha Carlson, Gemma Saravanos, Lucy Deng, Julia Maguire, Ryan Lucas and James Bao all from NSW, as well as Bing Wang (SA) and Daniel Norman (WA). We wish them all the best of luck as they continue with their studies.

Rubella elimination confirmed for Australia by World Health Organization (WHO)



The World Health Organization (WHO) verified in October 2018 that Australia has eliminated rubella.

We should not become complacent though, say NCIRS experts Professor Kristine Macartney, Associate Professor Heather Gidding and Dr Aditi Dey [in their article published in The](#)

[Conversation](#). They stress 'it is important that we maintain high coverage with our routine vaccination programs to ensure elimination is sustained, as rubella is still likely to be imported from other countries'. They also say that 'travellers should have had two MMR vaccinations before going overseas, and every effort must be made to ensure new arrivals in Australia are up to date with their vaccinations, especially women of child-bearing age'. Finally they note that 'to eradicate rubella globally we need to support other countries in our region, and globally, to strengthen their control efforts'.

Congratulations to the SKAI Team – 1st prize, short video - Westmead Research Hub's Art in Science competition

Congratulations to the [Sharing Knowledge About Immunisation \(SKAI\)](#) team, a collaboration developed by Professor Julie Leask, The University of Sydney, in close association with NCIRS and other experts, that took out first prize in the Westmead Research Hub's Art in Science competition short video category, with [its video: What Will Happen When We Get There?](#) a video describing the vaccination process.



Student news

NCIRS Social Science Unit hosted 3 University of Sydney Master of Public Health (MPH) 'Capstone' students for 10 weeks ending in November. The Capstone is the 'workplace learning' component of the postgraduate program. Students participated in and contributed to a Realist review being undertaken to inform the next phase of the Sharing Knowledge About Immunisation (SKAI) project. A Realist approach to evidence synthesis is 'theory-driven', utilising qualitative and quantitative data from multidisciplinary work incorporating various study designs. It aims to provide answers to the question: 'what works', but besides effectiveness, 'for whom, how and why, to what extent, under what circumstances?' The approach seeks to articulate Context (C) factors and uncover Mechanisms (M) in addition to the intervention Outcomes (O) (i.e. C+M=O), thereby providing information relevant to program and policy implementation. The students presented their work at an inaugural USyd Capstone 'conference', and it is anticipated they will graduate in 2019.

Australian College of Midwives (ACM) Annual National Conference (16-18 October, Perth WA) & Immunisation Resources for Midwives



Dr Penny Haora (NCIRS Research Fellow Social Science, who is also a Registered Midwife) led in developing and delivering a 70 minute Immunisation Workshop for midwives at the College's national conference. She also presented an overview of maternal immunisation in another session, highlighting relevant international and national research and programs work – much of which was quite likely new to many midwives. Australian midwifery/maternity services research has frequently highlighted the need for targeted learning and information resources for midwives as primary healthcare providers. The workshop

included presentations by a number of long-time COSSI committee members, including COSSI Co-Chairs Dr Margie Danchin and Dr Holly Seale. Additional findings from research, programs and evaluation work undertaken with midwives were presented by Dr Katie Attwell, Dr Jane Frawley, Ms Catherine Helps and Ms Samantha Carlson. Learning tools and resources to aid midwives to engage in quality conversations with pregnant women were showcased, such as SKAI and MumBubVax. A resources sheet was also developed and distributed at the conference, attended by approximately 500 midwives. Midwives partner with pregnant women and families across Australia (and globally), being the specialist care provider of choice for well women.

Power of population data science webinar series

[Probabilistic linkage of national immunisation and state-based health records for a cohort of 1.9 million births to evaluate Australia's childhood immunisation program](#)

Dr Heather Gidding, NCIRS, and Dr Hannah Moore, Telethon Kids Institute

This presentation described how an Australian research group assembled national death and immunisation databases along with state health data for a cohort of children born between 1996 and 2012 in two states (Western Australia and New South Wales) to enable the conduct of population-based studies related to immunisation and immunisation policy. Details of the data sources used, how the cohort was assembled, the quality of the probabilistic linkage, strengths and limitations of the linkage system developed and how it compares

with systems developed in Nordic countries were discussed. Plans for analysis and recommendations for future linkages were touched on. The talk should be of interest to researchers in other countries with national immunisation registers looking to establish similar systems.



Julie Leask, world renowned Social Science and Immunisation researcher, COSSI co-founder and inaugural Chair, and long-time NCIRS Affiliate, has received due recognition for her exceptional contributions and commitment having recently received a promotion to Professor at the University of Sydney, Susan Wakil School of Nursing and Midwifery. We would like to congratulate Professor Leask and wish her every success in her upcoming endeavours.

We would also like to congratulate Dr Katie Atwell (COSSI Committee, UWA) who recently became the recipient of a DECRA or Discovery Early Career Researcher Award for a three year fellowship for her work: "Addressing vaccine rejection: drivers and impact of mandatory vaccination." The project aims to analyse the introduction, design and implementation of vaccination regimes in Italy, France, Australia and California, utilising a comparative case study approach. A much needed and exciting project, and a wonderful achievement - well done Katie!

