



## Bolder action needed on climate change

**O**raTaiao (the New Zealand Climate and Health Council) is urging health colleagues to support bolder action on climate change to reduce global warming and to improve the health of all New Zealanders.

**NZSA Communications Manager Daphne Atkinson interviewed OraTaiao representatives about how we can reduce emissions in New Zealand as individuals and as a specialty, and the benefits for health, including the delivery of equitable health outcomes and cost-savings.**

Interviewees: **Dr Rhys Jones** (Ngāti Kahungunu), Public Health Physician and Senior Lecturer at the University of Auckland, and Co-convenor of OraTaiao and **Dr Matthew Jenks**, Consultant Anaesthetist at the Southern District Health Board and Executive Member of OraTaiao. He is also an NZSA member and chairs the NZSA's Environmental Advisory Group.

**It is estimated the health sector contributes 3% to 8% of a country's total emissions footprint. Which areas in health are contributing most, and how, to this negative impact?**

The emissions footprint of New Zealand's health sector has never been formally and systematically measured, so we need to look to evidence from other countries. The NHS UK have estimated 3% of its country's greenhouse gas emissions arise from the healthcare sector. In Australia the estimate is 7% and in the US 8%. The Australian data was published in the Lancet in 2017. One of the authors is Forbes McGain, an anaesthetist and intensivist at Western Health in Victoria. The four main areas where healthcare contributes to the problem of climate change are: energy for buildings, transport (including flights for CME), waste, and procurement. Procurement is the biggest component

of the footprint (>60% according to UK data) and includes all the "stuff" we use in healthcare – pharmaceuticals, medical devices, office supplies etc. All of these have greenhouse gas emissions associated with their manufacture, packaging, transport, use and eventual disposal.

**The link between addressing climate change and improved health is well recognised with climate change influencing key determinants of health such as clean air, safe drinking water and sanitation. But we also hear that addressing climate change will reduce health costs, which is particularly critical in a time of constrained resources and rising demand for health services. What level of cost savings are we looking at, and how can environmentally friendly measures lead to greater cost-effectiveness?**

The sky is the limit. Savings can be realised through more energy efficient buildings, reduced travel through videoconferencing and more rationale use of resources. A good example is the work of Rob Burrell and the anaesthetic department at Counties Manukau DHB. Through education and data there's been a reduction in desflurane use. This has saved \$250,000 per annum (as desflurane is more expensive than sevoflurane) and reduced greenhouse gas emissions by > 800 tonnes (as desflurane is a potent greenhouse gas).

Importantly we can save money and reduce the carbon footprint of healthcare by reducing waste in our models of care. By specifically addressing the resource use and carbon footprint of a model of care you can address the environmental impact of that care but also improve patient outcomes and save money. The Centre for Sustainable Healthcare in Oxford is pioneering work in this area.

More broadly for the health system, by encouraging low carbon initiatives like warm, well insulated homes, active transport like walking and biking, and a plant-based diet we can realise the health co-benefits of climate change action, have a healthy population, and therefore lessen demand on the healthcare system.

**Anaesthetic gases have greatly enhanced the comfort of patients before surgical interventions for many decades but are now the subject of debate owing to their contribution to the greenhouse effect, global warming and destruction of our atmosphere. What strategies does the specialty need to pursue to minimise the effects of these gases on the planet?**

We still need to use our anaesthetic gases – obviously! But as can be seen from the example given in the last question we can think about which gases we use. Other strategies include low flow anaesthesia, modern efficient anaesthetic machines, avoiding wastage at induction and emergence, avoidance of nitrous oxide where possible (a potent greenhouse gas with a very long atmospheric half life), use of regional anaesthesia and of course TIVA. ANZCA have recently awarded research grant money to Forbes McGain to investigate the chemistry and chemical engineering required to capture and potentially reuse sevoflurane.

