HIGHLIGHTS IN THIS ISSUE

P1 ROTAVIRUS IN THE SPOTLIGHT
The Australian Department of Health & Ageing have recently updated information on Rotavirus vaccine.

P2 VACCINOLOGY COURSE HELD IN FRANCE
Dr Kevin Yin provides a summary of the vaccinology course he attended in France.

P6 FEATURE ARTICLE ON SURVIVING PHD'S
Two NCIRS staff members recently submitted their PhD's and they share their challenges and triumphs.

P9 NEW ZEALAND IMMUNISATION CONFERENCE
NCIRS's Immunisation Nurse, Kath Cannings provides a wrap-up of the recent conference.

P10 JOURNAL CLUB SUMMARIES
Two summaries from recent journal club presentations.

ROTA VIRUS IN THE SPOTLIGHT

The Australian Department of Health & Ageing has recently updated the Rotavirus and Intussusception information on the Immunise Australia Website. This information can be found at http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/immunise-rotavirus

The updates align with the recent changes to the TGA website which can be found at http://www.tga.gov.au/safety/alerts-medicine-rotavirus-130828.htm

The parent and guardian information sheet has also been updated and is available to download from the publications section of the Immunise Australia website or by simply clicking on this link: http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/ITO136-cnt

LEARN MORE ABOUT THE PAEDS NETWORK
AUGUST NEWSLETTER NOW ONLINE

The PAEDS network conducts active, hospital-based surveillance to collect enhanced data on serious vaccine-related childhood conditions for which data are not readily available using existing surveillance mechanisms.

PAEDS is a joint initiative coordinated by the National Centre for Immunisation Research & Surveillance (NCIRS) and the Australian Paediatric Surveillance Unit (APSU). It consists of a network of clinicians and public health researchers in four Australian tertiary paediatric hospitals: The Children’s Hospital at Westmead, Sydney; Royal Children’s Hospital, Melbourne; Women’s and Children’s Hospital, Adelaide; and Princess Margaret Hospital, Perth. A fifth site in Queensland, at the Royal Children’s Hospital, has been on board since July 2012. Read more at www.ncirs.edu.au
Dr J Kevin Yin, Research Officer Evidence-Based and Policy Support Team at NCIRS, attended the prestigious Advanced Course of Vaccinology (ADVAC) in Annecy, France, during May 2013. ADVAC is a 2-week training program organised by Fondation Mérieux, covering all fields related to vaccines and immunisation. Attendance at ADVAC involves a highly selective process by an international scientific committee.

Kevin is very grateful that, through ADVAC, he has gained the latest and in-depth knowledge of vaccinology, including vaccine immunology, immunisation policy, vaccine safety and pre-clinical development. He also had the chance to learn from and interact with over 60 top-level speakers and with other candidates with diverse backgrounds. All of these are important additions to his work experience in policy support and clinical research, his doctorate in epidemiology and economics, and his public health and medical background.

After this course, Kevin has found that vaccinology is a very interesting but highly complex area with a multifaceted nature. We certainly have much to learn and apply.
During August, I travelled to Manila as part of the field epidemiology training program fellowship to work as a rumour surveillance officer at the Western Pacific Regional Office of the World Health Organization.

Prepared by Ms May Chiew

Working at the Emerging Disease Surveillance and Response (ESR) unit under the Division of Health Securities and Emergencies, my role included collecting public health events through informal and official channels, participating in rapid risk assessments of potential public health events and liaising with Member States to verify these events. I was also involved in preparing reports including situation updates on Dengue, Hand Foot and Mouth Disease and Seasonal Influenza for the region.

This was my first experience working in an international organisation and I learnt a great deal from the team members in ESR, who are dedicated in building the capacity of Member States in preparing, detecting and responding to public health threats. They were extremely generous in sharing their knowledge with me and patient in teaching me throughout the fellowship.

I was thankful for the skills and knowledge acquired at NCIRS and as part of the coursework of the Master of Philosophy (Applied Epidemiology) which equipped me with adapting to working in an outbreak response environment. Staying in Manila during rainy season was also an eye-opener. Witnessing first-hand the impact of flooding to the city and the potential risks to human health, including working on a risk assessment for leptospirosis were something I will never forget.

