

NEW REVIEWS

Early life influences on cardio-metabolic disease risk in aboriginal populations- what is the evidence? A systematic review of longitudinal and case-control studies: Exposure to maternal diabetes *in utero* is associated with type 2 diabetes. [Read more...](#)

General health checks in adults for reducing morbidity and mortality from disease: Cochrane systematic review and meta-analysis: More diagnoses but no effect found on total or cause-specific mortality from general health checks. [Read more...](#)

Influenza vaccination for immunocompromised patients: systematic review and meta-analysis by aetiology: Vaccination confers protection against influenza-like illness in transplant recipients, HIV-positive and cancer patients. [Read more...](#)

Health literacy and health outcomes in diabetes: a systematic review: Low health literacy found to be consistently associated with poorer diabetes knowledge. [Read more...](#)

Incentives for preventing smoking in children and adolescents: Incentives not shown to prevent young people from starting to smoke. [Read more...](#)

A systematic review of interventions to enhance access to best practice primary health care for chronic disease management, prevention and episodic care: Multiple, linked strategies targeting different levels of the health care system most likely to improve access. [Read more...](#)

FORTHCOMING REVIEWS

School based education programmes for the prevention of unintentional injuries in children and young people

Internet interventions for treatment of alcohol-related problems

Telemedicine for chronic pain management in adults

NEW REVIEWS

Early life influences on cardio-metabolic disease risk in aboriginal populations- what is the evidence? A systematic review of longitudinal and case-control studies

This review examines the evidence for the Developmental Origins of Health and Disease (DOHAD) hypothesis among Aboriginal populations in Australia, New Zealand, Canada and the US. Fifty studies examining the influence of prenatal exposures and birth outcomes on the risk of cardio-metabolic conditions in later life were included. Low birth weight was found to be associated with increased blood pressure among Aboriginal adults. Low birth weight and high birth weight were associated with impaired kidney function. The

association between high birth weight and impaired kidney function was thought to be due to exposure to maternal diabetes during pregnancy. Low birth weight and exposure to diabetes *in utero* were very strongly associated with type 2 diabetes and metabolic abnormalities among both Aboriginal children and adults. This highlights the importance of optimising the health of Aboriginal women of child-bearing age.

McNamara BJ, Gubhaju L, Chamberlain C, Stanley F, Eades S. Early life influences on cardio-metabolic disease risk in aboriginal populations- what is the evidence? A systematic review of longitudinal and case-control studies. *Int. J. Epidemiol.* First published online December 3, 2012. doi:10.1093/ije/dys190. <http://ije.oxfordjournals.org/content/early/2012/12/03/ije.dys190.full.pdf+html>

General health checks in adults for reducing morbidity and mortality from disease: Cochrane systematic review and meta-analysis

Health checks are intended to reduce morbidity and mortality however there is a paucity of evidence for their effectiveness. This review included 14 randomised controlled trials comparing general health checks with no health checks with a total of 182,880 participants. Participants had to be aged 18 years or older but trials specifically targeting people older than 65 years were excluded. People with specific risk factors or disease were not excluded. The reviewers did not find an effect on total or cause-specific mortality from general health checks in adult populations. They found that health checks led to more diagnoses and more medical treatment for hypertension but these did not improve morbidity or mortality. People who accept invitations to general health checks tended to have higher socioeconomic status, lower cardiovascular risk and lower mortality than those who do not accept invitations which is probably an important factor for explaining these results.

