



Our Ref: IMR 2259/OMR2349

Dr Andrew Robertson
Chief Health Officer
Via email: climatehealthwa@health.wa.gov.au

Dear Dr Robertson

SUBMISSION TO THE CLIMATE HEALTH WA INQUIRY

Thank you for your letter dated 4 July 2019 and the invitation for the Child and Adolescent Health Service (CAHS) to provide a submission to the Climate Health WA Inquiry.

The Lancet has named climate change as the greatest health threat of the 21st century¹. The accepted science states that unless permanent and unprecedented changes in all aspects of society have occurred within the next 11 years, including a reduction of carbon dioxide emissions by at least 50 per cent, an irreversible chain reaction beyond human control will commence. All Health Services Providers are in a position of significant influence to encourage people to lead more sustainable lifestyles, and all health services have a part to play, through their own operations, in stopping climate change and being more sustainable.

Impact on child health

There are innumerable reports of the impact that climate change is having, and will continue to have, on the health and wellbeing on humans. Monash University recently released the report *From Townsville to Tuvalu*², which looked at scientific research from approximately 120 peer-reviewed journal articles to paint a picture of the health-related impacts of climate change in Australia and the Pacific region. Findings included:

¹ Watts N, Amann M, Arnell N, Ayeb-Karlsson S, Belesova K, Berry H, et al. The 2018 report of the Lancet Countdown on health and climate change: shaping the health of nations for centuries to come. *Lancet*. [Internet]. 2018 [cited 2019 Aug 14]. Available from: [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(18\)32594-7/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)32594-7/fulltext)

² Global Health Alliance Australia. *From Townsville to Tuvalu*. Monash University. 2019. http://glham.org/wp-content/uploads/GLHAA_TownsvilleTuvalu-08.pdf



- The decreased nutritional value of staple crops as a result of higher carbon dioxide concentration is expected to cause stunting, anaemia and malnutrition in children, within ten to 20 years.
- Children born to women who were pregnant while they experienced floods in Brisbane in 2011 had lower cognitive capacity (equivalent to at least 14 points on an IQ scale), smaller vocabularies and less imaginative play at the age of two. This is attributed to stress hormones crossing the placenta and producing adverse effects on the foetus's neurocognitive development. Thus child development will be impacted by climate change.
- Rising global temperatures will expand the habitat of mosquitos, exposing more people to diseases including dengue, chikungunya and zika, and will cause other diseases to spread into Australia, including Nipah virus, which is spread by bats, and Q fever³.

A 2017 report in the journal *Nature* predicted that by 2100, 75 per cent of people around the world would be exposed to heatwaves extreme enough to kill⁴. Further to this, it is reported in the Climate Council's 2015 report *The Burning Issue: Climate Change and the Australian Bushfire Threat*, that globally, the length of the fire weather season increased by nearly 19 per cent between 1979 and 2013⁵. Bushfire smoke can seriously affect human health because it contains respiratory irritants, as well as inflammatory and cancer-causing chemicals. Elderly, infants and those with chronic heart or lung diseases are at higher risk⁶. This will have a flow on impact to hospitals and health services.

Further to this, children's mental health will be impacted in an environment where weather disasters are becoming more common. Weather disasters impact negatively on the broad social context for children - family, school, neighbourhoods and communities; this social context is necessary for the biological and cognitive development of children⁷. Post-traumatic stress disorder (PTSD) and serious emotional disturbance have been found to persist years after exposure to adverse weather events and their aftermath⁶.

³ Department of Health New South Wales. Q fever fact sheet [Internet]. New South Wales: Department of Health; 2019 [updated 2019 Jul 19; cited 2019 Aug 14]. Available from: <https://www.health.nsw.gov.au/Infectious/factsheets/Pages/q-fever.aspx>

⁴ Mora C, Dousset B, Caldwell I, Powell FE, Geronimo RC, Bielecki CR, et al. Global risk of deadly heat. *Nature*. [Internet]. 2017 [cited 2019 Aug 14]; 7: [501-6]pp]. Available from: <https://www.nature.com/articles/nclimate3322?proof=true&Jul>

⁵ Climate Council of Australia. The burning issue: Climate change and the Australian bushfire threat. Climate Council of Australia, 2015. <https://www.climatecouncil.org.au/uploads/e18fc6f305c206bdafdc394c2e48d4a.pdf>

⁶ Climate Council of Australia. Climate change and the Victorian bushfire threat. Climate Council of Australia, update 2017. Available from: <https://www.climatecouncil.org.au/resources/vicbushfires/>

⁷ Ahdoot S, Pacheco SE, Global climate change and children's health. *Pediatrics*. 136 (5) (pp 992-997), 2015.

