



## The New Zealand Branch of the Australasian Cochrane Centre

### Index

**Introduction**

AllTrials

Cochrane Profile: Professor Peter Herbison

Christchurch Workshop

Recent New Zealand Authored Protocols

Highlighted reviews from the Cochrane Library

Cervical cancer: DNA-based test more accurate than repeat smear ("Pap")

Prebiotics: Do supplements in baby formula help prevent allergies?

Diabetes: Computer based interventions provide limited support

Upcoming Events



Branch Co-Director  
Professor Cindy Farquhar



Branch Co-Director  
Dr Mark Jeffery



New Zealand Cochrane Fellow  
Dr Vanessa Jordan

## Introduction

Welcome to issue 2, 2013 of the NZ Branch Cochrane newsletter. In this issue we focus on the + AllTrials petition that is lobbying for publication of results from all clinical studies and profile one of New Zealand's prominent Cochrane authors, Prof Peter Herbison.



+ AllTrials

The + AllTrials petition is an initiative launched by five British evidence based medicine interest groups (Sense AboutScience, Centre for Evidence-based Medicine, the James Lind Alliance, Bad Science, and the BMJ group). The aim of this petition is to draw attention to the large number of clinical trials that are conducted throughout the world but are never published. Several attempts have been made to ensure publication of trial results both from Journals and groups such as the FDA but with limited success. This petition is urging those with the power to influence the publication of research such as universities, ethics committees and regulatory bodies to take a stand and demand that all research results reach the public domain. This would fulfil the expectations of those who participate in research that they are adding to the wealth of available knowledge that exists about the effectiveness of healthcare treatments. It is no longer acceptable to only publish results that support the researcher's or funder's views while suppressing information that may be in conflict with the original research agenda. Please take the time to visit the AllTrials website and add your name to the growing list of supporters.

<http://www.alltrials.net/>



## **Cochrane Profile: Professor Peter Herbison**

Peter is a biostatistician based at Otago University. Peter has been involved with the Cochrane Collaboration since 1995 as a statistical editor for Cochrane Incontinence Group and since then has also taken on role of editor in the Bone, Joint and Muscle Trauma Group. He is also an author in the Cochrane Depression, Anxiety and Neurosis Group, Anaesthesia Group, Breast Cancer Group, and the Pain Palliative and Supportive care Group. Peter also contributes to both the Statistical Methods and Bias Methods groups. Peter has also been very generous with his time in both assisting other Cochrane authors and supporting teaching through the New Zealand Branch of Cochrane.

Peter has recently been successful at securing an HRC grant to look at methodology in meta-analysis. This is one of the first ever funded methodological HRC grants. The grant focuses on the newly developed process of network meta-analysis which allows comparisons between multiple treatments even in the absence of direct comparisons within individual studies. Initially Peter's team are going to apply these advanced meta-analytical methods to a series of specific clinical problems in disciplines including psychiatry, cardiology and surgery, to help decide the best ways of treating patients. Following this they will examine a number of different methodological approaches to the conduct, analysis and interpretation of meta-analyses and RCTs. The project has potential to provide better information about the risks and benefits of specific treatments, and to improve the validity and usefulness of meta-analysis as a tool for informing clinical decision making.

## Christchurch workshop

We recently ran a two day workshop in Christchurch (3rd and 4th April) for those wishing to author a Cochrane review. The weather was spectacular and it was great to have this course based in the mainland. This course was very successful with 14 attendees from all over New Zealand representing various areas of healthcare. The first day of the course covered how to write a protocol. Vanessa Jordan ran the day with help from Suetonia Palmer (an active Cochrane author based in Christchurch). Feedback from all participants was very positive and throughout the day there was great dialogue from all.

Day two had a more statistical base and covered the many varied aspects of meta-analysis. Peter Herbison, a fantastic Cochrane associated biostatistician (read about Peter in another section of this newsletter) was able to join Vanessa with the teaching on this day. Again all those attending appreciated the knowledge that was passed on by these two trainers. If you are interested in attending one of these workshops please contact Vanessa at [v.jordan@auckland.ac.nz](mailto:v.jordan@auckland.ac.nz).