One of the highlights of my time in Manila would be the hospitality from my colleagues. Whether spending their weekends taking me sight-seeing or endlessly feeding me Filipino delicacies, their warmth was exceptional and made this experience extremely special. I was also very fortunate also to work in a culturally diverse unit, particularly with a number of rumour surveillance officers from around the region who shared similar interests and taught me a lot about their cultures and religions.

I would like to thank Drs Aditi Dey and Stephanie Davis, for allowing me to take this fellowship.
SAUDI ARABIAN AMBASSADOR MEETS WITH NCIRS RESEARCH TEAM

The Ambassador of the Custodian of the Two Holy Mosques, Kingdom of Saudi Arabia, in Australia, His Excellency Mr Nabil Al Saleh, met a team of doctors and researchers from NCIRS in his office in Canberra. In collaboration with the Kingdom of Saudi Arabia Ministry of Health the research team are conducting a study to prevent influenza and other respiratory viral infections among pilgrims during this year’s Hajj.

The team briefed the Ambassador on the key steps of the research and discussed the practical issues. The Ambassador praised this medical research as being of utmost importance for the Hajj pilgrims, and stressed full support from his side. He also highlighted the cooperation between the Kingdom of Saudi Arabia and Australia in the medical/biomedical research sector which has brought benefits to people of both countries as well as to humankind in general. The medical team included among others Professor Robert Booy and team from Australia, and Dr Osamah Barasheed from Saudi Arabia.

WE HAVE OVER 700 SUBSCRIBERS, HAVE YOU JOINED THE AUSTRALIAN IMMUNISATION PROFESSIONALS NETWORK YET?

We have well over 700 Australian immunisation professionals subscribed to the NCIRS-AIP email discussion group. NCIRS-AIP is designed to facilitate communication between professionals involved in immunisation in Australia, whether at the level of research, policy development, or as immunisation providers.

NCIRS-AIP provides:

- A forum for questions and feedback
- Regular international updates on immunisation news, notifications of news items, publications and meetings of interest, and summaries and commentaries on recent papers presented and discussed at the NCIRS Immunisation Journal Club.
- An avenue for rapid information about media controversies.

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. Senior NCIRS staff keep a watching brief on messages posted to the group and provide additional information where it is thought to be useful.

RECENT PUBLICATIONS


Wiley KE, Massey PD, Cooper Robbins SC, Wood N, Quinn HE, Leask J. Pregnant women’s intention to take up a post-partum pertussis vaccine, and their willingness to take up the vaccine while pregnant: a cross sectional survey. *Vaccine* 2013;31:3972-8.

There’s something in the water at the Social Research Unit within the NCIRS headquarters. We’ve recently had two of our staff members submit their PhD’s and they sat down to tell Communications Officer, Danielle Grant about their tales of triumphs, late nights and a few challenges.

**Kerrie’s story**

I recently completed my PhD on influenza and pertussis vaccination behaviour during pregnancy. I surveyed 815 pregnant women at Westmead, Royal Prince Alfred and Tamworth hospitals, and interviewed 20 women in depth.

One of the key findings of my study is that healthcare providers are key in pregnant women’s decisions to have a vaccine. Women who had received a recommendation to have an influenza vaccine were 20 times more likely to have one than women who hadn’t received a recommendation. I also found that women who feared that the vaccine was not safe to receive during pregnancy were less likely to have the vaccine, but the majority of them would have it if their healthcare provider recommended it. These results are now being used to inform the development of a shared decision tool for use in an antenatal setting which will help pregnant women to consider vaccination during pregnancy with their healthcare provider.

I have been extremely fortunate in having very knowledgeable and supportive supervisors in Associate Professor Julie Leask and Dr Nick Wood. As a result the last 3 years have been some of the most interesting of my working life, and doing a PhD has been a very positive experience for me. On the surface, a PhD is a research training degree; an opportunity to study a single topic in great depth, to learn how to conduct good research, and master the art of communicating your results. My PhD taught me these things and a lot more. I would therefore like to share with you 10 other things I learned while doing my PhD:

1) Nothing alleviates stress like a large block of chocolate. Unfortunately nothing alleviates your expanding waistline when you spend so much time sitting at a desk.

