

Nurses are crucial in the fight

Nurses understand the impact of the environment on individual and population health. That understanding is crucial to ensuring health justice in interventions to mitigate climate change.

By Michael Brenndorfer

As nurses, in our multifarious settings, we observe daily how the environment affects the health of those we care for and support. Throughout the year, we observe the ebbs and flows associated with seasonal changes, and the positive and negative ways these contribute to health outcomes. We see the impacts on health of poor housing, stressful family dynamics and workplaces, communities with limited healthy food options and of institutional racism and marginalisation.

Nurses at the frontline

Similarly, as nurses, we continue to be at the frontline, observing the negative impacts of climate change on the health and wellbeing of our communities. The scientific evidence on the matter is clear – climate change is happening and it will have significant impacts on health in an inequitable way.¹ But we can do things to mitigate climate change, and many of these will have benefits for the health of our populations.

The impacts of climate change are very broad and, consequently, so are its impacts on health. In Aotearoa New Zealand climate change will lead to rising average temperatures, greater frequency of unpredictable weather patterns, with extreme rainfall events. We can expect wetter weather in the west, with likely drier weather and potential droughts in the east and north.¹ These predicted climate impacts, both local and global, will disrupt food production leading to food insecurity issues, while flooding will increase the potential for contamination of our water and food supplies.¹

An increase in temperature of around two degrees is sufficient to allow mosquito varieties associated with vector-borne diseases to become established



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here, potentially leading to the transmission of illnesses such as dengue fever.¹

In the *Youth 19* survey young people revealed concerns about the negative impact of climate change on their mental health.² Anecdotally, in my role as a youth health nurse, young people frequently highlight the existential fears of climate change when discussing their own anxiety and depression symptoms. Previous research shows a clear association between the experience of extreme weather events and mental health issues.³

Increases in temperature and dampness will exacerbate asthma associated with sub-standard housing, an issue which already means Aotearoa New Zealand has high rates of, and inequities in asthma and respiratory illness.⁴

Health inequities arise from systemic forces and involuntary exposures, which create differences in health outcomes between different population groups. Climate change as a global health issue acts as an “involuntary exposure” which compounds and exacerbates existing inequities.⁵ This means low to middle-income countries experience greater impacts and more major disruptions from climate change than high-income countries. Climate change refugees are an anticipated consequence of this situation. This is particularly so for our Pacific neighbours who are acutely vulnerable to

rising sea levels.

In Aotearoa New Zealand the health impacts of climate change are magnified by the social determinants of health, exacerbating existing inequities.¹ Those already experiencing inequitable health outcomes associated with age, structural racism, disability status, location and socioeconomic status will be harder hit by the health impacts of climate change.

Māori and Pacific populations, who already experience a disproportionate burden of health conditions, will experience greater impacts of climate change. Increased risks of infectious diseases, respiratory illnesses due to substandard housing, mental health issues and food insecurity already disproportionately affect Māori. Their impact will be increased through the effects of climate change.¹

The good news is that we can do things to mitigate climate change, and many of these will have benefits for population health and on health inequities. Reducing carbon emissions will also have positive impacts on health outcomes.

Interventions to increase active transportation in Aotearoa New Zealand have been shown to significantly improve

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health outcomes, reduce risks of injury and accidental death, and reduce carbon emissions. An analysis of investment into active transport infrastructure in New Plymouth and Napier saw an increase in non-motorised trips of 30 per cent, and a reduction of carbon dioxide emissions of 1149 tonnes annually.⁶ At the same time, the health benefits of increased active transport contributed to a reduction in diabetes, depression, cardiovas-

against climate change

What is OraTaiao?

ORATAIAO: The New Zealand Climate and Health Council is made up of more than 700 health professionals concerned with:

- The negative impacts of climate change on health, wellbeing, and fairness;
- The gains to health, wellbeing, and fairness that are possible through strong, health-centred climate action;
- Highlighting the impacts of climate change on those who already experience disadvantage or ill-health (ie equity impacts);
- Reducing the health sector's contribution to climate change.

In addition to individual members, we have the backing of 18 of New Zealand's leading health professional organisations, including NZNO, for our Health Professionals Joint Call to Action on Climate Change and Health. Together, these organisations represent tens of thousands of New Zealand's health professional workforce.

As an organisational member of the board of the Global Climate & Health Alliance, we are part of a worldwide movement of health professionals and organisations urgently focusing on the health challenges of climate change and the health opportunities of climate action.

We honour Māori aspirations, are committed to the principles of Te Tiriti o Waitangi and strive towards the elimination of health inequities between Māori and other New Zealanders. We are guided in our practice by the concepts of kaitiakitanga, kotahitanga, manaakitanga and whakatipuranga.

If you are keen to become more active please contact us at www.orataiao.org.nz

cular disease, respiratory illnesses, and injuries, because of safer walking and cycling infrastructure. This resulted in a reduction of disability-adjusted life years (DALYs) of 34.5.⁶

Reducing carbon emissions

Improvements to housing and rental standards can help reduce carbon emissions with co-benefits for health. With increased energy demands, it is anticipated that, unless housing standards change, they will contribute to an increase in carbon emissions from energy production of 35 per cent within the next 10 years, through non-renewable, fossil fuel energy sources.⁷ However, through requirements to insulate houses, have energy-efficient heating options, ventilation and other improvements, household energy consumption can be greatly reduced, while simultaneously reducing negative health outcomes. This will see improvements in rates of asthma exacerbations and other respiratory illnesses associated with cold, damp housing.

Food production and consumption is another area where action can reduce carbon emissions with co-benefits for health. A movement towards whole plant foods has the potential to reduce carbon emissions associated with diet by up to 42 per cent, with a consequential positive impact on health. This has been estimated to result in improvements of 1-1.5 million QALYs in Aotearoa New Zealand.⁸

Animal agriculture results in higher levels of carbon emissions than plant-based agriculture. And the consumption of a diet high in processed animal fats is associated with increased risk of dietary-related health issues, such as cardiovascular disease, some cancers and diabetes. Analysis of the benefits of such a dietary shift also showed a significantly greater positive impact on health outcomes for Māori.⁸

Since the foundation of the profession, nurses have been important change agents, tasked with addressing environmental impacts on the health of those we care for. Specifically, Florence Nightingale

emphasised the role of nurses in ensuring an environment conducive to healing.⁹ While Nightingale could not have imagined climate change or its environmental impacts, nurses should be expected to remain as change agents. The impacts of climate change on the populations we care for should be a catalyst for action to mitigate climate change.

From our unique perspective as nurses, we can also work to put health equity at the centre of climate change interventions by calling for those with a focus on health justice. This can be as simple as raising awareness of the impacts of climate change on health when discussing the issue with friends and family. We can also identify and address how our health care systems and services contribute to carbon emissions and unsustainable clinical practices. Acknowledging the impacts of our individual and collective actions on planetary and population health is an important extension of our roles as nurses, as conceptualised by holistic nursing philosophies. It is right that nurses are at the forefront of calls for action on climate change.

Overcoming powerlessness

I am the NZNO representative member on the executive committee of *OraTaiao: the New Zealand Climate and Health Council* (see box at right), one of two registered nurses on the board. I would like to extend an invitation to nursing and midwifery colleagues to support the work the council does in placing health justice at the centre of climate change interventions. Becoming a council member and supporting the council's work is one way to overcome the sense of powerlessness when faced with such a massive issue as climate change. •

* References for this article are on p45.

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