

## NZNO College of Respiratory Nurses monthly news bulletin Friday 26 July 2019

### NZNO / section news

### **Consultation**

NZNO is presently consulting with members on a range of issues.

The full outline can be found here

#### Alcohol Advertising and Promotion Code – regular review

NZNO invites your views on the Alcohol Advertising and Promotion Code that the advertising industry are required to follow. This feedback will inform possible changes to this Code.

For example, in your opinion, does the Code do enough to:

- protect children and young people and other vulnerable audiences and
- ensure alcohol advertisements and promotions are targeted at adults and convey that a high standard of social responsibility is required.

Please see the draft code here:

https://www.asa.co.nz/codes/codes/advertising-standards-code/

Please send feedback to Jill.Wilkinson@nzno.org.nz by 16 August, 2019.

Posted in: Consultations

#### **New Zealand**

#### NZ experts play crucial role in fight against pneumonia

New Zealanders played crucial roles in a global pneumonia study pinpointing the deadliest forms of viruses and bacteria, and identifying one vaccine that could save the lives of hundreds of thousands of babies and young children.

### Auckland researchers build virtual lungs to better diagnose and treat patients

Virtual lungs could help doctors learn more about a vital set of organs without unnecessary tests and experiments.

#### General

#### Cellular Differences in Asthma Identified in First Lung Mapping Project

For the first time, the interactions of lung-resident structural and inflammatory cells have been profiled in both healthy individuals and those with asthma. The results of the analysis were published in Nature Medicine.

## **Air pollution**

#### <u>Dust pollution killing one Northlander every two years</u>

Dust from unsealed roads is killing an estimated one Northlander every two years and costing the health sector nearly \$3 million annually, a new study has found.

# Northland District Health Board wants toxic air discharges to be publicly notified; files Environment Court appeal

Public health officials are challenging Northland Regional Council's decision not to publicly notify large discharges of toxic air by large industrial outlets that have adverse health and environment impacts

#### Air pollution speeds up aging of the lungs and increases chronic lung disease risk

A study of more than 300,000 people has found that exposure to outdoor air pollution is linked to decreased lung function and an increased risk of developing COPD. Lung function normally declines as we age, but the new research suggests that air pollution may contribute to the ageing process and adds to the evidence that breathing in polluted air harms the lungs.

## **Asthma (inc paediatric)**

# Respiratory 'WOF' and follow up improves Maori and Pacific children's asthma management – HDC

A Hastings community pharmacy's project to improve asthma management in a group of MÄ• ori and Pacific children has left everyone breathing easier.

Hawke's Bay MÄ• ori and Pacific children have a much higher rate of hospital admissions for respiratory disease (7.3 and 10.4 per 1000 respectively) compared with New Zealand European children (4.5 per 1000).

#### **Acute Asthma Exacerbations Linked to Vocal Cord Dysfunction**

It has been hypothesized that vocal cord dysfunction (VCD) occurs silently in patients who are hospitalized and have symptoms of acute asthma exacerbation. VCD can be detected noninvasively with the use of the recently developed technique of dynamic computed tomography (CT) of the larynx, according to analysis results published in the American Journal of Respiratory and Critical Care Medicine.

#### 'Chaos' in the home linked to poor asthma control in children

A chaotic household, as well as child and parent depression, are risk factors for worse asthma outcomes in urban minority children, according to a new article.

Harrison, P., Duggan, W., Preddy, J. and Moline, A. (2019), <u>Asthmatic children from lower-income families are less likely to own an individualised asthma action plan</u>. J Paediatr Child Health. doi:10.1111/jpc.14553

This study aimed to explore the relationship between indicators of socio-economic status (SES) and prescription of a paediatric individualised asthma action plan (IAAP), as well as compliance with that plan.

