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Good news from NCIRS!

NCIRS will be part of a new \$2.5 million NHMRC Centre of Research Excellence (CRE) commencing in 2012. Titled “Immunisation in under studied and special risk populations: closing the gap in knowledge through a multidisciplinary approach”, the CRE will be a collaboration between the University of NSW, NCIRS, The Children’s Hospital at Westmead, the Kirby Institute, Westmead Hospital, the University of Sydney and the University of Antwerp. A very talented team of postdoctoral researchers will work with senior researchers to fulfill the goals of the CRE. The chief investigators are Professor Raina MacIntyre, Professor Peter McIntyre, Prof Robert Booy, Dr Nick Wood, Dr Rob Menzies, Associate Professor Philippe Beutels, Professor Cheryl Jones, Professor John Kaldor and Professor Dominic Dwyer.

New vaccines and vaccine combinations will continue to be developed, not only for prevention of acute infectious diseases, but for prevention of chronic diseases as well. Vaccination is an increasingly complex field, and represents the single largest public health preventive program in Australia. Much of the vaccine research which informs national policy, particularly large clinical trials, is conducted by the pharmaceutical industry. However, there are critical research gaps in special-risk and under-served populations where targeted research is not commercially viable or too complex because of the mixed methodology required. These include research in the extremes of age, Indigenous Australians, migrants, refugees, immunosuppressed and traveller populations. The CRE is devoted to addressing research gaps in such populations, which have not been addressed elsewhere, using novel multidisciplinary methods spanning both quantitative and qualitative research.

Over the 5 years of the program the CRE will conduct multidisciplinary, collaborative research, develop research capacity and translate its findings into policy and practice in the field of vaccinology across the whole of life. It will have a focus on developing advanced mixed methods research to improve the population health impact of vaccination programs. The CRE team brings together a highly collaborative, international team of experts in quantitative and qualitative methods in vaccine research, spanning clinical research, epidemiology, modelling, health economics and social sciences. The team will build Australian capacity in identified, talented postdoctoral researchers and has the existing links to directly inform national and international vaccine policy.

Progress towards control of meningococcal disease

By Dr Jane Jelfs



Melbourne 15 November 2011

Convenors: Professor Robert Booy, NCIRS, and Associate Professor Ross Andrews, Menzies School of Health Research (NT)

This workshop brought together seven internationally renowned clinicians and researchers who presented on diverse topics pertinent to meningococcal disease.

The global epidemiology of meningococcal disease: focus on serogroup B disease

Professor Lee Harrison, University of Pittsburgh, Pennsylvania, described the international aspects of meningococcal disease by providing a background on the clinical disease and the structure of the meningococcus. There is variable disease incidence with as few as 0.28 cases per 100 000 in some countries and to >1000 per 100, 000 in the meningitis belt in Africa.

The dynamics of meningococcal disease is forever changing but serogroup B MD remains predominant in children in developed countries. Serogroup W135 (MD) became a global concern during 2000 when an outbreak associated with Hajjes led to cases occurring globally, particularly in part of sub-Saharan Africa where serogroup A had previously predominated.

Meningococci are prone to antigenic variability through gene conversion, and horizontal gene transfer. An example of this was the Hajj W135 clone. It is believed that this arose because most vaccinees were receiving a bivalent polysaccharide AC vaccine which created a niche for this organism. This W135 clone went on to account for equal cases of MD in Burkina Faso where there were >13, 000 cases with >1400 deaths. Serogroup X also accounted for 51% of cases in Niger during 2006.

Conjugate serogroup A vaccine usage in Africa has led to a decline in serogroup A disease there. MenAfriVac has been used since December 2010 to vaccinate 1-29 year olds. The program began in Burkina Faso and then proceeded to Mali, Niger, Chad, Cameroon and parts of Nigeria. Studies on vaccine effectiveness, the duration of protection and impact of this program are in progress.

With regards to serogroup B, epidemics tend to be clonal but sporadic cases often belong to ST32 (ET-5) or ST41/44 (Lineage III). The MeNZB program led to dramatic decline in disease through the use of a dedicated vaccine. The case fatality rate (CFR) seen with serogroup B disease outbreaks has varied with CFR of 14% reported in Norway, Oregon (USA) 6–8% and in New Zealand 3–5%.