## Recent New Zealand authored protocols in Issues 1-3, 2013 of The Cochrane Library

Zhu X, Lim CED, Nagels HE. Acupuncture for female subfertility (Protocol). Cochrane Database of Systematic Reviews 2013, Issue 3. Art. No.: CD010462. DOI: 10.1002/14651858.CD010462.

Grillo-Ardila CF, Gaitán HG, Angel-Müller E, Ruiz-Parra AI, Lethaby A. Imiquimod for anogenital warts in non-immunocompromised adults (Protocol). Cochrane Database of Systematic Reviews 2013, Issue 2. Art. No.: CD010389. DOI: 10.1002/14651858.CD010389.

## Recent New Zealand authored reviews in Issues 1-3, 2013 of The Cochrane Library

Borthwick EMJ, Hill CJ, Rabindranath KS, Maxwell AP, McAuley DF, Blackwood B. High-volume haemofiltration for sepsis. Cochrane Database of Systematic Reviews 2013, Issue 1. Art. No.: CD008075. DOI: 10.1002/14651858.CD008075.pub2.

Palmer SC, Di Micco L, Razavian M, Craig JC, Perkovic V, Pellegrini F, Jardine MJ, Webster AC, Zoungas S, Strippoli GFM. Antiplatelet agents for chronic kidney disease. Cochrane Database of Systematic Reviews 2013, Issue 2. Art. No.: CD008834. DOI: 10.1002/14651858.CD008834.pub2.

## **Cervical cancer: DNA-based test more accurate than repeat smear (“Pap”)**

In women who have a potentially or mildly abnormal cervical smear, using a DNA-based test can identify those at higher risk of having precursors of cervical cancer, according to a new Cochrane systematic review. The authors found that the DNA-based test identified patients in possible need of treatment more accurately than a repeat smear test.

Cervical smear (“Pap”) tests are carried out to identify women who might be at high risk of developing cervical cancer. Cells collected in the smear test are examined under the microscope. If abnormalities are seen, a patient may be asked to undergo further tests to determine whether the abnormalities are serious and whether treatment of pre-cancer is required to prevent cancer developing. Sometimes the cells examined from the smear are not clearly normal or abnormal (referred to with the acronym ‘ASCUS’ or ‘borderline nuclear changes’), whereas other types of cells identified are only mildly abnormal (referred to as ‘LSIL’ or mild dyskaryosis). The main cause of cervical cancer is the human papillomavirus, although only a small number of women who carry the virus go on to develop cervical cancer. The Hybrid Capture 2 (HC2) assay is a DNA-based method that tests for DNA from those strains of the virus that are higher risk for cervical cancer.

The authors compared the HC2 test with a repeat conventional smear test as a way of prioritising possible cases that have cervical pre- cancer. They reviewed 39 studies involving a total of 13,196 women. Compared to a repeat smear, the HC2 test more accurately identified women with pre- cancer.

“Based on these findings, the HC2 test can be recommended as a way of triaging women with an ASCUS smear,” said lead researcher, Marc Arbyn of the Unit of Cancer Epidemiology at the Scientific Institute of Public Health in Brussels, Belgium.

However, the HC2 test over-called the risk of pre-cancer in women with LSIL abnormalities and the researchers conclude that more specific tests are needed to triage women with LSIL. “The use of the HC2 test in women with LSIL abnormalities in their smear test results should be carefully considered,” said Arbyn. “It may be more accurate in older women with these abnormalities, but it is important to take into account the local cost of further, more invasive tests and to avoid unnecessary referrals and anxiety.”

URL: <http://doi.wiley.com/10.1002/14651858.CD008054.pub2>

## **Prebiotics: Do supplements in baby formula help prevent allergies?**

Prebiotic supplements in infant formula may help to prevent eczema, according to a systematic review published in The Cochrane Library. However, the review highlights a lack of high quality evidence for the effects of prebiotics in preventing allergies.