Children exposed to extreme weather event disasters and the ensuing family stress, disruptions to social support networks, and displacement are at risk of developing PTSD and other mental health problems like depression, anxiety, phobias and panic, sleep disorders, attachment disorders, and substance abuse⁸.

Child and Adolescent Mental Health Services (CAMHS) can provide further expert advice to the inquiry from a mental health perspective in relation to responses to extreme weather events around impact on child/adolescent mental health outcomes.

Current actions to reduce carbon dioxide emissions

Perth Children's Hospital (PCH) was built with in line with contemporary design principles to maximise environmental efficiency. I am pleased to advise that a significant number of solar panels are installed on PCH, and louvres are designed to shield the building from the sun to assist in the reduction of power consumption through air conditioning throughout the day. Lighting in the building is triggered only when rooms are in use and switch off after a set period of time. PCH CCR2 (server rooms) are state of the art and are cooled at the server point and not the room, thus reducing power consumption. Low energy LED lights, which are more economical and power efficient than standard lighting, are in use throughout the building. This further reduces electricity usage.

Waste management

Intrinsically linked to the issue of climate change is the issue of waste. CAHS is potentially contributing to climate change through single use medical devices/consumables, deliberately used to minimise infection prevention risks. Currently at PCH, recyclable waste is separated from general waste. PCH also has a waste compacter/composter that can be implemented to compost waste food for use on grounds and gardens. In terms of water management, CAHS has the ability to improve water waste management at PCH by implementing the installed grey water system, and is considering utilising this system. However, CAHS is an organisation consisting of approximately 160 sites and our environmental footprint across these sites needs to be examined.

Initiatives around the world

On 27 June 2019, the Newcastle upon Tyne Hospitals NHS Foundation Trust became the first NHS trust to declare a climate emergency, joining an international movement in doing so. Further to this, Newcastle upon Tyne have committed to taking action on climate change by aiming to become carbon neutral by 2040. While setting a target is admirable, the reality

⁸ Burke SEL, Sanson AV, Vsn Hoorn J. The psychological effects of climate change on children. *Curr Psychiatry Rep* (2018) 20: 35

is that 2040 is too far in the future to limit global warming to 1.5C; we must decisive take action now.

Global Green and Healthy Hospitals, an initiative of Health Care Without Harm, brings together hospitals and health services from around the world under the shared goal of reducing the environmental footprint of the health sector and contributing to improved public and environmental health. Global Green and Healthy Hospitals challenge health services to pledge to take action on climate change citing:

- Climate action is an opportunity for health care to reduce its own carbon footprint;
- Climate action is an opportunity to improve patient and community health;
- Climate action is an opportunity for hospitals to be anchor institutions for their communities; and
- Climate action is an opportunity to be a leading advocate for healthy people on a healthy planet.

I am also aware of the well-publicised efforts of the Princess Alexandra Hospital, a tertiary public hospital in Brisbane, in reducing their waste by 600,000 kilograms in one year⁹. This is an exemplary effort and I acknowledge that CAHS should be doing more on this issue, which, as demonstrated by Princess Alexandra Hospital, would also provide an opportunity for revenue. CAHS has a Green Committee and is exploring avenues to further support this group. As part of this we will endeavour, as a matter of priority, to commit to the Global Green and Healthy Hospitals pledge.

Our team

CAHS is the State's peak paediatric health service, treating patients up to the age of 18. A total of 42.3 per cent of our staff are aged 39 or under. The changing climate will have direct impact on this cohort of people in the future, and it is CAHS' duty to advocate, on behalf of the children we care for now and in the future, as well as our young staff, for strong and effective measures to be taken, including those which may appear daunting and require significant systemic change. This is also in line with CAHS' strategic priority to embrace sustainable practices and be responsible for the use of resources.

Health care is uniquely positioned to play a leading role in addressing climate change and we must not shy away from this challenge. We must unite behind the science and commit to the changes required to stop climate change and create a sustainable future. This must be considered core business alongside our other operational duties.

⁹ <https://www.youtube.com/watch?v=WbRGxK4GTdk>

In relation to your request for a representative within CAHS for queries pertaining to the Inquiry, please contact Ms Kylie Mulcahy, Director, Office of the Chief Executive, via

Thank you again for the opportunity to provide comment on this extremely important issue.

Yours sincerely


Dr Aresh An
Chief Executive
Child and Adolescent Health Service

29th August 2019