Endemic MD accounts for a large proportion of cases in the <1 year age group with serogroup B predominant, followed by Y, other serogroups then C. A large proportion of cases occur before 6 months of age. In the UK the <3 year olds and the <6 months olds have increased rates of serogroup B disease in comparison with other age groups. However, the success of the meningococcal serogroup C vaccination program in the UK has seen a >90% decline in notifications since 1999. Similarly Egypt used a polysaccharide meningococcal vaccine in 1992 and has reported a decline in serogroup A notifications.

Serogroup B meningococcal vaccines based on outer membrane protein have been developed and the current antigens targeted are NadA, fHbp, NHBA and PorA. These have been chosen because they are reasonably conserved, with very little variation.

Meningococcal Surveillance in Australia

Associate Professor Monica Lahra, Director of the Australian National Neisseria Network (NNN), provided a history of meningococcal notification processes from 1917 up until the National Notifiable Diseases Surveillance System was established in 1991. There are various tools that are used to characterise isolates in participating NNN laboratories including phenotypic methods such as antimicrobial resistance, serogrouping and sero/serosubtyping; genotypic methods such as PFGE and MLST; and gene sequencing such as porA, porB, siaD, ctrA or fetA.

Meningococcal disease notifications in Australia display the “typical” bimodal peaks of incidence with the majority of cases occurring in <5 year olds, particularly in 1 year olds. Laboratory-confirmed cases and notification data are better matched now in comparison to early 2000. The greatest decline has been in serogroup C notifications and a small decrease in serogroup B disease. Case ascertainment has increased through the use of PCR which has been available since 1999 and a large proportion of cases are now confirmed via this tool. Serology only accounts for an approximated 15% of case confirmation. Morbidity data is not collected by any dataset and is often difficult to ascertain.

After effects; the MOSAIC study

Professor Russell Viner from UCL London (UK) provided a salient reminder regarding the ongoing sequelae which confront survivors of MD. Russell presented data from a retrospective study conducted in 245 children aged between 3 and 16 years who had invasive meningococcal disease (IMD).

The findings were that hearing was significantly impaired; mean IQ and verbal IQ were significantly reduced, by 7 points on average; memory deficits (verbal, visual) and reduced working/attention span tended to be cognitive rather than physical; 26% of children had a psychological deficit with ADHD, conduct disorders and phobias reported;

19% of children needed extra support at school and only 5% of schools recognised the need in these students.

The time since IMD was between 2.8 and 5 years; age at onset of IMD had no effect on outcomes. Children who presented with meningitis were more likely to have increased hearing loss.

Economic analysis indicated increased medical and significant QALY losses in patients in comparison to controls. At 1 month post IMD the cost per patient was £2490.38 vs. £34.39 in controls and at 60 months this had increased to £7500 for IMD cases versus £1100 for controls. QALYS were on average 7.5 loss per case. Societal costs were significant for parents with loss of work.

Vaccines in Use

Professor Peter Richmond, Princess Margaret Hospital, Perth, outlined the latest conjugated vaccines targeting serogroups A, C W135 and Y and the immunology underlying their development in comparison to the older polysaccharide-based meningococcal vaccines. These older vaccines have proved their use in outbreak settings but wider use has been limited due to their short duration of protection, and poor response in the under 2 years age group.

Conjugate vaccines induce good responses in all age groups and in the UK, where they introduced a MenC vaccine program in 1999, there has been a 97% reduction in serogroup C notifications with a significant reduction in carriage of serogroup C meningococci. However infants who were vaccinated at 2, 3 and 4 months of age were found to not have duration of protection. Circulating protective antibodies are important and persistence of serum bactericidal antibody (SBA) critical. The implementation of the MenC vaccination program in the UK proceeded without phase III trials and demonstrated the importance of private/public partnerships.

Recent advances include the availability of the combined Hib/MenC vaccine which further reduces the number of vaccines administered at 12 months of age and which will come onto the NIP in 2012. The current meningococcal C vaccine schedule with a single dose at 12 months of age is reliant on the current high degree of herd immunity and the need for a booster dose during adolescence is still unknown.

The quadrivalent conjugate vaccines (A, C, W135, Y) have demonstrated an overall effectiveness in adolescents of 78% (95% CI 29–93%) but this varies depending on serogroup with a vaccine effectiveness of 77% (95% CI 14–94%) reported against serogroup C and 88% (95% CI -23 to 99%) for serogroup Y. Current data indicate that a booster dose is required in those persons at ongoing risk of meningococcal disease.