It is thought that bacteria lining the gut may play an important role in a child developing sensitivities to certain foods and allergens, regulating immune responses and determining how they will react to the same substances in later life. Prebiotics are indigestible components of breast milk, fruit and vegetables that stimulate the growth and activity of healthy bacteria in the gut. They are distinct from probiotics, which are cultures of live bacteria such as those added to yoghurts and infant formula. Prebiotics can also be added to infant formula. However, it is unclear exactly what effect these supplements have on the development of allergies.

The researchers drew together data from four studies involving a total of 1,428 children. Children were given formula containing prebiotic supplements or, as a control, standard formula. Studies followed children to between four months and two years of age and reported the number who developed allergies. Eczema was significantly reduced in children who were fed formula containing prebiotics. Only two studies investigated asthma. The number of children who developed asthma was similar whether they were given formula with added prebiotics or without. In one study looking at urticaria (hives), giving children formula containing prebiotics did not prevent any cases of the allergy.

Only one study assessed the effect of giving formula containing prebiotics to high-risk children, who had close family members with allergies. In this study, prebiotics reduced both eczema and asthma, but there were no significant reductions in allergies overall in high-risk children. "Given these findings, it remains unclear whether the use of prebiotics should be restricted to infants at high risk of allergy or may have an effect in low risk populations," said lead researcher, John Sinn of the University of Sydney in Sydney, Australia.

"Overall, we found some evidence that infant formula containing prebiotic supplements can help prevent eczema in children up to two years of age," said Sinn. "However, the quality of existing evidence is generally low or very low. More high quality research is needed before we can recommend routine use of prebiotics for prevention of allergy."

URL: <http://doi.wiley.com/10.1002/14651858.CD006474.pub3>

## **Diabetes: Computer based interventions provide limited support**

Self-management interventions delivered by computer and mobile phone currently provide limited benefits for people with diabetes, according to a systematic review published in The Cochrane Library. Although computer and mobile phone-based self-management programmes had small positive effects on blood sugar levels, these effects seemed to be short-lived.

347 million adults worldwide live with diabetes and are at higher risk of heart disease and serious complications such as heart attacks and stroke because of their condition. There is some evidence to suggest that providing chronically ill patients with the skills to manage their own disease can help them to reduce their risk of further complications. Computers and smartphones offer the potential to improve self-care for diabetes through patient-tailored support and education, and to reduce the costs to health care systems. However, it is not clear whether these programmes actually work, what the important components are and if there are any important adverse effects.

The researchers reviewed data from 16 trials involving a total of 3,578 people with type 2 diabetes, who used computers or mobile phones as part of diabetes self-management interventions for between 1 and 12 months. Overall, these interventions appeared to be safe but had only limited positive effects. There were small benefits for controlling blood sugar levels, with slightly greater benefits for those whose self-care programmes were delivered by mobile phones. However, the benefits waned after six months and there was no evidence that these interventions helped to improve depression, quality of life or weight in people with type 2 diabetes.

“Our review shows that although popular, computer-based diabetes self-management interventions currently have limited evidence supporting their use,” said lead researcher, Kingshuk Pal of the Research Department of Primary Care and Population Health at UCL in London, UK. “There are also few studies looking at cost-effectiveness or long-term impact on patient health.”

The authors saw some evidence of computer-based interventions helping to improve knowledge and understanding of diabetes, but this did not seem to translate into behaviours that could improve health, such as changes in diet and exercise. “Effective self-management is a complex task that may require changes to many aspects of people’s lives. Any intervention to help that process needs to support sustained behaviour change in different areas like eating habits, physical activity or taking medication regularly and provide emotional support,” said Dr. Pal. “We did not see any convincing evidence for long-term change like this in the interventions we looked at.”

URL: <http://doi.wiley.com/10.1002/14651858.CD008776.pub2>

## Upcoming events

21st Cochrane Colloquium

19-23 September 2013 | Quebec, Canada



Follow us on