#### **Evidence for lifestyle interventions in asthma**

Isobel Stoodley, Lily Williams, Cherry Thompson, Hayley Scott, Lisa Wood Breathe 2019 15: e50-e61; DOI: 10.1183/20734735.0019-2019

Asthma is a chronic inflammatory airways disease, estimated to affect 300 million people worldwide. Asthma management plans focus on optimisation of asthma pharmacotherapy. Lifestyle interventions also hold great promise for asthma sufferers as they are accessible, low cost and have minimal side-effects, thus making adherence more likely. This review

explores lifestyle interventions that have been tested in asthma, including improving nutrition, increasing physical activity and introduction of relaxation therapies such as yoga and massage therapy. Available evidence suggests a protective effect of increasing fruit, vegetable and wholegrain intake and increasing physical activity levels in asthma. Weight loss is recommended for obese asthmatic patients, as just 5–10% weight loss has been found to improve quality of life and asthma control in most obese asthmatic patients. Other lifestyle interventions such as meditation, yoga and massage therapy show promise, with positive effects on asthma seen in some studies. However, the study protocols are highly variable and the results are inconsistent. Additional research is needed to further develop and refine recommendations regarding lifestyle modifications that can be implemented to improve asthma.

The items below are not available full text but may be sourced via a DHB library through databases like CINAHL or Proquest, or through the NZNO library service

Louise Bowden, Tony Long & Heather Henry (2019) **Evaluation of a Choir as a Non-Medical Intervention for Children with Asthma: BreathStars,** Comprehensive Child and Adolescent Nursing, DOI: <u>10.1080/24694193.2019.1607629</u>

A shift in the current health policy has seen heightened focus on non-medical interventions which can be delivered out with formal health-care settings, to complement and enhance the clinical care of people with long-term conditions. Asthma is a common long-term condition managed by pharmacological and non-pharmacological interventions. Recent research activity has focused on the use of singing for respiratory health due to its similarity with the more well-known intervention of breathing exercises. The aim of this study was to determine if singing improved breathing in children with asthma. A realist evaluation study design with a mixed methods approach was adopted to evaluate a singing group for children aged 7–12. Results obtained through framework analysis of the data indicated notable improvement in asthma control with the added impact on self-esteem. Enjoyment of the singing group within a family centered approach was seen as a positive alongside the community benefit of wider asthma education. Lessons can be learnt from this evaluation which could inform future initiatives relevant to the current agenda of asset-based approaches such as social prescribing within the context of the current devolution of the health and social care budget in the North West of England.

# **Asbestos exposure**

#### Landmark case for asbestos lung cancer claimants

A landmark ruling means a small but significant number of Kiwis who have developed terminal lung cancer through secondary exposure to asbestos will now be covered by ACC.

# **Breathing techniques**

The item below is not available full text but may be sourced via a DHB library through databases like CINAHL or Proquest, or through the NZNO library service

Lin, F-L, Yeh, M-L, Lai, Y-H, Lin, K-C, Yu, C-J, Chang, J-S. **Two-month breathing-based walking improves anxiety, depression, dyspnoea and quality of life in chronic obstructive pulmonary disease: A randomised controlled study.** J Clin

Nurs. 2019; 00: 000– 000. <a href="https://doi.org/10.1111/jocn.14960">https://doi.org/10.1111/jocn.14960</a> Aims and objectives

To examine the effects of the two-month breathing-based walking intervention and its followup on anxiety, depression, dyspnoea and quality of life in patients with chronic obstructive pulmonary disease.

Background

Mind-body-related exercises improve bio-psychological symptoms and quality of life in chronic diseases, but these improvements are not proven for chronic obstructive pulmonary disease.

#### **COPD**

# <u>Effectiveness of chronic obstructive pulmonary disease self-management interventions in primary care settings: a systematic review</u>

Hassan Hosseinzadeh A and Mahmmoud Shnaigat A B

+ Author Affiliations

Australian Journal of Primary Health 25(3) 195-204

Chronic obstructive pulmonary disease (COPD) is one of the more disabling diseases and the third cause of mortality worldwide. Self-management is considered an effective strategy for controlling and managing COPD. This review aims to summarise the available evidence on the effectiveness of COPD self-management in primary care settings. Social Sciences, Citation Index, MEDLINE, CINAHL, Academic Search Complete and Scopus were searched for randomised controlled trials of COPD self-management in general practice between 2001 and 2018. Ten randomised controlled trials of COPD self-management trials conducted in primary care settings were included in this review. The identified trials have recruited stable patients; a majority having mild to moderate COPD. The trials implemented different types of interventions and measured improvements in knowledge, skills and behaviours of selfmanagement, mental health, self-efficacy and endpoint outcomes such as hospitalisation and quality of life. The findings showed that COPD self-management trials had positive effects on COPD knowledge and improved self-management behaviours such as adherence to medication, physical activities and smoking cessation in some cases; however, the effect of trials on hospitalisation rate, quality of life and healthcare utilisation were not conclusive. There was also not enough evidence to suggest that the trials were efficient in improving self-efficacy, a major driver of self-management behaviours. Primary care COPD selfmanagement trials are efficient in improving surrogate outcomes such as knowledge of and adherence to self-management behaviours; however, such improvements are less likely to be sustainable in the absence of self-efficacy. Future studies should also focus on improving endpoint self-management outcomes like hospitalisation rate and quality of life to benefit both patient and healthcare system.