In Africa, large epidemics of serogroup A meningococcal disease occur frequently. The development and production of MenAfriVac via the Gates/PATH/WHO at 40c a dose will greatly impact on meningococcal disease epidemiology. Serogroup B meningococcal vaccines are currently being assessed for registration in many countries.

Vaccines in the Pipeline

Professor Andrew Pollard, University of Oxford, UK and Director of the Oxford Vaccine Group, described some of the recent impacts of vaccination on cases prevented. For example, Hib vaccine for it is estimated that over 10,000 cases have been prevented; the MenC vaccination program is estimated to have prevented 15,000 cases.

IN the UK, serogroup B remains the predominant serogroup. Variable antigens are being targeted because they are immunogenic and under immune selection, whereas conserved antigens are in general less immunogenic and therefore require the use of an immunogenic agent (adjuvant) which increases the risk of reactogenicity.

One of the antigens targeted for a serogroup B meningococcal vaccine is fHbp which is found in all invasive meningococci but occasionally may not be functional. fHbp is required by the meningococcus to survive in the bloodstream and does so by evading complement.

Pfizer's MenB vaccine has 2 fHbp variants and to date over 500 adolescents have been vaccinated.

There are difficulties in predicting coverage due to sequence variation and the expression of the protein.

Outer membrane vesicle vaccines have been developed by the Finlay Institute, NIPH, IVVI, GSK and Novartis. Vaccine efficacy varies from 50% to 80% and has usually been based on the PorA as this is the dominant immunogen in serogroup B meningococci.

The Novartis vaccines are based on fHbp, NadA, NHBA and PorA genes and two fusion proteins (GNA1030 and GNA2091). It is impracticable to perform SBA on large numbers of different isolates. A new typing system, meningococcal antigen typing system or MATS, was developed. This allowed testing for cross reactivity as well as the expression of a particular vaccine component on the strain of interest. There was agreement between the relative potency reported in the MATS and the SBA where the same monoclonal antibodies were used in the ELISA.

An issue for consideration, given that these vaccines would be concomitantly administered with other routine childhood vaccines, is the potential for immune interference. Some data has suggested a decrease in 6B response following 7vPCV. There has also been an increase in local reactions, systemic reactions including increased fever following the first dose, and medically attended fever.

On a cost-effectiveness vaccine basis serogroup B is rare with a small number of cases, but societal costs are not included in any analysis. For the 4vMenB to be considered cost effective the vaccine would have to be priced at £10 per dose. Another issue around the introduction of a MenB vaccine is the impact on carriage especially if only <1 year olds are vaccinated, as MenB carriage amongst this age group is low. In addition the MATS is based on the expression of a particular protein and is not validated. The MATS is only linked to SBA for the target antigens. The true vaccine effectiveness may be in the order of 70-80% but the effectiveness in <6 month olds has not been established. The 4vMenB vaccine has been submitted to the European Medicines Agency for licensure.

Modelling and Economics

Associate Professor Jodie McVernon, University of Melbourne, provided a background on the history of modelling and the framework that has remained in place since 1927. The cycle is: "susceptible" "becomes" "infected" "recovers" and becomes "resistant to reinfection". However, some people become "resusceptible". Other possible dynamics are the unobserved condition, such as carriage plus declining susceptibility, or where people can be infected without overt disease (e.g. polio), and where people recover quicker which decreases prevalence.

A number of factors come into play when developing models such as the infectious process, waning immunity, the strains and the age risk groups. These all impact on the interventions which may be time dependent, the coverage of the intervention, the schedule and differentiation amongst those at risk. A number of social determinants also need to be considered in a model such as the structure of the society, ages, heterogeneity and social mixing.

Immunity is important in models. For example the target group in the UK for serogroup C IMD was 15–19 year olds with a catch-up. There were big decreases in numbers but serogroup C IMD continued in infants. The impact of herd immunity leads to uncertainty analysis.

Incremental relative expenditure costs and outcome (effectiveness) cost utility consider value in terms of a year of full health lived (QALY and DALY) cost benefit supplementary for total expected mortality with opportunity costs and base case/ alternative interactive scenarios.

Mathos used decision tree static- vaccinate or not; intervening and direction dynamic herd immunity identify synthesise and translate disease treatment assumed direct and indirect costs and effectiveness of proposed intervention Quantification/ reporting of CE not much known around intervention sensitive to age and burden of disease Uncertainty and sensitivity analysis can change pricing a lot.