Krogsbøll L, Jørgensen K, Larsen C, Gøtzsche P. General health checks in adults for reducing morbidity and mortality from disease: Cochrane systematic review and meta-analysis. *BMJ* 2012;345:e7191 doi: 10.1136/bmj.e7191 <http://www.bmj.com/content/345/bmj.e7191.pdf%2Bhtml>

Influenza vaccination for immunocompromised patients: systematic review and meta-analysis by aetiology

Immunocompromised patients are at higher risk of serious infection or complications from influenza. Many national guidelines recommend annual influenza vaccination of this group however the decision to vaccinate is at clinical discretion. This review included 209 studies, most of which were not randomised and therefore were potentially at high risk of bias. Meta-analyses from this review suggest vaccinating HIV-positive patients, cancer patients and transplant recipients against influenza confers a statistically significant degree of protection against influenza-like illness. There was insufficient evidence for patients with autoimmune and respiratory conditions treated with immunosuppressants. The potential for high risk of bias and confounding mean the evidence reviewed is generally weak, although the directions of effects are consistent. The findings favour a policy of routinely recommending influenza vaccination to immunocompromised patients though clinical judgement remains important.

Beck C, McKenzie B, Hashim A, Harris R, UNIC Study Group and Nguyen-Van-Tam J. Influenza vaccination for immunocompromised patients: systematic review and meta-analysis by aetiology. *J Infect Dis.* First published online August 16, 2012. doi:10.1093/infdis/jis487 <http://jid.oxfordjournals.org/content/early/2012/08/15/infdis.jis487.abstract>

Health literacy and health outcomes in diabetes: a systematic review

Low health literacy is recognised as a stronger predictor of a persons' health than age, socioeconomic status or race. This systematic review of the literature was conducted to better understand the relationship between health literacy and health outcomes in diabetes. Twenty four studies were included. There was discrepancy in results found among the studies which could have been due to the different tools used to measure health literacy. A positive association between health literacy and diabetes knowledge was shown consistently in eight studies. However, the evidence was only rated as sufficient. There was a lack of consistent evidence on the relationship between health literacy and clinical outcomes. Based on these findings, the reviewers suggest that it may be premature to try to improve health literacy as a means for improving patient-related outcomes in diabetes, although there may be other reasons to do so.

Sayah F, Majumdar S, Williams B, Roberston S, Johnson J. Health literacy and health outcomes in diabetes: a systemetic review. *J Gen Intern Med.* October 2012. doi: 10.1007/s11606-012-2241-z <http://link.springer.com/article/10.1007%2Fs11606-012-2241-z?LI=true>

Incentives for preventing smoking in children and adolescents

Most smokers take up smoking in adolescence and those who don't take up smoking during this period most likely never will. This review assessed the effect of incentives on preventing children and adolescents from starting to smoke. Seven trials were included in the review, six of which were trials of the Smokefree Class Competition (SFC), which has been widely implemented throughout Europe. In this competition, youth (11 to 14 years) report regularly on their smoking status and if 90% or more of the class is non-smoking at the end of a six month period, the class goes into a competition to win prizes. Results from five SFC trials were combined and found that the competition did not have a significant impact on whether or not young people who were previously non-smokers started smoking. There was insufficient information to evaluate the seventh trial. Incentives associated with the SFC competition have not been shown to prevent young people from starting to smoke, although there are relatively few published studies and these are of variable quality.

Johnston V, Liberato S, Thomas D. Incentives for preventing smoking in children and adolescents. *Cochrane Database of Systematic Reviews* 2012, Issue 10. Art. No.: CD008645. doi: 10.1002/14651858.CD008645.pub2. <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD008645.pub2/pdf>

A systematic review of interventions to enhance access to best practice primary health care for chronic disease management, prevention and episodic care

This review identified 75 evaluated interventions for enhancing access to best practice primary health care. Interventions were most effective when they used a combination of strategies targeting different levels to improve access, addressing both patient demand and service provision. Successful strategies targeted 3 areas: 1) System level change, service delivery policy and financial incentives; 2) Practice level reorganisation to provide better support and systems for patient identification and follow up; and 3) Community level programs to enhance engagement. For example, effective interventions to improve access to diabetes education in general practice included strategies which considered workforce availability and skills, developed systems to facilitate patient recall and education, and addressed patient out of pocket expenses through additional funding pathways such as practice incentive programs.

