Respiratory Bulletin

Articles

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A Multifaceted Intervention Improves Prescribing for Acute Respiratory Infection for Adults and Children in Emergency Department and Urgent Care Settings.
[Antibiotics are commonly prescribed during emergency department (ED) and urgent care center (UC) visits for viral acute respiratory infection (ARI). We evaluate the comparative effectiveness of an antibiotic stewardship intervention adapted for acute care ambulatory settings (adapted intervention) to a stewardship intervention that additionally incorporates behavioral nudges (enhanced intervention) in reducing inappropriate prescriptions.]

Airflow relieves chronic breathlessness in people with advanced disease: An exploratory systematic review and meta-analyses.
[Airflow appears to offer meaningful relief of chronic breathlessness and should be considered as an adjunct treatment in the management of breathlessness.]
Freely available online

Antibiotic therapy for chronic infection with Burkholderia cepacia complex in people with cystic fibrosis.
Frost F. Cochrane Database of Systematic Reviews 2019;6:CD013079.
[Cystic fibrosis (CF) a life-limiting inherited disease affecting a number of organs, but classically associated with chronic lung infection and progressive loss of lung function. Chronic infection by Burkholderia cepacia complex (BCC) is associated with increased morbidity and mortality and therefore represents a significant challenge to clinicians treating people with CF. This review examines the current evidence for long-term antibiotic therapy in people with CF and chronic BCC infection.]

Appropriate physical training helps to relieve clinical symptoms of pediatric asthma: a meta-analysis.
[Appropriate physical training can help to relieve asthma symptoms, decrease incidence of bronchial hyperresponsiveness (BHR) and exercise-induced bronchoconstriction (EIB), and increase endurance but it cannot help in improving FEV1 in asthmatic children.]
Freely available online

Assessing the impact of diet, exercise and the combination of the two as a treatment for OSA: A
systematic review and meta-analysis.
[All lifestyle interventions investigated appear effective for improving OSA severity and should be an essential component of treatment for OSA. Future research should be directed towards identifying subgroups likely to reap greater treatment benefits as well as other therapeutic benefits provided by these interventions.]
Freely available online

Association of Elevated Plasma Interleukin-18 Level With Increased Mortality in a Clinical Trial of Statin Treatment for Acute Respiratory Distress Syndrome.
[A high plasma level of inflammasome mediator interleukin-18 was associated with mortality in observational acute respiratory distress syndrome cohorts. Statin exposure increases both inflammasome activation and lung injury in mouse models. We tested whether randomization to statin therapy correlated with increased interleukin-18 in the ARDS Network Statins for Acutely Injured Lungs from Sepsis trial.]

Effect of Pressure Support vs T-Piece Ventilation Strategies During Spontaneous Breathing Trials on Successful Extubation Among Patients Receiving Mechanical Ventilation: A Randomized Clinical Trial.
[Among patients receiving mechanical ventilation, a spontaneous breathing trial consisting of 30 minutes of pressure support ventilation, compared with 2 hours of T-piece ventilation, led to significantly higher rates of successful extubation. These findings support the use of a shorter, less demanding ventilation strategy for spontaneous breathing trials.]
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Exercise training undertaken by people within 12 months of lung resection for non-small cell lung cancer.
Cavalheri V. Cochrane Database of Systematic Reviews 2019;6:CD009955.
[Decreased exercise capacity and health-related quality of life (HRQoL) are common in people following lung resection for non-small cell lung cancer (NSCLC). Exercise training has been demonstrated to confer gains in exercise capacity and HRQoL for people with a range of chronic conditions. A programme of exercise training may also confer gains in these outcomes for people following lung resection for NSCLC.]

Ibuprofen for the prevention of patent ductus arteriosus in preterm and/or low birth weight infants.
Ohlsson A. Cochrane Database of Systematic Reviews 2019;6:CD004213.
[Patent ductus arteriosus (PDA) complicates the clinical course of preterm infants and increases the risk of adverse outcomes. Indomethacin has been the standard treatment to close a PDA but is associated with renal, gastrointestinal, and cerebral side effects. Ibuprofen has less effect on blood flow velocity to important organs.]
**Inhaled corticosteroids in children with persistent asthma: effects of different drugs and delivery devices on growth.**
Axelsson I. *Cochrane Database of Systematic Reviews* 2019;6:CD010126.  
[Inhaled corticosteroids (ICS) are the most effective treatment for children with persistent asthma. Although treatment with ICS is generally considered to be safe in children, the potential adverse effects of these drugs on growth remains a matter of concern for parents and physicians.]