Effectiveness decrease individual anxiety, public concerns in vaccines, costs of contracts, costs of outbreak investigation managements

Useful way of modelling a partial program and its impact can provide the evidence base to support

Lessons learnt from UK research on meningococcal group C conjugate and MenB vesicles/protein vaccines

Professor Ray Borrow, Head of the Vaccine Evaluation Unit, Manchester UK, presented data regarding the changing methods of diagnosing meningococcal disease. PCR was first used in 1996 and accounts for more than 60% of all diagnoses now. There has been a slight increase in notifications of serogroup Y over the past years but the overall numbers are still small. The biggest impact of the MenC vaccination program has been on deaths with 234 meningococcal c deaths notified in 1999 down to only 12 in 2010.

With serogroup C there is a gradation of response dependent on the vaccine administered Meningitec/Menjugate/NeisVacC irrespective of whether doses are given at 2 and 3 months of age or 2 and 4 months of age. No differences were noted post dose 2.

Lessons Learnt

C IgG SBA titres decline rapidly following infant primary course still rise and fall with SBA.

NeisVacC and Menjugate are sufficient for priming in infancy move third dose to adolescents maintain herd immunity and is cost neutral. This will till provide herd immunity to <3 month olds. There have been large effects noted on carriage as a result of MenC vaccination and no evidence of serogroup replacement. There remains only low carriage of other serogroups. Serogroup Y has increased but still not significant. Keeping non pathogenic meningococci as carriage strains may in act be beneficial.

RECENT WORKSHOPS

Hunter New England Immunisation Conference

By Kath Cannings



A number of staff from NCIRS attended and presented at the inaugural Hunter New England Immunisation Conference: "Immunise for Life: a local and global approach", held in Newcastle on 9-10 December. Over 150 doctors and nurses attended the conference that covered everything from service delivery to immunology.

In the morning session of Day 1, Dr Kristine Macartney (NCIRS) gave the keynote address titled "Immunisation: success and new frontiers", touching on new VPDs, coverage, vaccine safety, maintaining public confidence, return of some old VPDs and hard to reach groups. A summary of the National Pertussis Working Party was given by Patrick Cashman, followed by Dr Nick Wood and Kath Cannings (NCIRS) who presented various case studies on adverse events following immunisation. Dr Sarah Moberly gave an update on the Cochrane review on pneumococcal vaccines she has been involved with and Kristine gave another presentation on adult vaccination that looked at vaccines that might be recommended for different stages of life including a rugby player, a farmer, a pregnant woman, a migrant couple and a grandparent.

The early afternoon session included a look at refugee immunisation by Dr Murray Webber and Karinne Andrich and an interesting presentation on how to rebut vaccine myths from an immunological perspective by Dr Michael Boyle. Dr Julie Leask (NCIRS) also presented on communication and perception of risk which included an impromptu skit with Kath on how not to discuss concerns with a parent. To conclude the afternoon, Dr Peter Massey ran a panel discussion in the style of Geoffrey Robertson, posing questions to the panel such as "If you could go back to the 80s, what would you change in the immunisation program?" and "If you had unlimited funds to spend on immunisation, what would you spend it on?".

The last session of Day 1 was devoted to concurrent sessions looking at: the rotavirus vaccines and intussusception investigation, Kath Cannings; changes to immunisation incentives, Kirsten Ward (NCIRS); and childhood influenza vaccines in 2010, Dr Nick Wood; as well as improving immunisation rates, basic immunology and immunisation clinical skills.

Day 2 commenced with Dr Scott Nightingale discussing the importance of prevention and follow up of hepatitis B infection in newborns and Dr Peter Massey discussing the epidemiology of Q fever and highlighting some of the issues with the effectiveness and use of the current vaccine. There was a focus on travel vaccination, with Dr Christine Aus discussing several thought-provoking case studies; Dr Christine Carr highlighting the challenges and success of vaccination in the developing world through her experiences as an international volunteer; and Professor David Durrheim discussing current thinking around rabies, Australian bat lyssavirus (ABLV) and post-exposure prevention.

Concurrent sessions featured results from some local research and evaluation projects on invasive pneumococcal disease, vaccination of health care students in partnership with a local university, and immunisation of local Aboriginal and Torres Strait Islander people. This session also saw Kerrie Wiley (PhD candidate, NCIRS) present early findings from a survey of pregnant women's attitudes to vaccination.

The overall feeling was that the conference was a success and provided a great opportunity for networking as well as hearing from people working on the "front line".

Congratulations to ...