Also we would like to congratulate Dr Margie Danchin, current COSSI Co-Chair, for being awarded a 2019 NHMRC project grant for her work on "The Vaccine Barriers Assessment Tool (VBAT): a vaccine acceptance and barriers tool for optimisation of vaccine uptake for parents of children under the age of five". The project aims to develop the first comprehensive and interlinked model of parent acceptance and access barriers to childhood vaccination.

MumBubVax Pilot Launch

A new pilot study to assess the acceptability and feasibility of an innovative, multi-component intervention designed to optimise vaccine discussions between midwives and expectant parents to inform a national cluster RCT commenced at the Royal Women's Hospital in October 2018. This study is led by COSSI members Margie Danchin, Jessica Kaufman, Katie Atwell and Julie Leask. Other key investigators include Prof Saad Omer, Emory University, USA and Dr Annette Regan, Texas University, USA, in collaboration with University of Sydney, NCIRS and Telethon Kids Institute. The P3-MumBubVax intervention package, which includes components at the practice, provider and parent levels, includes: SMS vaccine reminders for pregnant women post clinic appointments; 30-minute tutorial for midwives with interactive learning exercise; MumBubVax website with provider and parent portals, featuring information on maternal and infant vaccines and links to information on childhood vaccines.

This will be the first antenatal maternal and childhood vaccine promotion intervention targeting midwives to increase maternal and childhood vaccination uptake in Australia. This study will provide crucial pilot data to support an NHMRC funding application to undertake a national cluster RCT to evaluate the intervention's efficacy. The P3-MumBubVax intervention package is novel and is intended to have a sustained impact on vaccine acceptance and uptake, reducing childhood and maternal morbidity and mortality in Australia and will also provide the optimal platform for the introduction of other maternal vaccines in the pipeline (e.g. Group B Streptococcus and Respiratory Syncytial Virus).

COSSI Meetings in 2019

COSSI will host alternating knowledge exchange meetings and journal clubs online every 2 months in 2019 to foster collaboration and social science research that will build the evidence base on strategies to increase demand and acceptance of vaccines in Australia to optimise uptake, confidence and immunisation policy and practice. The NCIRS website will also include updates COSSI membership, publications and links to projects in 2019.

Special edition of Vaccine - Vaccine hesitancy: towards a better understanding of drivers and barriers to awareness, acceptance and activation

Congratulations to our fellow Australian researchers who were highly represented in a recent special edition of *Vaccine*, entitled [Vaccine hesitancy: towards a better understanding of drivers and barriers to awareness, acceptance and activation](#). A special mention to Professor Julie Leask, NCIRS Professorial Fellow, who was an author on four articles in this edition, including [Sharing Knowledge About Immunisation \(SKAI\): an exploration of parents' communication needs to inform development of a clinical communication support intervention](#).

Many of these Australian researchers are part of the Collaboration on Social Science and Immunisation (COSSI) network. The COSSI network is open to researchers, health care providers and postgraduate students working in the social science of immunisation.

NCIRS in the media October – December 2018

[Sydney suburbs dragging down Australia's record vaccination rates](#) – Dr Frank Beard, NCIRS

[Australia's vaccination rates rise, but not in this Melbourne area](#) – Dr Frank Beard, NCIRS

[Vaccine side effects: Australia's world-first surveillance system](#) – AusVaxSafety

[Our world-leading tool for vaccine safety](#) – AusVaxSafety

[New shingles vaccine 'superior' but comes with a sting](#) – Professor Kristine Macartney

[Study suggests birth dose of pertussis vaccine could be safe, effective](#) – Associate Professor Nicholas Wood

['Very positive': Immunisation coverage rates in children hit record high](#) – Professor Kristine Macartney and Dr Frank Beard

['Highly efficacious' shingles vaccine excluded from NIP](#) – Professor Kristine Macartney

NCIRS staff attendance at national and international conferences/meetings October – December 2018

25 - 26 October 2018: Hunter New England Local Health District, Staff Health State Conference in Newcastle, Australia – Presentation by Professor Kristine Macartney

2 November 2018: South Australian Vaccinology Update in Adelaide – Presentation by Associate Professor Nicholas Wood

5 - 9 November 2018: 9th Southeast Asia & Western Pacific Bi regional Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET) Scientific Conference in Vientiane, Laos – Presentation by Julia Maguire

26 - 27 November 2018: World Health Organisation Regional Office for Europe national workshop “New developments in Surveillance and Causality assessment of Adverse Events Following Immunisation” in Riga, Latvia, – Professor Kristine Macartney invited as an expert advisor

3 December 2018: Western Sydney Local Health District (WSLHD)/University of Sydney Launch of Health Literacy Hub and NSW Health’s Agency for Clinical Innovation (ACI) Consumer Enablement Guide – Presentation by Dr Penny Haora

NCIRS Publications October – December 2018

Khan A, Ashher F, Karim T, Fatema A, Jahan I, Muhit M, Dey A, Beard F, Khandaker G. [Immunization status of mothers of children with cerebral palsy in rural Bangladesh](#). *Infectious Disorders Drug Targets*. 1 October 2018.

