

Cocoon immunisation: Protecting newborns against whooping cough

Researchers at the Children's Hospital, Westmead are currently evaluating the effectiveness of a state-wide program of free pertussis vaccinations to parents, siblings and other household carers in providing protection against severe pertussis in infants too young to be immunised themselves.

The NSW 'cocoon strategy' has provided the opportunity for free adult-formulated diphtheria-tetanus-pertussis (dTpa) booster vaccinations to all close adult contacts of newborn infants since March 2009. The vaccine is not currently available for adults in the National Immunisation Program.

NSW has been experiencing a prolonged pertussis epidemic since 2008. Pertussis, more commonly known as whooping cough, is a highly contagious disease caused by the bacteria *Bordetella pertussis* which is spread by airborne droplets. Pertussis epidemics occur every 3 to 4 years and infants under 12 months are particularly vulnerable. Those under 4 months old are at especially high risk because they are too young to have received at least 2 doses of the child-formulated dTpa vaccine. Mothers have been identified as the most likely source of infection for young infants, followed by siblings, grandparents and then other contacts.

The 'cocoon strategy' aims to prevent new notifications and especially hospitalisations in a population that is at high risk of contracting severe pertussis. Considerable resources are currently expended in NSW and other Australian states by medical, nursing and public health professionals (and parents of newborns) in implementing the 'cocoon strategy', in addition to the cost of the government-funded vaccines. This necessitates a sound evidence base to justify its ongoing provision.

The research - which is being carried out by the National Centre for Immunisation Research and Surveillance at Westmead using data linked by the CHReL - is required to provide direct evidence of a protective benefit from 'cocooning' and to provide an estimate of the size of the benefit.

The results are of direct interest to the NSW Ministry of Health, as part of their evaluation of 'cocooning'. The results are also expected to inform national immunisation policy decisions on pertussis control by the Australian Government. If found to be effective, this vaccination strategy may be considered for adoption as a long-term measure for population pertussis control, with the possibility of public funding under the National Immunisation Program.



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New website

The new CHReL website is now live. The site aims to deliver comprehensive online information about how linked data is being used.

The website, complete with a new logo, provides more detailed information in a format designed to be easier to navigate. It explains how record linkage works, quality assurance surrounding linked records as well as detailing the latest projects to be using linked records and upcoming events.

For more information about the CHReL go to www.cherel.org.au.



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Connecting Care

By 2020 it is expected that 80 per cent of the disease burden in Australia will be due to chronic disease.

Prolonged and manageable conditions such as diabetes, dementia, congestive heart failure and asthma are generally incurable and, if not well-managed can lead to substantial deterioration in health and increased hospital admissions. These illnesses have a profound effect on the physical, emotional and mental well-being of individuals, often making it difficult to carry on with normal daily activities and relationships. However, in many cases, health outcomes can be improved by good care.

NSW's Chronic Disease Management Program aims to reduce avoidable hospitalisation of people with chronic disease through the provision of integrated, holistic and well-coordinated care.

The Program's approach aims to improve the quality of life and health outcomes of those already diagnosed with one or more chronic diseases and reduce the progression and complications of their illness. It is underpinned by several key principals including comprehensive health assessment, the use of multidisciplinary shared care plans, the application of evidence-based treatment protocols, the promotion of person-centred care with active self management support where possible and care coordination where required.

Data linked by the CHeReL is being used to develop eligibility criteria for the Program, so that it targets those who stand to benefit most by being enrolled. Linked data will also be used to evaluate the effectiveness of the program, particularly its impact on hospitalisation rates.

NSW residents, aged over 15 years, who are diagnosed with selected chronic diseases and who are at risk of repeated episodes in hospital will be offered enrolment to the Chronic Disease Management Program.

This program is being overseen by the Primary Health, Community Partnerships and Chronic Disease Branch at NSW Ministry for Health to improve the quality of life of people with chronic and complex conditions, their carers and families and to prevent unplanned and avoidable hospital admissions.

About the CHeReL

This year marks the 6th year since the inception of the Centre for Health Record Linkage (CHeReL) in NSW.

There has been an enormous amount of work going on in different areas and the program has flourished. The number of linkage requests completed by the CHeReL has increased from 4 in 2006/07 to a staggering 57 in 2010/11.

The CHeReL links multiple sources of population health data and maintains a record linkage system that protects privacy. In this way, routinely-collected data is transformed into a powerful resource for research and evaluation.

Researchers have been making use of these important data resources in increasingly sophisticated ways. During 2011, using data linked by the CHeReL, researchers published new findings about asthma, cancer and stroke treatment as well as maternal and child health risk factors. A number of prestigious grants were awarded by the National Health and Medical Research Council to use linked data for projects on blood transfusions, emergency department performance and Aboriginal children's health. By building Australia's capacity to produce applied research of high quality science, these awards will help provide answers to the complex and difficult questions that decision makers face when designing policies that affect Australians' health and health care.

One of the many benefits of linked data is that it enables the public sector to design and evaluate new programs and monitor the performance of the health system. In this issue we showcase two programs that aim to keep people healthy: preventing illness through vaccination and assisting people to manage their chronic diseases.

New Committee Members

At the end of 2011 we welcomed new members Andrew Hayne, Jane Moxon and Catherine Settle to the CHeReL Community Advisory Committee. Established in 2007, the Committee provides advice on issues of community interest regarding the operation of the CHeReL.

Margo Gill, Elizabeth Hay and Sandra Everett have recently stepped down from the Committee and we would like to express our gratitude for their wonderful support and valuable contribution over the past four years.