The NHMRC held its 75 year celebration on the 1st of December where they announced their Excellence Awards for 2011-12. Dr Tom Snelling was awarded the Frank Fenner Early Career Fellowship that he will be undertaking here at NCIRS. Congratulations Tom, this is a great achievement.



Dr Julie Leask was recently nominated and received the Excellence in Postgraduate Supervision award.

Julie is truly a worthy recipient and the staff at NCIRS congratulate her on this wonderful achievement.



Congratulations to Dr Nick Wood, who was awarded the Paediatric Research Society of Australia and New Zealand (PRSANZ) award during the RACP conference in Darwin 2011.



The Children's Hospital at Westmead holds the Young Investigator Award as part of the Paediatric Update. Kevin Yin, NCIRS PhD candidate, who is supervised by Robert Booy, Glenn Salkeld and Kathryn North, was one of the two finalists in the Clinical Research category of the Young Investigator Award this year and gave a presentation on "Epidemiological and economic outcomes of healthcare interventions to control influenza in institutions: implications for policy". Through involvement in two Australian Research Council Linkage grants (assessing the social, economic and health impacts of oseltamivir use in aged care facilities [ACFs] and influenza vaccination in day care centres), Kevin's PhD evaluates the effectiveness of influenza control measures in institutions, taking into account both health and economic perspectives. He found that treatment and prophylaxis with oseltamivir was effective and cost-effective in controlling influenza outbreaks in ACFs and influenza-like illness caused a significant medical burden to children and substantial costs to the families and the society. His findings have the potential to inform governmental deliberations here and abroad regarding the use of oseltamivir and annual influenza vaccination.



Recent Journal Club presentations

Cytomegalovirus glycoprotein-B vaccine with MF59 adjuvant in transplant recipients: a phase 2 randomised placebo-controlled trial

Griffiths PD, Stanton A, McCarrell E, et al. *Lancet*, 377(9773):1256-63

Link to abstract: <http://www.ncbi.nlm.nih.gov/pubmed/21481708>

Cytomegalovirus (CMV) infection remains a significant pathogen in pregnant women, immunosuppressed patients, in particular those with AIDS, and people who have received either haematopoietic stem cell transplant (HSCT) or solid organ transplant (SOT). CMV can remain latent and therefore reinfect despite pre-existing immunity. Disseminated CMV infection in transplant patients can result in end stage organ failure. Currently there are two modes of treatment. Pre-emptive treatment involves monitoring for CMV infection and commencing treatment once CMV viraemia reaches a predefined threshold, or antiviral prophylaxis pre-transplant.

The source of the CMV infection is the challenge to the development of an effective CMV vaccine. Infection can arise from the donor organ or from reactivation in the recipient. The infection can be due to a seronegative or previously immune recipient being infected with a new strain of CMV. The recipient who acquires donor-derived CMV is at greatest risk of end stage disease.

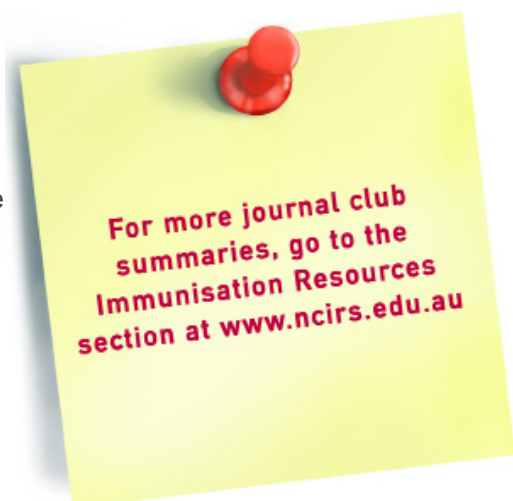
The authors undertook a phase II randomised, placebo-controlled trial in adults who were waiting for either a kidney or liver transplant. The vaccine consisted of 20 µg of a recombinant CMV glycoprotein B adjuvanted with MF59. This vaccine was administered intramuscularly at 0, 1 and 6 months. Where a patient received a transplant while enrolled in the trial, no further vaccines were administered. Patients in the placebo arm of the trial received normal saline. Outcomes were adverse events monitoring and immunogenicity.

The most commonly reported side effect was injection site pain.

Glycoprotein B antibodies were significantly increased 1 month post dose 2 in comparison to placebo for both patients who were initially seronegative or immune to CMV. For those patients who proceeded to transplantation and who subsequently were observed to have a CMV viraemia, the duration of CMV viraemia was significantly reduced which also reduced the number of days on pre-emptive therapy (ganciclovir or valganciclovir).