# **Dyspnoea**

# Assessing the effects of inspiratory muscle training in a patient with unilateral diaphragm dysfunction

Mayra Caleffi Pereira, Sauwaluk Dacha, Dries Testelmans, Rik Gosselink, Daniel Langer Breathe 2019 15: e90-e96; DOI: 10.1183/20734735.0129-2019

A 55-year-old man was referred to the outpatient pulmonary department of our hospital because of dyspnoea during exertion and when bending forward, which had been present for at least 6 months. He reported experiencing severe symptoms of breathlessness and many of his daily activities had to be adapted or interrupt due to symptoms (as documented by the Baseline Dyspnea Index (BDI)) (table 1). Recent infectious episodes or episodes of neck or shoulder pain were absent. His medical history included systemic arterial hypertension, obesity (body mass index (BMI) 36 kg·m–2), and obstructive sleep apnoea for which he was treated with night-time continuous positive airway pressure therapy (8 cmH2O). He was a former smoker (18 pack-years) who quit smoking 15 years ago. 8 months ago, he underwent abdominal surgery (transabdominal epigastric hernia repair). The presence of cardiopulmonary disease and other aetiologies, such as neuromuscular disease, was excluded. Chest radiograph showed an elevated left hemidiaphragm and impaired left phrenic nerve conduction (i.e. increased latency and compound muscle action potential (CMAP) duration) after electrical stimulation (table 1) [1].

#### **Influenza**

#### Flu fact sheet for parents increases vaccination rate in children

Parents given a handout with flu facts at their pediatrician's office were significantly more likely to get their kids vaccinated before the end of flu season, pediatricians have found.

#### Prenatal flu vaccination not tied to adverse childhood health outcomes

Children whose mothers received the H1N1 vaccine during pregnancy didn't have higher odds of cancer, chronic diseases, infections, hospitalizations or death, compared with those born to unvaccinated mothers, according to a Canadian study in The BMJ. Researchers also found slightly lower gastrointestinal infection rates and slightly higher asthma prevalence among those with prenatal flu vaccination, but other factors may have been involved or the association could have been due to chance.

HealthDay News (7/11),

#### **Mechanical ventilation**

#### Many nurses believe in sedation for comfort of ventilated patients

(HealthDay)—More than half of critical care nurses believe sedation is needed to minimize discomfort and distress among patients receiving mechanical ventilation, according to survey results published in the July issue of the *American Journal of Critical Care*.

#### **Pneumonia**

### Antibiotics for Pneumonia: Short Course is More Effective

For patients hospitalized with community-acquired pneumonia (CAP), more is not better when it comes to antibiotic therapy. In fact, it is likely worse, a study has shown.

# Sleep apnoea

# <u>Detecting sleep apnoea syndrome in primary care with screening questionnaires and</u> the Epworth sleepiness scale

Chamara V Senaratna, Jennifer L Perret, Adrian Lowe, Gayan Bowatte, Michael J Abramson, Bruce Thompson, Caroline Lodge, Melissa Russell, Garun S Hamilton and Shyamali C Dharmage

Med J Aust 2019; 211 (2): 65-70. || doi: 10.5694/mja2.50145

**Objective:** To examine the utility of apnoea screening questionnaires, alone and in combination with the Epworth sleepiness scale (ESS), for detecting obstructive sleep apnoea (OSA) in primary care.

**Design, setting:** Prospective validation study in an Australian general population cohort.

Møkleby, M, Mengshoel, AM. <u>Devoted or negotiated routes of adherence: Narratives of patients with obstructive sleep apnoea using a continuous positive airway pressure device.</u> Nursing Open. 2019; 00: 1– 8. <a href="https://doi.org/10.1002/nop2.325">https://doi.org/10.1002/nop2.325</a> Aims

To explore the narratives of patients about receiving a diagnosis of obstructive sleep apnoea and using a continuous positive airway pressure device.

