# Relay Cochrane!

Cochrane Canada

**< Volume 31** – June 2015>

## In the News

### Québec Branch of Cochrane Canada announces new Scientific Director

The Québec Branch of Cochrane Canada is pleased to announce the placement of Dr Alexis Turgeon as Scientific Director. Dr Turgeon is an Associate Professor and Research Director in the Division of Critical Care Medicine, Department of Anesthesiology and Critical Care Meidicine. He practices Critical Care Medicine and Anesthesiology at the CHU de Québec - Hôpital de l'Enfant-Jésus in Québec City.

He currently leads the CIHR-funded TBI-Prognosis Multicenter Prospective Study, a pan-canadian study aiming to develop a prognostic model of long-term prognosis following severe traumatic brain injury. He also leads the FRQS-funded TBI-QualE Study aiming to understand the determinants of the decision to withdraw life-sustaining therapies in critically ill patients with traumatic brain injury. Dr Turgeon his also involved in research on the use of blood products in critically ill patients.

He has a long-time methodological interest and expertise in systematic reviews and meta-analyses. We welcome Dr Turgeon to Cochrane Canada!

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### New Blog Launch: #saveCochraneCanada

There's a lot going on at Cochrane Canada these days. Our funding runs out in September 2015 and we need your help. As a means of keeping you updated, we've created a #saveCochraneCanada blog. Here, we'll share stories from the public about how Cochrane Reviews and evidence have impacted the lives of Canadians; as well as how Cochrane evidence is being used in healthcare decisions and policy-making around the country.

Follow along and submit your "Cochrane" story today! We have strength in numbers and we will continue to fight to #saveCochraneCanada.

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## EVENTS

### Cochrane Colloquium 2015

**Filtering the information overload for better decisions**

Vienna, Austria
3-7 October 2015

**Registration now open!**

Visit often for updates on Colloquium news.

### Connect with us online

Connect with us using social media for daily updates on recent healthcare news and to interact with Cochrane Canada's online community!

### Symposium Recap

Last month, on 21-22 May, Cochrane Canada held its 12th Annual Symposium at the Hotel Alma, located on the University of Calgary campus. This year we saw 105 attendees, which soared to 170 on the morning of 21 May from a joint meeting with representatives from the Core Outcome Measures in Effectiveness Trials (COMET) Initiative.

This year's theme was Reaching New Heights, Measuring Success. We had 13 poster abstracts, including 3 student submissions, as well as 31 oral abstract presentations, and 7 workshops. Topics covered included social media's role in Cochrane Reviews; information sharing with Canada's aging population; and uncertainty in policy decision-making. While the overall tone of the Symposium focused on our core funding issues (read more here), the general consensus of attendees was positive in that Cochrane is a necessity in Canada and something must be done to ensure the presence of the Centre for years to come.

We'd like to offer special thanks to our Regional Site at the University of Calgary, and Dr Roger Thomas. As well, a generous thank you to our sponsors: Knowledge Translations Platform Alberta SPOR Support Unit; Medlior Health Outcomes; and Wiley.

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### The future of funding for Cochrane Canada

Cochrane Canada's funding runs out in September 2015 and will not be renewed by our primary funder, the Canadian Institutes of Health Research (CIHR). We know all our stakeholders have questions; and we plan to provide information on a regular basis. We've addressed the following questions on our website:

- How is Cochrane Canada funded?
- How does Cochrane Canada use its money?
- Why has the Canadian Institutes of Health Research (CIHR) decided not to renew Cochrane Canada's funding?
- Can Cochrane Canada apply to CIHR's Open Operating Grant Program?