Danchin MH, Costa-Pinto J, Attwell K, Willaby H, Wiley K, Hoq M, Leask J, Perrett KP, O'Keefe J, Giles ML, Marshall H. [Vaccine decision-making begins in pregnancy: correlation between vaccine concerns, intentions and maternal vaccination with subsequent childhood vaccine uptake](#). *Vaccine* 2018;36:6473-9.

Berry NJ, Danchin M, Trevena L, Witteman HO, Kinnersley P, Snelling T, Robinson P, Leask J. [Sharing Knowledge About Immunisation \(SKAI\): an exploration of parents' communication needs to inform development of a clinical communication support intervention](#). *Vaccine* 2018;36:6480-90.

Attwell K, Wiley KE, Waddington C, Leask J, Snelling T. [Midwives' attitudes, beliefs and concerns about childhood immunisation: a review of the global literature](#). *Vaccine* 2018;36:6531-9.

Bedford H, Attwell K, Danchin M, Marshall M, Corben P, Leask J. [Vaccine hesitancy, refusal and access barriers: the need for clarity in terminology](#). *Vaccine* 2018;36:6556-8

Patel C, Brotherton J, Pillsbury A, Jayasinghe S, Donovan B, Macartney M, Marshall H. [The impact of ten years of HPV vaccination in Australia: what additional disease burden will a 9-valent vaccine prevent?](#) *Eurosurveillance*. October 2018;23.

Pillsbury A, Glover C, Jacoby P, Quinn HE, Fathima P, Cashman P, Leeb A, Blyth CC, Gold MS, Snelling T, Macartney K. [Active surveillance of 2017 seasonal influenza vaccine safety: an observational cohort study of individuals aged 6 months and older in Australia](#). *BMJ Open*. 2018;8.

Macdonald-Laurs E, Koirala A, Britton PN, Rawlins W, Hiewa CC, McRae J, Dalea RC, Jones C, Macartney K, McMullana B, Pillaia S. [CSF neopterin, a useful biomarker in children presenting with influenza associated encephalopathy?](#) *European Journal of Paediatric Neurology*. 2018.

Alqahtani AS, Heywood AE, Rashid H. [Preparing Australian pilgrims for the Hajj 2018](#) [letter]. *Journal of Travel Medicine*. 2018;25. doi: 10.1093/jtm/tay068

Alqahtani AS, Fakeerh M, Bondagji D, Park S, Heywood AE, Wiley KE, Booy R, Rashid H. [Hand hygiene compliance and effectiveness against respiratory infections among Hajj pilgrims: a systematic review](#). *Infectious Disorders – Drug Targets*. October 2018.

Badahdah AL, Tashani M, Khatami A, Booy R, Rashid H. [Interaction of meningococcal conjugate vaccines with other conjugate or diphtheria-tetanus containing vaccines](#) [letter]. *Journal of Travel Medicine*. October 2018.

NCIRS Publications October – December 2018 cont.

Giles ML, Krishnaswamy S, Macartney K, Cheng A. [The safety of inactivated influenza vaccines in pregnancy for birth outcomes: a systematic review](#). *Human Vaccines and Immunotherapeutics*. 2018.

Lu X, Quinn H, Menzies R, Hueston L, Gilbert L, McIntyre PB. [Diphtheria immunity in Australia: should we be concerned?](#) *Infectious Disorders – Drug Targets*. November 2018.

Lu X, Quinn H, Menzies R, Hueston L, Gilbert L, McIntyre PB. [Tetanus immunity and epidemiology in Australia, 1993-2010](#). *Infectious Disorders – Drug Targets*. November 2018.

Lu X, Quinn H, Menzies R, Hueston L, Gilbert L, McIntyre PB. [Hepatitis B seroepidemiology in Australia one decade after universal vaccination of infants and adolescents](#). *Infectious Disorders – Drug Targets*. November 2018.

Dey A, Wang H, Quinn H, Cook J, Macartney K. [Surveillance of adverse events following immunisation in Australia annual report, 2016](#). *Communicable Diseases Intelligence* 2018;42:S2209-6051(18)0000111-8.

McHugh L, Marshall HS, Perrett KP, Nolan T, Wood N, Lambert SB, Richmond P, Ware RS, Binks P, Binks MJ, Andrews RM. [The safety of influenza and pertussis vaccination in pregnancy in a cohort of Australian mother-infant pairs, 2012–2015: the FluMum study](#). *Clinical Infectious Diseases*. [Epub].

Karki S, Muscatello DJ, Banks E, MacIntyre CR, McIntyre P, Liu B. [Association between body mass index and laboratory confirmed influenza in middle-aged and older adults: a prospective cohort study](#). *International Journal of Obesity*. 2018;42:1480-88.