NCIRS was a co-sponsor of the conference organised by the Victorian Cytology Service (VCS) on “Preventing cervical cancer: integrating screening and vaccination” held in Melbourne from 20–22 February 2015. This key conference was attended by government officials as well as local and international experts who discussed concurrent issues in the field.

From NCIRS, Professor Peter McIntyre, Associate Professor Kristine Macartney, Dr Aditi Dey and Dr Melina Georgousakis attended the conference. Associate Professor Kristine Macartney chaired a session on “Future directions for the National HPV Vaccination Program” and Professor Peter McIntyre presented findings from the national evaluation of the HPV vaccination program particularly the first 5 years of the program. This report is now available online at the Immunise Australia website http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/news-20142908

It was a privilege for NCIRS staff members to attend the reception at Government House to celebrate the 50th birthday of VCS on Friday 20th February, 2015. Happy birthday VCS!
Linkage of Australian Childhood Immunisation Register (ACIR) data to state-based health datasets to evaluate and inform Australia’s immunisation program

By Dr Heather Gidding

Until March 2015 the Australian Childhood Immunisation Register (ACIR) had not been linked to other routinely collected datasets to enable an in-depth understanding of factors associated with poor vaccine uptake, delayed vaccination and vaccine effectiveness. A 3-year collaboration between researchers at the Telethon Kids Institute, the NCIRS and the University of NSW, together with state and national agencies, has resulted in the successful linkage of ACIR data to health outcome data for approximately 2 million children born in Western Australia (WA) and New South Wales (NSW) between 1996 and 2012.

In addition to data about the children’s vaccinations, we now have linked data from the National Death Index (NDI), the WA and NSW midwives’ data collections, hospital admissions, emergency department visits, disease specific notifications, and pathology tests and results from the PathWest Laboratory Database (WA only). This will enable us to obtain population-based measures of vaccine uptake, timeliness and effectiveness and determine factors associated with these measures (using multivariate statistical methods) for all births in the cohort, as well as special risk groups (including Aboriginal children) separately.

Priorities include measuring pneumococcal vaccination coverage in targeted risk groups, and vaccine effectiveness estimates for the pertussis, pneumococcal and influenza vaccines. The risk groups and potential confounders will be identified using all the datasets, but in particular the diagnostic and procedural codes from emergency department and hospitalisation records. Diseases of interest will be identified from the notification, hospitalisation, emergency department and laboratory databases and include those specifically targeted by vaccination as well as some conditions where there may be an indirect effect of vaccination.

The project has received ‘Proof of Concept’ funding from the Population Health Research Network, as part of the National Collaborative Research Infrastructure Strategy, and researcher and project support from the National Health and Medical Research Council.

We will be celebrating the successful linkage of the ACIR to state-based health datasets in WA and NSW and launching our study during the lunch-time break on the second day of the Public Health Association Australia’s Communicable Disease Control Conference (2nd June, 2015). We hope you can join us then to hear more about the study, including the planned priorities for analysis. The launch will also provide an opportunity to propose collaborative projects that could be answered with our study data, and preferred mechanisms for stakeholder feedback.

Have you heard about AIP? Now is a good time to join!

THE NCIRS-AIP EMAIL DISCUSSION GROUP WILL CELEBRATE ITS 12TH BIRTHDAY THIS YEAR. THERE ARE NOW OVER 750 AUSTRALIAN IMMUNISATION PROFESSIONALS SUBSCRIBED TO THE GROUP.

NCIRS-AIP provides:

• A forum for questions and feedback
• Regular international updates on immunisation news, publications and meetings of interest, and summaries and commentaries on recent papers presented and discussed at the NCIRS Immunisation Journal Club.

NCIRS-AIP is intended to be an interactive forum for debate as well as serving as a source of reliable information. Posts and responses are encouraged from all members and, in the interests of open and rapid communication, discussion content is not screened before distribution to the group. If you are interested in subscribing to this group, please go to www.ncirs.edu.au/immunisation/professionals-network/index.php
The Vaccine Safety Net highlights PAEDS

The Vaccine Safety Net is a World Health Organization (WHO) initiative that aims to improve global dissemination of balanced evidence-based vaccine safety information via the internet. Through the VSN, WHO identifies websites that provide information on vaccine safety and evaluates them against good information practices criteria established by the Global Advisory Committee on Vaccine Safety (GACVS). Institutions whose websites meet the criteria are invited to participate in the VSN, and are added to the WHO list of websites providing credible vaccine safety information. NCIRS has been a member of the VSN since 2011.

The February VSN newsletter, highlighted PAEDS as one of the campaigns and initiatives.

Paediatric Active Enhanced Disease Surveillance (PAEDS) was established in 2007 by the National Centre for Immunisation Research and Surveillance (NCIRS), together with the Australian Paediatric Surveillance Unit. PAEDS conducts active hospital based surveillance for adverse events following immunization and vaccine preventable diseases, and was founded on the Canadian Immunization Monitoring Program ACTive (IMPACT) model. It involves a network of clinicians and public health researchers in five Australian tertiary paediatric hospitals. Conditions under surveillance include intussusception, febrile seizures, acute flaccid paralysis, varicella and herpes zoster, pertussis, influenza and encephalitis.