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## Cochrane for Policy

### Medical day hospital care for older people versus alternative forms of care

Day hospitals are one way of delivering healthcare to older people. They are out-patient facilities which older patients attend for a full or near full day and receive multidisciplinary health care 'under one roof.' Sixteen trials involving 3689 participants were included in this review and compared day hospitals with other comprehensive services (including inpatient and outpatient services), home based care and no comprehensive services. Attendance at a day hospital offers benefits compared to providing no treatment which include reducing the risk of needing more help with daily activities such as washing or dressing. Furthermore, patients are less likely to suffer one of the following: dying, being institutionalised or becoming more dependent on others. There is no apparent benefit when day hospitals are compared with other comprehensive services or home care. The economic value of day hospitals when compared with other health care services remains unclear.

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## Cochrane for Practice

### Psychosocial interventions for benzodiazepine harmful use, abuse or dependence

In this Cochrane review we aimed to measure the effectiveness of psychosocial interventions for treating people who harmfully use, abuse or are dependent on benzodiazepines (BZDs). BZDs are a type of drug that can be used to treat people who have anxiety, panic disorder, insomnia and a range of other conditions. Long term use of BZDs is not generally recommended and can lead to physical and psychological dependence and withdrawal symptoms when patients reduce or stop using them. Previous systematic reviews, examining other drugs like heroin, cocaine or alcohol, have suggested some benefits of psychosocial interventions to reduce these substances. There has been no Cochrane review of psychosocial interventions to reduce BZD use.

We found that CBT studies showed a short term benefit when added to taper but this benefit was not sustained beyond three months. MI studies did not support the use of MI to reduce BZD use.

Three smaller studies showed some promise. One trial showed that tailored letters sent by GPs to patients versus standard GP letter encouraged patients to cease or reduce their BZD use (one trial, 322 participants) where there was evidence in favour of tailored letter (twice as likely) to cease BZD use at 12 months follow-up. A study with 139 participants which compared standardised interview plus taper versus TAU and showed evidence of benefit in both discontinuation and reduction of BZDs at six and 12 months, but not 36 months. One relaxation study, with 60 participants, comparing relaxation versus TAU was significant at three-month follow-up for the successful discontinuation of BZDs.

CBT plus taper is effective in the short term (three month time period) in reducing BZD use. However, this is not maintained at six months and subsequently. The possibility of including a 'top-up' of CBT to sustain long term effects should be investigated. Currently there is insufficient evidence to support the use of MI to reduce BZD use. There is some evidence to suggest that a tailored GP letter versus a general GP letter, standardised interview versus TAU and relaxation versus TAU could be effective for BZD reduction. There is currently insufficient evidence for other psychosocial approaches to reduce BZD use.

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## *Cochrane Library* Spotlight: April – June 2015

### Alternative Therapies

**Chinese herbal medicine for treating recurrent urinary tract infections in women**

Recurrent urinary tract infections (UTIs) are a common problem that can have a serious negative impact on well-being and healthcare costs. Although preventative antibiotics can help reduce numbers of recurrent infections, there are growing concerns about antibiotic resistance, side effects and the lack of long-term benefits from treatment. Consequently, alternative treatments such as Chinese herbal medicine (CHM) are being considered.

We evaluated the evidence for the effectiveness and safety of CHM for treating recurrent UTIs in women. Our searches to May 2015 for Western and July 2014 for Chinese literature led to the inclusion of seven studies that met our selection criteria for this review. These involved a total of 542 women.

The studies suggested that CHM used either on its own or with antibiotic treatment may be more effective than antibiotics alone for relieving acute UTIs and preventing recurrent episodes. There were only two studies that explicitly stated that adverse events were to be reported; neither reported any adverse events.

However, studies were small and assessed as having poor methodological quality; and most study participants were post-menopausal. Therefore, results should be interpreted cautiously and can only be considered as preliminary findings that may not be relevant to pre-menopausal women. Further research is required to provide more rigorous evidence before CHM can be routinely recommended as a treatment option for recurrent UTIs.
Read more

## Asthma

**Chronic disease management programmes for adults with asthma**
Asthma is a chronic (long-term) airway (breathing) disease affecting about 300 million people worldwide. People with asthma have many symptoms, such as wheezing, coughing and shortness of breath. The aim of a chronic disease management programme for asthma is to improve the quality and effectiveness of asthma care by creating a programme that is centred on patient's needs, encourages the co-ordination of the health services provided by healthcare professionals such as doctors and nurses, who should work together, and focuses on helping the patients to manage their illness themselves as well as providing them with information to help them understand their illness.