**Interventions for smoking cessation in people diagnosed with lung cancer.**
Zeng L. *Cochrane Database of Systematic Reviews* 2019;6:CD011751.  
[Most people with lung cancer are still active smokers at diagnosis or frequently relapse after smoking cessation. Quitting smoking is the most effective way for smokers to reduce the risk of premature death and disability. People with lung cancer may benefit from stopping smoking. Whether smoking cessation interventions are effective for people with lung cancer and whether one method of quitting is more effective than any other has not been systematically reviewed.]

**Long-term all-cause mortality in people treated for tuberculosis: a systematic review and meta-analysis.**
[People treated for tuberculosis have significantly increased mortality following treatment compared with the general population or matched controls. These findings support the need for further research to understand and address the biomedical and social factors that affect the long-term prognosis of this population.]

**Management of swallowing problems in community settings.**
Minshall S. *British Journal of Community Nursing* 2019;24(7):323-327.  
[Conclusion: Community and district nurses ... are perfectly placed to have an early awareness of developing problems with swallowing function and to make timely and effective referrals to other members of the community team. Such awareness and action will contribute to the prevention and reduction of risk to people living in their own homes with chronic health conditions or those in recovery.]

**NICE encourages use of greener asthma inhalers.**
[People with asthma will be helped to choose the inhaler that is best for them, and best for the environment, by a ‘patient decision aid’ from the National Institute for Health and Care Excellence (NICE). The patient decision aid (NICE, 2019) highlights that some inhalers have a much higher carbon footprint than others. The aid will help people with asthma, alongside health professionals, to identify which inhalers could meet their needs and control their symptoms.]

**Vitamin D for secondary prevention of acute wheeze attacks in preschool and school-age children.**
[Review notes that there is conflicting evidence for use of vitamin D supplementation as adjuvant
therapy for the secondary prevention of acute wheeze in school-age children with asthma, and limited evidence for its use to reduce risk of wheezing attacks in preschool children.]

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Xpert MTB/RIF and Xpert MTB/RIF Ultra for pulmonary tuberculosis and rifampicin resistance in adults.
Horne DJ. Cochrane Database of Systematic Reviews 2019;6:CD009593.
[Xpert MTB/RIF (Xpert MTB/RIF) and Xpert MTB/RIF Ultra (Xpert Ultra), the newest version, are the only World Health Organization (WHO)-recommended rapid tests that simultaneously detect tuberculosis and rifampicin resistance in persons with signs and symptoms of tuberculosis, at lower health system levels. Since the previous review, new studies have been published. We performed a review update for an upcoming WHO policy review.]

Evidence Searches

Improving patient ability to self-care or self-manage in heart failure, diabetes type 2, and COPD
Carried out by Lisa Burscheidt from Aubrey Keep on 19/7/2019
[Results include:
- recent systematic review for COPD
- search on Patient Activation Measure

Picture of evidence seems to be that the more engaged patients are, the more likely they are to be able to self-manage, which results in fewer emergency admissions, fewer exacerbations for COPD, and lower general healthcare usage.

What works: supporting and educating them about their condition, providing tools such as exacerbation action plans, empowering them to manage their condition.]

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Is there an effect from passive vaping on non-smokers?
Carried out by Lisa Burscheidt from Aubrey Keep on 10/5/2019
[There is quite a bit of research on this but no high-level review or meta-analysis. Most studies are small.]

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Guidelines

The following new guidance has recently been published:

Ambu aScope4 Broncho for use in unexpected difficult airways.
National Institute for Health and Care Excellence (NICE); 2019. 
https://www.nice.org.uk/guidance/mtg14

"In June 2019, we updated the guidance to refer to the latest version of the device, which has been modified but works in the same way as earlier versions. Details of the modifications are explained in the review decision. The guidance also includes revised cost-saving estimates. New evidence and updated costs identified during the guidance review are denoted as [2019]."