PAEDS published the first paper on the risk of intussusception associated with newly registered rotavirus vaccines (Buttery et al., 2011 http://www.ncbi.nlm.nih.gov/pubmed/21316503) which informed advice from the World Health Organization, the Australian Government Department of Health and other key expert bodies and organizations worldwide regarding the use of rotavirus vaccines. PAEDS also contributed data to a later pivotal paper further defining the intussusception risk (Carlin et al., 2013 www.ncbi.nlm.nih.gov/pubmed/23964090) Since 2013, PAEDS has been conducting active surveillance of febrile seizures with a focus on a potential association with measles, mumps, rubella and varicella (MMRV) vaccine. MMRV was added to the Australian National Immunisation Program from July 2013 as the second dose of measles-containing vaccine at 18 months of age, following measles, mumps and rubella vaccine (MMR) given at age 12 months. Children with vaccine and non-vaccine proximate febrile seizures identified through PAEDS will also be enrolled into a National Health and Medical Research Council study led by NCIRS examining long-term developmental outcomes and genetic susceptibility to seizures. Results of PAEDS surveillance of intussusception and febrile seizures were presented at the recent Public Health Association of Australia National Immunisation Conference: http://www.phaa.net.au/14thNationalImmunisationConference.php

Further information and contact details are available from the new PAEDS web site: www.paeds.edu.au

Staff News

PhD student, Mohamed Tashani, received the Robert Austrian Award at the International Symposium on Pneumococci and Pneumococcal Diseases for his research on “Optimising immune responses to vaccination in Australian Hajj pilgrims.”

Nick Wood received a National Award at the Sydney Medical School celebrations dinner following his Research Excellence Award from the NHMRC (highest-ranked Clinical Career Development Fellowship) in 2014.
Recent Journal Club presentation:
The Vaccination Confidence Scale: A brief measure of parents’ vaccination beliefs

By Dr Kerrie Wiley, Research Fellow - Social Research

This US-based study used national population-based telephone survey data to develop a brief vaccine confidence scale for parents of adolescents. While much work has been done in this area to measure confidence in parents of younger children, there are fewer tools and datasets relating to parents of adolescents.

Eleven beliefs were measured using an 11-point scale (0 = “strongly disagree” to 10 = “strongly agree”). These items were developed based on the Health Belief Model, and responses were subject to a two-phase factor analysis, beginning with an exploratory factor analysis using a randomised sample of half the data. In this phase, three items were dropped, as they did not meaningfully load into any factor. A confirmatory factor analysis was then undertaken on the remaining 8–item set, using a model with one factor, and another with three, “Trust”, “Benefits” and “Harm”.

While the one-factor model showed a “marginally acceptable” fit with the data, the three-factor model gave a “good” fit.

The resulting 8–item Vaccination Confidence Scale offers a reasonable measure of parental adolescent vaccination beliefs, and when divided into three factors fits the data best while aligning well with Health Belief Model constructs.

There is potential to test these items in the Australian context, not only with parents of adolescents, but with other groups in the population. It was shown with the American sample to be consistent across a number of demographic groups, and has the potential to be used to routinely measure vaccine confidence over time. The information garnered could inform
Dubbo Immunisation Conference

By Ms Kath Cannings

On Wednesday 25 March, Peter McIntyre, Nick Wood and Kath Cannings attended and presented at the Western NSW Medicare Local Immunisation Conference held in Dubbo. The day was split into two sessions.

The day session was attended by approximately 207 RNs from GP practices, hospitals, community health and public health and the evening session was attended by approximately 56 GPs and medical students. Nick opened each session with a general immunisation update covering multiple topics including influenza, pertussis, HPV, meningococcal B, varicella and shingles.

There was a lot of interest in the new recommendations for dTpa vaccination in pregnancy as well as extra doses of DTPa and varicella vaccines that were recommended but not funded. Kath’s presentation covered hot topics in adverse events following immunisation including a summary on the journey of HPV vaccine safety, febrile seizures following vaccination and the use of prophylactic paracetamol for the new meningococcal B vaccine. Peter discussed Aboriginal and Torres Strait Islander vaccination focusing on the improvements that have been made as well as the gaps that still exist in both childhood immunisation and disease incidence.

Nick and Kath also presented a role play to demonstrate an approach to a vaccine-hesitant parent which was thoroughly enjoyed by the RNs in the morning session. Other topics presented on the day by local staff included cold chain management, ACIR notification, and updates on the local Aboriginal Immunisation Program and the School Immunisation Program.

A question and answer panel was held at the end of each session which was valuable for the attendees as well as the speakers. Feedback from both sessions to date has been positive.

Left to Right: Professor Peter McIntyre, Immunisation CNC Kath Cannings and Dr Nick Wood


Final Report of the Evaluation of the National Human Papillomavirus Vaccination Program

The final report of the evaluation of the National Human Papillomavirus (HPV) Vaccination Program is now available on the Immunise Australia website at http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/news-20142908

The report includes:

- a process evaluation focusing on strengths and challenges of program implementation
- estimates of vaccination coverage
- analysis of adverse events following immunisation
- impact of the program on the epidemiology of high-grade cervical abnormalities and genital warts.

Updated vaccination history tables

The vaccination history tables on the NCIRS website have been updated. They are available at: http://ncirs.edu.au/immunisation/history/index.php

The tables that have been updated (new dates and/or updates to existing information) are:

- Diphtheria, tetanus, pertussis
- Haemophilus influenzae type b (Hib)
- Hepatitis A
- Hepatitis B
- Influenza
- Japanese encephalitis
- Pneumococcal
- Polio
- Q fever

Updated Handbook pertussis chapter now online

There have been approved updates to the pertussis chapter of The Australian Immunisation Handbook. The new chapter is now available on the Immunise Australia website http://www.immunise.health.gov.au/