This review found 20 studies that compared the effects of chronic disease management programmes in adults with asthma with the effects of usual care. The average age of the patients was 42.5 years, 60% were women, and they had moderate to severe asthma. Overall the evidence that was found was of moderate to low quality.

Chronic disease management programmes for adults with asthma probably improve patients' quality of life, reduce the severity of the asthma, and improve breathing as demonstrated by improved performance in lung function tests after 12 months. It is unclear whether chronic disease management programmes improve the patients' abilities to manage their own asthma or decrease the number of hospitalisations or emergency visits.
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## Cancer

**The effects of idarubicin versus other anthracyclines for induction therapy of patients with newly diagnosed leukaemia**
Acute myeloid leukaemia (AML) is a type of cancer that mainly affects bone marrow and peripheral blood. Although 40% to 45% of AML patients enjoy long-term disease-free survival, most patients will die of the disease. Induction therapy is the first phase of treatment of newly diagnosed AML which is essential for prolonging survival. An anthracycline (a class of chemotherapy drugs derived from the Streptomyces bacterium Streptomyces peucetius var. caesius) combined with cytarabine (a chemotherapy drug used mainly in treatment of haematological malignancies) has remained the standard of induction therapy for several decades. Nowadays there are several kinds of anthracyclines available, among which idarubicin (IDA) draws more attention because of its theoretical advantages in improving efficacy and reducing side effects. However, clinical trials comparing IDA with other anthracyclines have

conflicting results.
To clarify the role of IDA in induction therapy of newly diagnosed AML.
Data from available randomised controlled trials (RCTs) that compared IDA with other anthracyclines in induction therapy of newly diagnosed AML were meta-analysed. The data collected are up to 3 August 2014.
Twenty-seven RCTs involving 9549 patients were included. The consolidation treatments adopted in the included studies were comparable and had no impact on the results.
Eighteen RCTs assessed IDA versus daunorubicin (DNR; a chemotherapy drug in the anthracycline family). Results showed that IDA compared to DNR prolongs overall survival and disease-free survival, increases complete remission rate, and reduces relapse rate, although increases the risks of death on induction therapy and grade 3/4 mucositis (a kind of painful inflammation and ulceration of mucous membranes lining the digestive tract). No difference in other various grade 3/4 adverse events was found.
The currently available evidence suggests that in induction therapy of newly diagnosed AML, IDA is superior to DNR in terms of prolonging overall survival and disease-free survival, increasing complete remission rate and reducing relapse rate, although IDA may increase the risks of death on induction therapy and grade 3/4 mucositis. The current evidence does not support the superiority of IDA over MIT. There is insufficient evidence for clarifying the role of IDA versus DOX or ZRB. Additionally, there is no evidence for a difference on the effect of IDA compared with other anthracyclines (DNR, MIT, DOX and ZRB) on quality of life.
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## Child Health