2) There is a fine line between combining parenthood with a PhD, and insanity.

3) Two Starbucks Venti skim lattes can help you concentrate for long periods of time. Three gives you palpitations.

4) Children can find the most interesting places to eat their dinner when the kitchen table has been commandeered for study purposes.

5) Typos are like weeds. They are a ubiquitous pest. No matter how many times a manuscript is checked to get rid of them, or by how many people, more will always appear.

6) When coding qualitative data a good sign that you’re on the right track is when your eyes start to water, your head hurts and you feel even more confused than when you started.

Kerrie’s kids eating breakfast at her kitchen table, which she commandeered for the last few months of her PhD.
Talking with other students regularly is a good thing to do. You soon realize you’re not the only nutter who has a habit of biting off more than you can chew, and those other nutters are really good at giving you encouragement and support.

When your friends and family ask what you’re doing it’s best to answer with a short sentence like “I’m studying flu vaccine”. Longer answers are generally met with glazed eyes and facial expressions which approximate a PC in screensaver mode.

Knowing exactly what your limits are is a really useful thing. Pushing past those limits to find new ones is invaluable.

If you find yourself asking why on earth you thought doing something was a good idea (like a PhD, for example), it probably is worth doing.

Maria’s story
I started working at NCIRS in 2009 as a research assistant, and who would have thought that my job here has turned out to be my PhD project! My thesis title is ‘Psychological and social impact of influenza-like-illness (ILI) in children on their families’. The project is a part of the PIVOT project (Paediatric Influenza Vaccination Outcomes Trial), a cohort and RCT study looking at the benefits of vaccinating children at childcare centres against influenza. I interviewed parents of children with severe ILI, and was astonished to see the extent and variety of impacts it has on the child’s family, including the parents’ and siblings’ physical health, their emotions, social life and daily life routine. There were no specific ILI quality of life questionnaires for caregivers to measure the level of impact, so one of my research aims was to develop and validate such a questionnaire. This will help health administrators and clinicians to better evaluate the impact of ILI on families, so as to provide adequate support and to inform policy changes. Please see http://www.ncbi.nlm.nih.gov/pubmed/23742615 and http://www.ncbi.nlm.nih.gov/pubmed/23292299 for two of my published articles from my PhD.

This PhD project brought me completely out of my comfort zone. I have to confess that I am the sort of person who is always afraid to give public speeches, talk to strangers, and talk to people on a phone, especially since English is my second language. Fortunately (or unfortunately), I experienced all these through presenting at conferences, informing parents at childcare centres about the research project (somehow like a salesperson), and interviewing them, and talking them into participating in the research over the phone. In hindsight, I am glad that I am trained to overcome my fear and have conquered it. Working on a PhD project is like trekking in the dark. Professor Robert Booy is like my compass, pointing me in the right direction of research; Associate Professor Julie Leask is my headlight, enabling me to see what is in front of me and guide my footsteps; and Dr Angie Morrow is my walking stick, protecting me from any ‘dangers’ and giving me strength to tread the whole path. There are many angels that I am very grateful to for their help too.

Below are some of my encounters/experiences during the PhD candidature:

1. Publishing journal papers took at least 3 times longer than expected. “Never give up” is the way to success in publishing.
2. I became friends with the hospital security guards because they escorted me back to my home (hospital accommodation) nearly every night.
3. On a Sunday night, I was locked in between the research building and the building next door (in an outdoor eating area) without my phone or a badge. I climbed over the wooden poles and landed safely next to the entrance of the research building.
4. I could nearly recite the complete hospital cafeteria menu because I have eaten there so many times in the past few years.
5. During my thesis-writing stage, the motto “Keep calm and write your d__d thesis” kept me going.
Implementation of a hepatitis A/B vaccination program using an accelerated schedule among high-risk inmates, Los Angeles County Jail, 2007–2010
Vaccine 2012;30(48):6878-82
Link to abstract: http://www.ncbi.nlm.nih.gov/pubmed/22989688