Freely available online

** Bronchoscopic thermal vapour ablation for upper-lobe emphysema.**
National Institute for Health and Care Excellence (NICE); 2019. 
https://www.nice.org.uk/guidance/ipg652

[1 Recommendations 1.1 Current evidence on the safety and efficacy of bronchoscopic thermal vapour ablation for upper-lobe emphysema is inadequate in quantity and quality. Therefore the procedure should only be used in the context of research. 1.2 Further research should evaluate safety and efficacy in the short and long term and include details of patient selection. NICE may update the guidance on publication of further evidence.]

Freely available online

** BTS/SIGN British Guideline on the Management of Asthma.**
British Thoracic Society (BTS); 2019. 
https://www.brit-thoracic.org.uk/quality-improvement/guidelines/asthma/

[A focus on asthma attack prevention is one of key areas of advice in updated national guidance produced by BTS and SIGN. Health professionals should assess all patients for their level of risk of having a future asthma attack and tailor monitoring, treatment & care accordingly.]

Freely available online

** Rivaroxaban (Xarelto▼): reminder that 15 mg and 20 mg tablets should be taken with food.**
Medicines and Healthcare Products Regulatory Agency (MHRA); 2019. 

[Drug Safety Update. MHRA has received a small number of reports suggesting lack of efficacy (thromboembolic events) in patients taking 15 mg or 20 mg rivaroxaban on an empty stomach; remind patients to take 15 mg or 20 mg rivaroxaban tablets with food.]

Freely available online

** Tofacitinib (Xeljanz▼): restriction of 10 mg twice-daily dose in patients at high risk of pulmonary embolism while safety review is ongoing.**
Medicines and Healthcare Products Regulatory Agency (MHRA); 2019. 

[Drug Safety Update. Following observation in a clinical study of an increased risk of pulmonary embolism and overall mortality with tofacitinib 10 mg twice-daily in rheumatoid arthritis, a safety review has started and new contraindications introduced. The 10 mg twice-daily dose of tofacitinib
(authorised for ulcerative colitis) must not be used in patients at high risk of pulmonary embolism.]

**Reports**

The following report(s) may be of interest:

**Asthma attacks triple when children return to school in September.**
NHS Behind the Headlines; 2019.

[In this study, researchers from Public Health England used surveillance data from GPs and hospital emergency departments to track attendances of children with asthma symptoms throughout the year. They found children aged up to 15 were 2 to 3 times more likely to attend with asthma symptoms in the period after the schools go back in September compared with other times of the year.]

**Freely available online**

**Pulmonary rehabilitation may modestly improve anxiety and depression in adults with chronic obstructive pulmonary disease.**
NIHR Dissemination Centre; 2019.
[https://discover.dc.nihr.ac.uk/content/signal-000794/copd-rehabilitation-may-improve-anxiety-and-depression](https://discover.dc.nihr.ac.uk/content/signal-000794/copd-rehabilitation-may-improve-anxiety-and-depression)

[NIHR Signal. This review of 10 trials is the first to show that pulmonary rehabilitation – already known to improve quality of life and exercise capacity - may also improve anxiety and depression, which are common in people with COPD.]

**Freely available online**

**Whole-body MRI scans are as accurate as standard imaging pathways for lung cancer staging.**
NIHR Dissemination Centre; 2019.
[https://discover.dc.nihr.ac.uk/content/signal-000796/lung-cancer-staging-by-whole-body-mri-scans](https://discover.dc.nihr.ac.uk/content/signal-000796/lung-cancer-staging-by-whole-body-mri-scans)

[NIHR Signal. Using whole-body magnetic resonance imaging (MRI) in the initial investigation pathway is as good as standard pathways for detecting metastatic disease in adults with non-small-cell lung cancer. This NIHR-funded study also found that WB-MRI used for diagnosis and staging is quicker, cheaper and requires fewer other investigations than standard pathways.]

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