**Antibiotic lock for the prevention of catheter-related infection in neonates**
Babies in the neonatal intensive care unit require medicines and fluids through their veins. To do this, a small tube (described as a central venous catheter, CVC) is inserted into the infant's vein through the umbilical cord or through the skin. This tube is placed just outside the heart. This tube is then used to give medicines and fluid without causing any discomfort. However, this tube does lead to an increased risk of infection, which can be life threatening. There are many measures taken to try to prevent this, but infection still occurs. This review looks at one way to prevent this infection by putting an antibiotic solution into the tube and leaving it to stay there for a certain length of time (called antibiotic lock) compared with a solution containing no antibiotic.
We included three studies enrolling 271 infants in this review.
These studies showed that infants whose tubes contained an antibiotic solution were less likely to develop an infection. One side effect of this treatment could be the development of 'super' bugs. Super bugs cause a type of infection that some antibiotics may not be able to fight. Our included studies did not show any evidence that antibiotic lock was more or less likely to produce super bugs compared with no antibiotic lock, but to show this convincingly the studies would need to be much larger. The rates of death from an infection caused by the tubes were not reduced by the antibiotic lock.
Relatively few infants were enrolled in the three included studies. Two of the three included studies had overall low risk of bias, and the remaining study had high risk of bias from two sources: i). Selection bias, namely, the manner in which group allocation took place (based on the room infants were nursed in) posed a major concern as to whether the allocation was truly random, and ii). Performance bias, namely, non-blinding of the people who were involved in the care of the infants might have contributed to differential care and/or expectations which might have affected the results.
Based on a small number of trials and infants, antibiotic lock solution

appears to be effective in preventing catheter-related blood infections in infants. However, as each included study used a different antibiotic and antibiotic resistance could not be reliably assessed, the evidence to-date is insufficient to determine the effects of antibiotic lock on infections in infants.
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## Dental

**Water fluoridation for the prevention of dental caries**

Tooth decay is a significant problem worldwide affecting the majority of adults and children. Although levels of tooth decay have been decreasing in some communities (levels vary both between and within countries), generally children from poorer backgrounds (measured by income, education and employment) have greater levels of tooth decay.

Untreated tooth decay causes progressive destruction of teeth which is often accompanied by severe pain. This may lead to teeth having to be removed under local or general anaesthetic.

Fluoride is a mineral that prevents tooth decay. It occurs naturally in the soil, water and atmosphere at varying levels worldwide. Water can be artificially fluoridated (also known as community water fluoridation) through the controlled addition of a fluoride compound to a public water supply. Fluoridation is set at the 'optimum level', considered to be around 1 part per million (ppm).

This review was conducted to assess the effects of water fluoridation (artificial or natural) for the prevention of tooth decay. It also evaluates the effects of fluoride in water on the white or brown marks on the tooth enamel that can be caused by too much fluoride (dental fluorosis).

Data suggest that the introduction of water fluoridation resulted in a 35% reduction in decayed, missing or filled baby teeth and a 26% reduction in decayed, missing or filled permanent teeth. It also increased the percentage of children with no decay by 15%. Although these results indicate that water fluoridation is effective at reducing levels of tooth decay in children's baby and permanent teeth, the applicability of the results to current lifestyles is unclear because the majority of the studies were conducted before fluoride toothpastes and the other preventative meaures were widely used in many communities around the world.

There was insufficient information available to find out whether the introduction of a water fluoridation programme changed existing differences in tooth decay across socioeconomic groups.

There was insufficient information available to understand the effect of stopping water fluoridation programmes on tooth decay.

No studies met the review’s inclusion criteria that investigated the effectiveness of water fluoridation for preventing tooth decay in adults, rather than children.

The researchers calculated that, in areas with a fluoride level of 0.7 ppm in the water, approximately 12% of the people evaluated had fluorosis that could cause concern about their appearance.

The review authors assessed each study included in the review for risk of bias (by examining the quality of the methods used and how thoroughly the results were reported) to determine the extent to which the results reported are likely to be reliable. This showed that over 97% of the 155 studies were at a high risk of bias, which reduces the overall quality of the results. There was also substantial variation between studies in terms of their results.

Our confidence in the size of effect shown for the prevention of tooth decay is limited due to the high risk of bias in the included studies and the fact that most of the studies were conducted before the use of fluoride toothpaste became widespread.

Our confidence in the evidence relating to dental fluorosis is also limited due to the high risk of bias and variation in the studies' results.

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## Mental Health

**Psychological interventions for women with non-metastatic breast cancer**

Breast cancer is the most common cancer affecting women worldwide. Being a distressing diagnosis, considerable research has examined the psychological consequences of being diagnosed and treated for breast cancer. Breast cancer diagnosis and treatment can cause depression and anxiety and reduce quality of life. As a result, various psychological interventions have been utilised to help address the psychological distress experienced after a diagnosis of breast cancer.