Inmates of prisons are at increased risk of complications from hepatitis infections and have a high prevalence of other risk factors for liver disease such as poly-pharmacy, use of illegal drugs, unsafe tattooing practices, alcoholism, and human immunodeficiency virus (HIV) infection. The aim of this study was to describe the hepatitis A/B immunisation program using an accelerated schedule in a US gaol. In April 2007, the FDA approved the accelerated schedule for the combined hepatitis A/B vaccine. The accelerated vaccine schedule was given at day 0 (day of vaccination), 7 days, 21–30 days and as a 12-month booster. In August 2007, a 1-year hepatitis vaccination project began in the LA County Jail, Men's Central Jail. Data from the vaccine program and the lessons learned from their experience is presented in this study. A vaccine record card documenting patient information was generated for each inmate who received vaccine. A next-dose card was given to each inmate after vaccination, which included a record of hepatitis vaccines administered, due date for the next dose, information on sexual health clinics, website and helpline. Data in this analysis were collected from the beginning of the program in August 2007 to June 2010. Vaccinated and unvaccinated inmates screened for sexually transmitted infections (STIs) were compared. There were no differences by age or race/ethnic group between vaccinated and unvaccinated inmates. Nearly 4,000 doses were administered over a 42-month period and individuals with STI history were more likely to receive at least one dose of vaccine compared to those without STI history. Offering vaccine to gaol personnel in sight of the inmates helped dispel distrust or fear of vaccination among inmates. However, vaccine acceptance rates were not measured to determine the factors that increased enrolment and retention in the program. Other limitations of the study were unavailability of serological data and cost-effective analyses.

Presented by Dr Aditi Dey, Manager, Surveillance, NCIRS

Importance of timing of maternal combined tetanus, diphtheria, and acellular pertussis (Tdap) immunization and protection of young infants
Healy CM, Rench MA, Baker CJ
Clinical Infectious Diseases 2013;56(4):539-44

There are high levels of pertussis morbidity and mortality in infants too young to be vaccinated. An initial strategy to address this was ‘cocooning’, vaccinating close adult contacts of infants with dTpa. Both overseas and in Australia there have been barriers to the success of this strategy, such as implementation in hospitals and timely delivery of the vaccine to mothers of newborns. A subsequent strategy has been maternal immunisation with dTpa during pregnancy. This has been recommended in the United States since 2011, has been used recently in England and New Zealand as an outbreak response, and is included as an alternative option to cocooning in the 10th edition of The Australian Immunisation Handbook. A question that now arises is how often should women receive a dose of dTpa? This study aimed to determine pertussis-specific IgG levels in plasma at delivery from mothers who received dTpa vaccine within the prior 2 years and to assess the levels in cord serum from infants born to these women. The study also aimed to estimate whether passively acquired maternal IgG levels could potentially protect infants through the first few months of life, until they were old enough for their first dose of DTPa. The study found that maternal antibodies waned quickly, even in women immunised during pregnancy, and that pertussis antigen IgG levels in infants were unlikely to be high enough to passively protect them until 2 to 3 months of age. Based on this data, in October 2012 a recommendation was made in the United States for women to receive a dose of dTpa during every pregnancy. In Australia we continue to have the recommendation that is in the 10th edition of The Australian Immunisation Handbook, which states that pregnant/post-partum women should receive another dose of dTpa if it is 5 years or more since their last dose.

Presented by Dr Helen Quinn, Research Fellow, NCIRS
The 8th New Zealand Immunisation Conference and pre-conference workshop was held over 3 days in September at the Waipuna Hotel and Conference Centre in Auckland. Delegates included representatives from the NZ Ministry of Health, PHARMAC (Pharmaceutical Management Agency), District Health Boards, Public Health, Australia, America, Fiji and Canada.

