In this edition of “Airwaves” we celebrate some of the unusual news items and colourful characters which have made the news in recent months. We also ponder the meaning (if any) of the current UK Government slogan “levelling up”. In this month’s journal you will find the unusual (bronchial cut-off sign) (see page 422) and the colourful (see the beautiful images derived from bronchoscopic needle based confocal laser endomicroscopy) (see page 370), with a dash of “levelling up”.

FAREWELL MEATLOAF BUT WHEN WILL WE SAY FAREWELL AIR POLLUTION?

In January this year, we bid farewell to the singer “Meatloaf” – famed for the album “Bat out of Hell” which features a very large motorcycle on the cover, belching exhaust gases. The damaging effects of exhaust gases, with particles of aerodynamic diameter less than 2.5 μm (PM$_{2.5}$), are well described. But what of the even smaller particles in the range 5–560 nm (PN$_{5-560}$)? In this issue of Thorax, Fang and colleagues (see page 391) compare measured levels of PN$_{5-560}$ with emergency department visits for respiratory problems, by children in Beijing, China. The authors find increased risks of emergency respiratory visits with increases in PN$_{5-560}$ on the day the child was seen or the day before. The emissions were largely attributable to petrol and diesel vehicles which increased the risk of emergency respiratory visits by 6.0% and 4.4% respectively. The authors call for traffic emission control in urban areas. With such a high density of traffic in Beijing, Meatloaf might have observed that “…by the Dashboard Light”.

CAPTAIN JAMES T KIRK AND ADVICE TO AIR TRAVELLERS

One of the more bizarre news events of recent months was the blast off of William Shatner (aka Captain James T Kirk of the Star Ship Enterprise) in a real life space shot, in the Blue Origin rocket, owned by Jeff Bezos of (Amazon fame). We are not told whether James T Kirk suffers with respiratory problems but, if he does, he would do well to read: “the BTS Clinical Statement on air travel for passengers with respiratory disease” (see page 12) published in this month’s Thorax (see page 329). This updated statement provides an exhaustive review of the literature and makes specific recommendations on pre-flight screening tests – in particular which patients should undergo the hypoxic challenge test (HCT). There is specific advice for a wide range of respiratory conditions including asthma, cystic fibrosis, COPD and recent pneumothorax. After touchdown, William Shatner exclaimed “I hope I never recover from this…” before being drenched in champagne. Avoiding champagne (and any other alcoholic drink) during flight is recommended by the consensus statement to avoid venous thromboembolism. With this comprehensive clinical statement clinicians can ensure their respiratory patients do make a full recovery after their flights.

THE MEANING OF LEVELLING UP

As we write Airwaves the editors have had sleepless nights, crossing an ocean of tears, trying to understand the meaning of levelling up. This policy was announced with great fanfare this month and many wonder whether there will be losers as well as winners. But, of course, the meaning of this phrase is surely Level 42. The concept of levelling up is to prevent regional geographical differences and indeed they really do exist, not just nationally and internationally as well. In this issue of Thorax (see page 378) Araghi and colleagues describe differences in lung cancer survival by sex, histological type and stage at diagnosis. They find that lung cancer survival was lower in the UK than Canada and Norway, and regardless of lung tumour histology survival was better for females than males. They conclude that while tumour histology and sex differences play a major role in differences in survival, quality of treatment and healthcare system factors also play a big role. So does Level 42 bring only feelings of doubt, gone with the hope the words have erased? We do hope not!

DEEP THOUGHT

The galaxy is currently full of super computers trying to define the meaning of life, or the value of life in the case of cryptocurrency. However, that answer is known, its 42. Deep thought is also required when considering whether to undertake a lung transplant in an emergency situation, such as an Acute Exacerbation of Interstitial Lung Disease (AE-ILD). In this edition of Thorax (see page 364) Chizinga and colleagues compare the outcomes of 53 patients admitted with AE-IPF. 28 had medical therapy and 25 received a lung transplant. 100% patients with AE-ILD who underwent transplantation, in contrast with only 43% of those treated medically, survived to discharge. During the same period, 67 patients with stable ILD underwent transplantation and survival at 1 year was not different for the AE-ILD or stable ILD patients transplanted (96% vs 92.5%). Now at the risk of being accused of being a paranoid android we think it might be time to re-think the meaning of transplant policies.

CLUSTERING PHENOTYPES

Levelling up is a moral, social and economic programme, although without extra funding it will be seen as levelling out rather than levelling up. Indeed, it would be more useful to consider levelling up as a process of managing clusters of social and economic deprivation. Horsley and colleagues (see page 357) used this clustering approach in the longitudinal assessment of lung clearance index to monitor disease progression in children and adults with cystic fibrosis. The authors assessed the feasibility, repeatability and longitudinal LCI change in children and adults with mild CF as a prospective, 3-year, multicentre, observational study. One hundred and twelve patients completed the study with latent class growth model analysis demonstrating four discrete clusters with baseline LCI as the strongest factor associated with longitudinal change and risk factor for future disease progression. These results support the use of LCI in clinical practice in identifying patients at risk of lung function decline. Annangi and colleagues [thoraxjn-2020–2 14 644] took a similar approach in COPD and focused on fractional exhaled nitric oxide levels (FENO), and observed that FeNO levels ≥25 ppb and peripheral eosinophilia was higher among COPD subjects with asthma compared with COPD without asthma. This clustering and phenotyping of our patients identifies those patients at greatest clinical risk. We can only hope that our politicians are equally as deft at phenotyping and identifying clusters of the UK population at social and economic risk.

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