The evidence was current to May 2013. An intervention could be delivered in a group setting (group intervention), as one to one contact between a therapist and a patient (individual intervention) or in the form of couple therapy where the patient and her spouse attends the therapy sessions (couple intervention). The control group could receive educational leaflets or have access to seminars or relaxation classes. A comprehensive search of the literature was conducted and 28 studies comprising 3940 participants were included. The majority (24 out of 28 studies) of interventions were based on cognitive behavioural therapy, which involves changing a person's thoughts and behaviour. Four studies used psychotherapy as the intervention. Generally, the methods for assessing outcomes (such as anxiety, depression, quality of life) after the intervention and the timing of these assessments were not uniform across studies.

Women who received cognitive behavioural therapy showed important reductions in anxiety, depression and mood disturbance, especially when it was delivered to groups of women. An improvement in quality of life was observed when women received individual cognitive behavioural therapy compared to the control group. The effects on survival were uncertain because the results were imprecise.

The four psychotherapy studies reported limited information for each outcome. Therefore no firm conclusion could be made about the efficacy of psychotherapy.

Further research should aim to provide evidence for people to make informed decisions about whether the effects of these treatments are sustainable after discontinuation of the therapy.

The quality of evidence ranged from very low quality (for example for quality of life, individually delivered intervention) to moderate quality evidence (for mood disturbance). The interventions varied between studies as did the methods and timing of outcome measures and treatment received within the control groups.

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## Women’s Health

**Mobile phone-based interventions for improving contraception use**

Contraception - methods or devices used to prevent pregnancy – has significant benefits for women's and children's health. Despite these benefits, an estimated 225 million women in developing countries were not using a modern contraceptive method in 2014 despite wanting to avoid pregnancy. Expansion of mobile phone use in recent years has led to increased interest in healthcare delivery via mobile phone and the potential to deliver support wherever the person is located, whenever it is needed, and to reach populations with restricted access to services. Mobile phone-based interventions have been demonstrated to be effective in other health areas, but not yet in the field of contraception.

In 2014, we undertook computer searches for randomised trials evaluating mobile phone-based interventions to increase contraception use. We found five trials. Three trials used text messaging to support women in continuing

to use a specific method of contraception. Two trials aimed to improve both uptake and continued use of contraception - one with voice and one with text messaging. Our review provides limited evidence that interventions delivered by mobile phone improve contraception use. One trial in the USA reported that women were more likely to continue to take the contraceptive pill from an intervention comprising a range of educational text messages. One trial in Cambodia reported increased use of contraception at four months post abortion from an intervention comprising voice messages and phone counsellor support. Another trial in the USA reported improved attendance for the first but not subsequent contraceptive injection appointments from an intervention comprising reminders and healthy self-management text messages. Simple text message contraceptive pill reminders did not reduce missed pills in a small trial in the USA. No difference in contraception use was reported amongst users of isotretinoin (a drug used for acne) from an intervention that provided health information via text messages and mail.

In conclusion, evidence indicates that a series of voice messages and counsellor support can improve contraception amongst women seeking abortion services not wanting to get pregnant again at the current time, and data suggest that daily educational text messages can improve continued use of the contraceptive pill. However, the cost value and long-term effectiveness of these interventions remain unknown. More good quality trials are needed to establish the effectiveness of interventions delivered by mobile phone to increase contraception use.

Read more

## What's Ahead

### Cochrane Standard Author Training

Please join us at McMaster University Medical Centre for Cochrane Standard Author training, in collaboration with the Cochrane Upper Gastrointestinal and Pancreatic Diseases Review Group.

Registration is now open. Please visit our website for more information. The workshop will be held 21-23 August, 2015, in Hamilton, Ontario.

Cochrane Canada is one of 14 independent, not-for-profit
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