**OraTaiao believes New Zealand is lagging behind other countries in addressing climate change. There appears to be a positive shift under the new Government, such as the recommendation to establish a Climate Change Commission, new money in the Budget for resourcing climate change action, and the Zero Carbon Bill consultation. What else would you like to see New Zealand do?**

There have been some positive developments, but we need to strengthen New Zealand's climate action and centralise equity. We must increase the urgency and focus on a just transition to a zero emissions economy. The Zero Carbon Bill, currently being consulted on, is a good example of a step in the right direction – but we need to build on this momentum to strengthen New Zealand's climate action.

We know that legislation like a Zero Carbon Act works. The UK Climate Change Act has led to real climate action, including by the health sector, with the NHS reducing emissions by 11% since 2007 – despite an 18% increase in healthcare activity. The UK's overall emissions are falling, unlike ours. However, OraTaiao has two major concerns with the Bill as currently proposed. First, the target of zero emissions by 2050, while more ambitious than previous targets, is still too little, too late. Because of our previous inaction, alongside inaction by other countries, New Zealand's emissions now need to be net zero by the 2030s to meet our promises under the Paris Agreement to keep warming well below two degrees. For the sake of our Pacific neighbours and others living in low-lying areas, we must reach net zero emissions faster.

Second, there are major issues of fairness that need to be addressed in the Bill. Equity and Māori well-being have to be at the heart of climate policy to support those being hit hardest by climate change. The process has so far failed to fulfil the Government's partnership requirements under Te Tiriti o Waitangi.

**Health Minister David Clark has stated in his letter of expectations to DHBs, that one of his key priorities is bridging health inequities. How can addressing climate change contribute to this goal?**

The tragedy of climate change is that those who already have poor health outcomes, due to ethnicity and income, will be disproportionately affected. To add insult to injury, many of the actions we can take to address climate change also have the potential to exacerbate social and health inequities.

The good news is that well designed climate change mitigation and adaptation policy can reduce health inequities. Examples include accessible and affordable public transport and active transport (cycling and walking), subsidised insulation and home heating, and promoting dietary changes to increase fruit and vegetable consumption and reduce meat and dairy. These actions can improve health, while also reducing greenhouse gas emissions. If they are carefully planned and we prioritise equity, they can also contribute to reducing and ultimately eliminating health inequities.

**Which countries and initiatives should we be looking to emulate?**

I think we can look to the UK model of a Climate Change Act. Their emissions are going down. We should be supporting the Government's plans to pass the Zero Carbon Bill, but also advocating for aspects of the Bill to be strengthened. Consultation on this Bill closed on 19 July and we encouraged health organisations, such as the NZSA, to submit. We're very pleased at the number who did and that the health sector is speaking out.



## How do we incentivise people and organisations to take action? What will be the drivers for change?

My opinion is that the most effective tool is a tax on carbon. Revenue generated can then be used to facilitate further mitigation, invest in renewable alternatives and help offset the financial impact on low income households. On an individual level I think people respond to the health co-benefits of taking climate change action – walking, biking, a plant-based diet, well insulated, warm dry homes. Less air pollution from fossil fuels is good for our health, communities and the environment.

**We published an article on reducing health sector emissions in the NZ Anaesthesia December magazine and provided examples of DHB initiatives. This seems to be where the real momentum is coming from – the regions and communities.**

There is great work occurring in some DHBs. However, this needs to be rapidly scaled up and expanded to include all DHBs. Co-ordinated action at the Ministry of Health level with strong signals about the direction we need to take from the Minister of Health are required and I think we are starting to see this happen. The Sustainable Health Sector National Network is doing fantastic work. In particular, it is advocating that Pharmac apply environmental and carbon impact criteria to its “Factors for Consideration” when assessing pharmaceuticals and medical devices.

## What changes should we be making as individuals?

I have mentioned some individual actions that have co-benefits for health and climate above, such as a plant-based diet and walking/ biking to work. Eating locally produced seasonal food supports local communities and has a lower carbon footprint. Consume less stuff – do we really need to upgrade our phone every other year? There is good evidence that our consumer lifestyles are not making us any happier and they have a huge carbon footprint. Reducing our flying is probably the biggest way we can reduce our individual carbon footprints – attend local CME and taking holidays locally. More broadly, action we can take includes divesting our KiwiSaver and superannuation funds from fossil fuels (there are now good options available, Medical Assurance Society being an example) and offsetting our unavoidable emissions annually (check out Enviromark, Ekos, Million Metre Streams).