Desian

A qualitative design with a narrative approach.

Methods

Participants with personal experience of using a continuous positive airway pressure device were recruited through purposive sampling. Two women and five men were interviewed in 2017. The data material was subjected to a narrative analysis.

#### Results

Two storylines portraying two different trajectories of continuous positive airway pressure use were identified: "A route of devotion" reflects patients experiencing immediate health benefits, which lead to committed use. "A route of negotiations" is characterized by more irregular use, and the perceived benefits were less evident than for those displaying a devoted route. Individuals adjust to a continuous positive airway pressure device differently based on their prior and present life situation and whether use of the device is experienced as an opportunity to regain ordinary life or as an obstacle to maintaining ordinary life.

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# Estimation of the global prevalence and burden of obstructive sleep apnoea: a literature-based analysis

Adam V Benjafield, ... et al

The Lancet: Respiratory medicine

VOLUME 7, ISSUE 8, P687-698, AUGUST 01, 2019

There is a scarcity of published data on the global prevalence of obstructive sleep apnoea, a disorder associated with major neurocognitive and cardiovascular sequelae. We used publicly available data and contacted key opinion leaders to estimate the global prevalence of obstructive sleep apnoea.

## Smoking (inc vaping and electronic cigarettes)

### Smokefree 2025: The ever-mutating Government plan to stamp out smoking

It's been through several iterations, and at one point was dubbed "National Party bulldust" by Winston Peters but, despite its naysayers, Smokefree 2025 has yet to go up in smoke.

#### **Big Tobacco targeting Māori with e-cigarettes**

Tobacco company Philip Morris is visiting marae and sports clubs to offer free trials and discounts on its e-cigarette as it targets Māori. In the first story in the Smoke and Mirrors series, Guyon Espiner asks if vaping and e-cigarettes offer smokers a less dangerous habit or give them a new, damaging problem.

#### New data on e-cigarette use among New Zealand adults

Around one in six New Zealand adults have tried e-cigarettes but only 2 per cent are using them currently, a national survey has found.

However, the research led by the Health Promotion Agency and recently published in the scientific journal Addictive Behaviours also found more than half (56.5 per cent) of current smokers had at least tried e-cigarettes.

#### **Tuberculosis**

#### Preventing TB is a critical cog in wheel to end TB and AIDS

Every case of active tuberculosis (TB) disease comes from an individual with latent TB infection. And every new case of latent TB infection is a sign of failing infection control, as someone with active TB disease transmitted the bacteria to an uninfected person.

#### Standard tests may not detect low-level case of TB in some people

An international collaboration of infectious disease experts has identified a large group of people who appear to have naturally mounted an immune response to TB, a bacterial infection that is the leading cause of infectious disease death worldwide. Nearly 200 people from 2500 households with active TB were clearly exposed to TB for more than 10 years but the two most reliable tests (TST and IGRA) came back negative on repeated tests.

## **General items of interest**

#### **Respiratory Research Review**

#### **Issue 161**

In this winter issue we have included a number of studies reporting on COPD and discover that even small increases in wintertime temperature variability can impact on the risk of respiratory diseases.

#### Other highlights include:

- The impact of long versus short courses of oral corticosteroids on COPD exacerbations.
- Surgical and endoscopic interventions to reduce lung volume in emphysema.
- Triple versus single and dual long-acting bronchodilator therapy in COPD.

#### **Lung Cancer Research Review**

#### Issue 9

Welcome to Issue 9 of Lung Cancer Research Review.

This issue features a broad range of research topics including programmed death ligand 1 (PD-L1) expression and tumour mutational burden (TMB) as predictors of patient outcomes in the Checkmate 568 trial, and data from the FLAURA trial supporting use of osimertinib for first-line treatment in patients with EGFR-mutated advanced non-small cell lung cancer.

#### Other highlights include:

- Welding fumes and lung cancer risk.
- · Characterising lung cancer in NZ.
- A non-invasive test for early-stage lung cancer.

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It is provided on the last Friday of each month and contains an overview of news items, articles and research papers of interest to the College members.

All links are current at the time of being compiled and distributed.

For feedback please contact your College administrator: <u>DianaG@nzno.org.nz</u>

#### To learn more about the College go to:

http://www.nzno.org.nz/groups/colleges\_sections/colleges/college\_of\_respiratory\_nurses

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