Prepared by Ms Kath Cannings

One of the highlights of the 70 presentations given over the 3 days was invited speaker Dr Marc LaForce, who directed the Meningitis Vaccine Project (MVP), a Gates-Foundation funded partnership between PATH and the World Health Organization (WHO) from 2001 to 2012. As MVP director Dr LaForce oversaw the successful development, licensure, and widespread introduction of the first internationally licensed vaccine specifically designed for and introduced in Africa. The vaccine was introduced in Burkina Faso, Mali, and Niger in mass vaccination campaigns in December 2010. At the close of the meningitis epidemic season in June 2011, no case of meningitis A had been reported among those who received the vaccine. The vaccine was introduced in Cameroon, Chad, and Nigeria in 2011, and to date, 56 million Africans have received the vaccine. Over a 10 day period 10.8 million people received the vaccine! This gave us all pause for thought about our school vaccination programs! At the end of Marc’s presentation there was a spontaneous standing ovation from the delegates.

Key conference themes included reports on the progress of coverage in NZ, pertussis, communication, vaccine safety and the future of vaccines.

Immunisation coverage in NZ has increased to over 93% for children fully immunised at 2 years of age. One of their new targets set in 2012, is to have 95% of all 8 month old children fully vaccinated by December 2014. Timeliness of vaccination is still an area of focus for the primary series of childhood immunisations.

There were a number of presentations given on the pertussis epidemic that NZ has been experiencing including a safety report on the adult diphtheria/tetanus/pertussis vaccine currently being given to pregnant women in NZ who are between 28 - 38 weeks gestation and a report on babies with pertussis admitted to NICU.

Communication presentations included information on how to get the message right and what type of social media to use.

The presentations on vaccine safety covered topics including influenza vaccine, HPV vaccine, allergies, a global report, a regulator’s perspective and groups with special risks.
5 MINUTES WITH DONNA ARMSTRONG

Donna’s background is in biomedical science as a scientist in pathology and research laboratories, and as a product/technical specialist in molecular biology and immunology instrumentation supply companies. Donna is involved in editing, proofreading and referencing support for NCIRS publications, and subscription management for the NCIRS-AIP electronic mailing list. Donna is certified as an Editor in the Life Sciences (ELS) having successfully completed the certification examination conducted by the US-based Board of Editors in the Life Sciences.

1. WHAT DOES YOUR ROLE AT NCIRS ENTAIL?
   Most of my role involves editing, proofreading and referencing major reports produced by NCIRS, including the Immunisation Handbook, as well as some of our other publications, like fact sheets, newsletters, biennial reports, etc. I also keep records of NCIRS journal publications, contribute to the NCIRS website and am an administrator for the NCIRS-AIP discussion group.

2. WHAT ISSUES IN IMMUNISATION CONCERN YOU THE MOST?
   It concerns me that incorrect or misleading information leads to kids not being protected against diseases they don’t need to get.

3. WHAT IS THE MOST ENJOYABLE PART OF YOUR ROLE AT NCIRS?
   I get to read a whole lot of interesting information written by a whole lot of extremely knowledgeable and dedicated people.

4. DESCRIBE YOURSELF IN THREE WORDS...
   Quiet. Persistent. Genuine.

5. WHAT WOULD YOU SPEND YOUR LAST $5 ON...
   Probably chocolate, and however much red wine I could get with the change.

6. YOUR IDEA OF HAPPINESS IS...
   That inner sense of well-being and contentment when you realise you’ve got all the things you need in life - family, friends and work you love to do (my philosophy tutor would be proud).

7. IF YOU COULD INVITE THREE PEOPLE OVER FOR DINNER, WHO WOULD THEY BE?
   Brett Kirk, Sharelle McMahon, the Dalai Lama

8. IF YOU COULD HAVE ANY SUPERPOWER, WHAT WOULD IT BE AND WHY?
   Mind reading - it would make communicating with my teenage sons a whole lot easier.

9. DO YOU HAVE ANY HIDDEN TALENTS?
   Probably, but I haven’t discovered them yet.

10. IF YOU WEREN’T WORKING AT NCIRS YOU WOULD BE...
    I’ve been working at NCIRS for so long I can’t imagine working anywhere else but hopefully I’d still be doing a similar thing wherever I was. Or maybe taking that gap year I should have taken 30 years ago.