

Climate Health W.A. Enquiry Response from Forbes McGain, 9th July, 2019.

I congratulate the Western Australian Minister for Health for an inquiry into the impacts of climate change on health in W.A., the inaugural such statutory inquiry in Australia. Climate change is a health issue, and yet healthcare's pollution itself contributes to climate change.

Thank you for inviting me to respond to the Climate Health W.A. Enquiry. I am a doctor working in anaesthesia and intensive care at Western Health, Melbourne. I also have a PhD in hospital environmental sustainability and continue to have a strong research and advocacy role in sustainability. Further, I am a sandgroper (born in Kalgoorlie)!

I have noted the specific terms of reference of the enquiry. I am not an expert in the health effects of climate change per se, so I will not focus on those sections of the terms of reference. Rather, I will focus upon the following sections of the terms of reference as I have expertise in these areas:

Specific Terms of Reference:

1. Reduce the contribution of WA health services to climate change and other detrimental impacts and enable WA Health services to implement change, including energy efficiency, to a more sustainable model.

Firstly, we need to be able to measure what effects WA health services have on the environment (and health itself).

Carbon. Australian healthcare is responsible for approximately 7% of our nation's CO₂ emissions,¹ equivalent to about half of that of agriculture, or the entire state of South Australia. It is likely that the CO₂ emissions from healthcare in W.A. is about 7% of the total CO₂ emissions for W.A.. Such calculations of healthcare CO₂ emissions (ongoing annually) could be performed reasonably inexpensively with the assistance of an expert in input-output life cycle assessment (see our paper,¹ and the associated appendix for further details). Further, process based life cycle assessment can be used to examine the environmental footprints of different processes and approaches to healthcare as W.A. moves to a low carbon economy.

Interim 5 to 10 yearly targets for carbon reduction will be required out to 2050. Currently, universities² and large businesses/local councils³ lead the way towards 'net carbon neutral'. Part of the reason for this move isn't just leadership and charisma, large scale renewable electricity contracts are making financial sense and security of supply. *Yet climate change is a health issue.* Real leadership by W.A. Health above and beyond other economic sectors would highlight to the community that we are serious about the impending climate crisis because it is a health issue.

Energy. Closely linked to CO₂ emissions, measurement of energy use within healthcare is required. Energy efficiency efforts will need to be guided by engineers and with carbon

reduction plans set out over time to 2050. Movement from gas to renewable electricity for sources of heating and cooling will have to occur in a carbon constrained world despite gas having a lower CO₂ footprint per unit of energy than coal. Interim targets for renewable electricity for healthcare will make the transition away from coal/gas more orderly and secure.

Water. W.A. is a very dry state (S.A. is the driest!) in the second driest continent. There are evident areas within healthcare that water can be saved. Large scale water harvesting from hospital roofs is possible for grey water. Areas more specific to healthcare where water can be saved and used sensibly include recovering wasted reject water from reverse osmosis processes for dialysis and hospital cleaning/sterilisation. Once again, targets (% reductions on a decadal basis) would be useful to guide hospital staff.

Waste. Similarly to energy, *targets* will be required for waste reduction. Improving recycling within Australia will be important, but more important in the waste hierarchy (ecologically and financially) are reducing and reusing. Reducing and reusing require more nuanced behaviour changes at the level of medical/nursing choices.⁴ Any plans to improve procurement and reduce waste will require efforts and solutions that will potentially vary widely between hospitals. Collaboration between the Dept of Health and local hospital staff will be integral.

Procurement. Examining how we and why we purchase new items, from paper to plastic syringes, to new MRI scanners, will require ongoing commitment from the Dept of Health to examine innovative ways to reduce demand and purchasing. Consideration of reducing and reusing equipment where possible will be important as well as avoiding unnecessary tests/investigations/operations etc. (Choosing Wisely).⁵

Models of Care. “*Only do in hospitals what only hospitals can do.*” Importantly, moving care that is not required within hospitals to the community will be important in reducing our carbon footprint. Nevertheless, avoiding any potential reduction in patient care will be important as will measuring any potential reductions in CO₂ emissions from patient care exterior to hospitals. Emphasising the role of preventive/public health will be vital.

2. Evaluate the likely benefits (health and wellbeing, social and economic) arising from climate change mitigation strategies, with a focus on W.A. health services.

Direct benefits: **reduction in the threat of the climate crisis** (i.e. reduced CO₂ emissions from W.A. Health). Although this is a global crisis requiring global commitment, without local efforts there is no global commitment. Reduced air pollution from coal fired electricity (from Collie- 60km from Bunbury).

Energy- reduced financial costs with greater energy efficiency, greater renewable electricity (natural gas is expensive now, even if W.A. has huge reserves off the N.W. Shelf). No reduction in energy security, with another energy source from renewables. *Leadership*.

Water- greater water security from reduced use. *Leadership* for the community.

Waste- reduced amounts lead to reduced costs. *Leadership* again (‘Health is doing our bit’).

Indirect benefits.

Healthcare staff (particularly nurses) become distressed by the daily waste they see around them.⁶ Although rarely researched it is likely that by improving energy/waste/water use in

hospitals staff could become more content at work and potentially there may be a reduction in sick leave. If healthcare staff see hospitals leading by example they may become more likely to institute further sustainable behaviours both at home and at work.

Emphasising preventive health will be important. For example, reducing rates of smoking, diabetes, obesity etc. will all improve individual patient's lives, and W.A. Health's financial footprint, but in addition will reduce W.A. Health's CO₂ emissions (reduced hospital admissions, intensive resource use, medications etc.).

3. Define the role of the Department of Health in leading public policy on climate change and health.

The United Kingdom's Sustainable Development Unit (SDU) has reduced healthcare emissions by 18.5% and water use by 21% from 2008-2018.⁷ The SDU provides a successful example of the benefits of national coordination, commitment to targets, regular monitoring, and the provision of guidance to health providers on environmental sustainability.

Having at least a state based approach to healthcare sustainability, including a clear mandate from the state government is vital to focussing efforts on reducing healthcare's environmental footprint.

The role of the W.A. Department of Health should, in my opinion, be similar to that of the UK SDU for their National Health Service. Setting carbon, energy, water etc. targets will be important, *but just as important*, if not more so, will be having a *clinical lead of the W.A. SDU* who will interact with local hospital staff to bring about change- particularly behaviour change (to reduce waste, improve procurement etc.). There will be the need for innovative thinking, rejection of the status quo when this is without foundation, and removal of ineffective or unnecessary medical therapies (i.e. *waste*). Emphasising the role of GPs, public health physicians, et al in mitigating healthcare's unsustainable financial, social and environmental trajectory. Reducing obesity, trauma, and diabetes has impressive patient, societal, economic, and environmental *co-benefits*, all of which reduce the need for the less sustainable hospital care.⁸ We can move to more ecologically sound healthcare, protecting the patient *and* the environment. W.A. Health has the opportunity to show the rest of Australia the way!

References:

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5. Cassel CK, Guest JA. Choosing wisely: helping physicians and patients make smart decisions about their care. *Jama* 2012;307:1801-2.
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8. Capon AG, Talley A, Nicholas J, Horton RC. Planetary health: what is it and what should doctors do? *The Medical journal of Australia* 2018;208:296-7.