**The OraTaiao climate change open letter to the Ministry of Health calls on the Government to address DHB Greenhouse Gas Emissions with reduction targets and to measure these in accordance with the ISO 14064 Standard. How is this petition going? When will it be presented?**

At last count we have 741 healthcare workers who have signed the open letter. We have requested a meeting with Julie Anne Genter (Associate Minister for Health) to present the letter.

## Facts at a Glance

- The Health Sector contributes 3-8% of a country's greenhouse gas emissions
- January 2018 was the hottest month in New Zealand's recorded history
- 40% reduction in all causes of mortality if you bike to work
- 400 ppm CO<sub>2</sub> – higher than at any time in past 400,000 years
- The planet is one degree celsius hotter than baseline
- Desflurane use for one hour is like driving a car >300 kilometres
- 20% of global greenhouse gas emissions are from animal agriculture (50% in NZ)
- >30 coal boilers still being used to power hospitals
- Pharmaceuticals are the biggest contributor to the carbon footprint of healthcare.



So hopefully soon! We think it's crucial that DHBs address the greenhouse gas emissions associated with their operations. Several, such as CMDHB, ADHB, NDHB and CDHB, are doing this already. We would like to see this mandated for all DHBs and that the reporting framework is standardised so that we can compare and share what we have learned.

## What are some recent goals and projects for OraTaiao?

We co-ordinated a hui with Climate Change Minister James Shaw to provide health sector input into the Zero Carbon Bill. This hui took place in July and many health sector organisations attended, including the NZSA. Our executive developed a Zero Carbon Bill guide to help others with developing submissions. We are always busy submitting on regional council plans and government reports such as the Productivity Commission's Draft Report on Transitioning to a Low Emissions Economy. We are working on a "Climate Smart New Dunedin Hospital" proposal as well.

**OraTaiao is always looking to expand our membership and reach. It is our members and membership subscriptions that allow us to do the work we do. So please sign up at: [www.orataiao.org.nz](http://www.orataiao.org.nz)**

## References

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3. [https://journals.lww.com/anesthesia-analgesia/Fulltext/2012/05000/Managing\\_Fresh\\_Gas\\_Flow\\_to\\_Reduce\\_Environmental.27.aspx](https://journals.lww.com/anesthesia-analgesia/Fulltext/2012/05000/Managing_Fresh_Gas_Flow_to_Reduce_Environmental.27.aspx) How to manage fresh gas flows to reduce anaesthetic gas wastage
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# Upcoming Lectureships



**Dr Ian Williams,**  
Canterbury DHB,  
Christchurch

**Presentation: A  
Personal Journey,  
My Experience  
with TIVA**

**Speaking in:  
Whanganui 7 September**

Dr Williams will provide a brief history of TIVA, how it is delivered currently and TIVA's relationship with EEG based monitors. He will outline why TIVA, in many practices, remains a minority anaesthetic. There will be insightful observations and examples of best practice, based on his experiences during the past three years of administering over 1500 TIVA's. Despite good evidence for improved outcomes, TIVA continues to be underutilised in many hospitals in New Zealand and overseas. He hopes that with better understanding of the techniques and monitoring equipment available, this excellent form of anaesthesia will be utilised more often.



**Dr Lara Hopley,**  
Waitemata DHB,  
Auckland

**Presentation: A  
Cure for Health IT  
Allergy**

**Speaking in:  
Whanganui  
7 September**

Dr Hopley will be presenting an enhanced post-election perspective lecture, discussing HDC decisions and how we can use health IT to begin getting the best out of the clinical computer systems we are being given to use in our daily lives.

[Lectureships continue on page 23](#)

For more information see  
[www.anaesthesiaeducation.org.nz/lectureship](http://www.anaesthesiaeducation.org.nz/lectureship)