Comino E, Powell Davies G, Krastev Y, Hass M, Christl B, Furler J, Raymont A, Harris M. A systematic review of interventions to enhance access to best practice primary health care for chronic disease management, prevention and episodic care. BMC Health Services Research 2012, 12:415
<http://www.biomedcentral.com/content/pdf/1472-6963-12-415.pdf>

FORTHCOMING REVIEWS – PROTOCOLS

School based education programmes for the prevention of unintentional injuries in children and young people

Unintentional injuries are the leading cause of death in children aged 5 – 19 years in Europe. School-based education programs have the potential to deliver safety interventions to children and therefore reduce injuries. However, there are no published Cochrane reviews on the effects and cost-effectiveness of school-based education programs to prevent unintentional injuries. This systematic review will look at the evidence for school-based programs to help health and social care providers make informed decisions about this approach which would ensure appropriate resource allocation. Randomised controlled trials, non-randomised controlled trials, and controlled before-and-after studies will be considered. This review will evaluate the effects of school-based programs to prevent unintentional injuries in children and young people with respect to child characteristics, intervention type and duration.

Orton E, Watson M, Mulvaney C, Kendrick D. School based education programmes for the prevention of unintentional injuries in children and young people (Protocol). Cochrane Database of Systematic Reviews 2012, Issue 11. Art. No.: CD010246. doi: 10.1002/14651858.CD010246.
<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD010246/pdf>

Internet interventions for treatment of alcohol-related problems

Internet and mobile technologies provide a potential treatment modality for alcohol-related problems, which may help to overcome the barriers to accessing traditional face-to-face treatment. There is growing recognition of the potential of the internet for the treatment of mental health and alcohol and drug problems, and programs are rapidly proliferating. This review will assess the effect of internet and mobile phone alcohol-related interventions on reducing participants' alcohol consumption. Randomised controlled trials (RCTs) or cluster RCTs and associated economic evaluations will be included. Participants will be adults or adolescents with at-risk drinking behaviours, dysfunctional drinking patterns or symptoms of an alcohol-related disorder. The review will also assess whether there are different outcomes for different diagnostic groups, and which intervention approaches or components may be contributing to any positive effects.

Stallman H, Kavanagh D, White A. Internet interventions for treatment of alcohol-related problems (Protocol). Cochrane Database of Systematic Reviews 2012, Issue 11. Art. No.: CD010228. doi: 10.1002/14651858.CD010228. <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD010228/pdf>

Telemedicine for chronic pain management in adults

Chronic pain is a long term condition and sustainable solutions to problems in functioning need to engage patients in home-based rehabilitation. There is an opportunity for telemedicine to provide methods that support this self management. Telemedicine is the use of information and communications technology (ICT) within health care. Potential benefits of telemedicine include increased access to healthcare resources, not limited by geographic location or staff availability, and reduced costs. However, the evidence base is inconclusive. This review will assess the effectiveness of ICT interventions for chronic pain

management. Randomised controlled trial comparisons of technology based intervention for chronic pain with an active control, treatment as usual, or waiting list control will be included. This review will assess whether complex clinic-based pain management programs can be adapted and delivered in the home.

Eccleston C, Keogh E, Duggan G, Rosser B. Telemedicine for chronic pain management in adults (Protocol). Cochrane Database of Systematic Reviews 2012, Issue 10. Art. No.: CD010152. doi: 10.1002/14651858.CD010152. <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD010152/pdf>

NEWS

Health Evidence Webinar

Health evidence, a searchable online registry of quality-appraised systematic reviews, will host a 90-minute webinar on *Community Wide Interventions for Increasing Physical Activity: What's the Evidence?* The webinar will be held at 1pm EST on Wednesday 30 January (5am AEDT on 31 January). The PowerPoint slides and a recording of the presentation will be available following the webinar. To register for the webinar follow the links on <http://www.health-evidence.ca/>

PulsE can also be viewed on the Sax Institute [website](#)

The logo for the Sax Institute, featuring the word "sax" in a bold, blue, sans-serif font, followed by "institute" in a black, sans-serif font. The "i" in "institute" has a unique design with a horizontal line through its middle.

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Please feel free to forward this bulletin to any colleagues who may be interested