



doi:10.1136/thoraxjnl-2019-214381

The Triumvirate

"I've got 20:20 vision and that's all I need: enough to keep my baby for company."

The words of blues legend Rory Gallagher: "Ireland's Jimi Hendrix". At *Thorax*, we would like to keep you, our readership, for company in 2020. To do so, we bring you our new impact factor of 10.307 and a clutch of original and impactful manuscripts in this month's issue!

"GUARDIANS" AND INJECTABLE TB DRUGS

Global deaths from TB were estimated to be 1.3 million in 2016. Annually, 700 000 people receive treatment for recurrent TB and 480 000 for multidrug-resistant TB. Both involve administering injectable drugs for at least 60 days. The problem persists into the third decade of the 21st century. In this month's journal, Cohen and colleagues (*see page 64*) describe a randomised controlled, non-inferiority trial of hospital administration of injectable drugs versus home administration by a lay "guardian", conducted in Malawi. Recruitment proved difficult. The recruitment target was 268 patients and recruitment was stopped at 204 patients for futility. Non-inferiority could not be demonstrated. However no difference was found, between regimens, in the number of patients alive and on treatment at 60 days. Home treatment was cheaper by \$817 per patient. A cost-effective vision for 2020?

24 VALENT VISION

Another infection which won't be disappearing anytime soon is pneumococcal pneumonia. Indeed the incidence of community acquired pneumonia due to the pneumococcus is increasing. This is the conclusion of the paper by Pick *et al* in this issue of *Thorax* (*see page 38*). The study, from two large teaching hospitals in Nottingham, showed that the increase is mainly accounted for by rises in non-vaccine serotypes and in serotype 3. The author's vision for 2020 and beyond is the development of pneumococcal vaccines, targeting emerging serotypes.

EXCEEDING EXPECTATIONS

This year will see some contrasting visions put to the test at the ballot box. One of the presidential candidates, Cory Booker, has asked us to 'Give more than is expected, love more than seems wise, serve more than seems necessary, and help more than is asked'. If we are

going to beat the global threat associated with Anti-Microbial Resistance (AMR) we will need to exceed current expectations when it comes to managing infective exacerbations of COPD as the study by Ramsheh *et al* (*see page 8*) illustrates. Analysing sputum and bronchial brushings from patients with COPD and healthy controls they identified that antimicrobial resistance genes (ARGs) were highly prevalent in sputum of patients with COPD and healthy controls and proportional to the bacterial abundance in the sputum. With higher bacterial colonisation there are high ARGs. So if the 2020 vision is for good to triumph over evil, and to beat AMR then we really need Great Expectations.

WORKING MANIFESTOES

Although the Conservative manifesto does not specifically address the issue of Work the Labour Party Manifesto stated 'Work should provide a decent life for all, guaranteeing not just dignity and respect in the workplace, but also the income and leisure time to allow for a fulfilling life outside it.' However, critical illness can be a real barrier to work with associated adverse consequences. In this issue of *Thorax* Kamdar *et al* (*see page 17*) highlight the major adverse consequences of critical illness in the workforce. They reveal that 40% of ITU survivors are unemployed and up to 84% have had worsening employment status. It is clear that critical illness is a barrier to work, and this in turn is a barrier to quality of life. So I vote for 2020 vision that takes a joined up approach to helping survivors unleash their potential.

ARTIFICIAL INTELLIGENCE (AI) VERSUS ACTUAL CLINICAL INTELLIGENCE (ACI)

AI in healthcare aims to improve patient outcomes by assisting clinicians in using medical knowledge, which has been analysed and memorised by these systems, thereby providing clinical solutions. However, how these systems assess and manage complex symptoms, such as breathlessness, is still to be determined. Until then, we will need clinical trials to determine best practice for our patients. Currow and colleagues from Australia (*see page 50*) performed a trial to determine the efficacy and safety of regular, low-dose, sustained-release morphine for chronic breathlessness. 284 participants were randomised to morphine (n=145) or placebo (n=139), but there was no difference

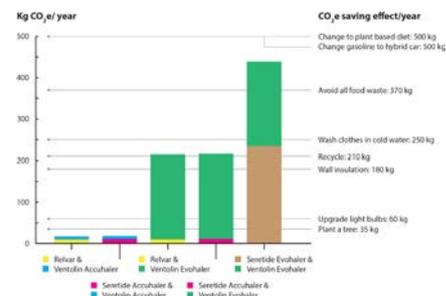
observed at 7 days in the primary endpoint of intensity of breathlessness. We still need to use ACI until AI can be more considerate and thoughtful.

SLEEP TO THE STARS

Hibernating animals enter a state known as torpor, which reduces their bodily functions to a minimum and uses fat stores in their body for energy. This may be an approach we could use to visit another star system, as even travelling at the speed of light, the journey would take years. Being able to go into a state of long-term torpor would make travelling such distances considerably less tedious for the astronauts and conserve vital resources. However, we may need to consider the impact of sleep disturbance as in the study of Kim and colleagues (*see page 57*) who investigated the effect of respiratory effort and oxygenation during sleep on systemic blood pressure in obstructive sleep apnoea. The analysis from 2055 patients showed that breathing pattern was associated with a lower blood pressure during Non-REM sleep, whereas hypoxic burden was associated with higher blood pressure. Who really wants to sleep for few years to get to the stars?

2020 low carbon vision

Metered dose aerosols have a 20–30 times larger carbon footprint than dry powder equivalents. Check out this arresting comparison and read the paper on page 82.



Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Not required.

Provenance and peer review Commissioned; internally peer reviewed.

© Author(s) (or their employer(s)) 2020. No commercial re-use. See rights and permissions. Published by BMJ.