This study shows great promise, in particular for vaccination of CMV naive recipients, and also demonstrated the potential for the use of this vaccine as a booster to circumvent reactivation. This vaccine may also be beneficial to women of childbearing age. Further trials are planned with this candidate vaccine.

Presented by Dr Jane Jeffs, Manager, Policy Support, NCIRS



Overview of the New Zealand National Immunisation Conference, Rotorua, August 2011

Kirsten Ward, Evaluation Project Officer, NCIRS, and Kath Cannings, Immunisation CNC, NCIRS, gave a summary of a selection of presentations from the New Zealand Immunisation Conference held in Rotorua in August 2011. A key theme that featured in many of the presentations was the importance of building trust between the immunisation provider and the patient. The achievement of 90% coverage of children aged 2 years was celebrated, with the new goal for 95% and strategies to achieve this presented. Individual conference presentations are available online at <http://imac2011.co.nz/>

Presented by Kirsten Ward, Evaluation Project Officer, and Kath Cannings, Immunisation CNC, NCIRS

SAVE THE DATE

ETHICAL SEMINAR issues in Immunisation

MARCH 26TH, 2012 10am - 5pm @ The Darlington Centre, The University of Sydney

A forum that asks how Australia can achieve the most ethically sound vaccination programs in terms of vaccine funding, public engagement, vaccine safety and compensation, communication, incentives and mandates.

Cost TBA. More details to come in early 2012.

For more information, please contact Ms Joanne Perkins on 02 9845 1433 or joanne.perkins@health.nsw.gov.au

IMMUNISATION PROGRAM implementation research and evaluation

MARCH 27TH, 2012 9am - 4pm @ The Darlington Centre, The University of Sydney

An opportunity to share evidence-based immunisation program implementation initiatives and identify priorities for future research and evaluation of strategies to enhance vaccination uptake in Australia.

Cost TBA. More details to come in early 2012.

For more information, please contact Ms Joanne Perkins on 02 9845 1433 or joanne.perkins@health.nsw.gov.au



Some recent publications

Leask J, Braunack-Mayer A, Kerridge I. Consent and public engagement in an era of expanded childhood immunisation. *Journal of Paediatrics and Child Health* 2011;47:603-7.

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Killingley B, Enstone J, Booy R, Hayward A, Oxford J, Ferguson N, Van-Tam JN, on behalf of the influenza transmission strategy development group. Potential role of human challenge studies for investigation of influenza transmission. *The Lancet Infectious Diseases* 2011;11:879-86.

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Nicholson M, Leask J. Lessons from an online debate about measles-mumps-rubella (MMR) immunization. *Vaccine* November 2011 [Epub ahead of print]

Wood N, Sheppeard V, Cashman P, Palasanthiran P, Casacelli M, Cannings K, McIntyre P. Influenza vaccine safety in children less than 5 years old: the 2010 and 2011 experience in Australia. *Pediatric Infectious Disease Journal* November 2011 [Epub ahead of print]

Elliott EJ, Zurynski YA, Walls T, Whitehead B, Gilmour R, Booy R. Novel inpatient surveillance in tertiary paediatric hospitals in New South Wales illustrates impact of first wave pandemic influenza A H1N1 (2009) and informs future health servicing planning. *Journal of Paediatrics and Child Health* November 2011 [Epub ahead of print]

Killingley B, Enstone JE, Greatorex J, Gilbert AS, Lambkin-Williams R, Cauchemez S, Katz JM, Booy R, Hayward A, Oxford J, Bridges CB, Ferguson NM, Nguyen Van-Tam JS. Use of a human influenza challenge model to assess person-to-person transmission: proof-of-concept study. *Journal of Infectious Diseases* November 2011 [Epub ahead of print]

Complete list available at www.ncirs.edu.au

NCIRS NEWS

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Join the NCIRS Australian Immunisation Professionals email discussion group. The group was created to facilitate communication among Australian immunisation practitioners, policy makers and researchers. You'll find news items, meetings of interest, questions and feedback, media controversies, discussions and more.

To subscribe, go to:
<http://mailman.ucc.usyd.edu.au/mailman/listinfo/ncirs-aip>

NCIRS closure over Christmas

With the festive season just around the corner, please note that our office will be closed over the Christmas period (from COB Friday December 23, 2011).

We will re-open on Tuesday January 3, 2012.

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