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For your information: Submissions on Nelson City Council Air Quality Plan Proposed Plan Change A3 (the Wood Burner Plan Change) raising the matter of increased hospital admissions

The Nelson Marlborough District Health Board Public Health Service (NMDHB-PHS) notes that several submissions on Plan Change A3 (Submitter Numbers 35, 97 and 99) make statements which link hospital admissions for respiratory disease in Nelson to wood burner restrictions.

The NMDHB-PHS would like to draw the Hearing Committee's attention to a report by Dr Ed Kiddle¹, on the Nelson City Council (NCC) website in relation to Plan Change A3, which addresses this very issue.

The report discusses the findings of an analysis by NMDHB-PHS on seasonal variation in admissions to hospital for respiratory disease. In summary, the report notes:

- despite an overall improvement in local air quality the overall trend in the number of hospital admissions for respiratory disease in Nelson Marlborough has not decreased
- this trend may be explained by changing demographic and socio-economic factors such as an ageing population and lower use of primary care due to economic constraints (e.g. less likelihood of doctor's visits to intervene before hospitalisation is required), alongside other contributing factors such as housing quality and year to year variations in the incidence of circulating viruses such as influenza.

The NMDHB-PHS would like to highlight that because there are multiple causal factors it is difficult to quantify the attributable component for each factor. Notwithstanding this, a study by Emily Wilton² for the NCC found that it is unlikely that there has been an increase in cold homes since high emission wood burners were phased out.

It would be a very negative step to take the lack of a fall in respiratory admissions to hospital over the period 1999 - 2013 as a reason to relax air quality rules and permit greater air pollution particularly as these effects often do not become apparent for many years.

The Royal College of Physicians in the UK recently released a report titled 'Every breath we take: The lifelong impact of air pollution' and to quote from the executive summary:

"Air pollution plays a role in many of the major health challenges of our day and has been linked to cancer, asthma, stroke and heart disease, diabetes, obesity and changes linked to dementia.

¹ Kiddle E. 2014. NCC Air Quality Plan – possible changes for wood burner rules: A discussion paper on adverse health effects related to poor air quality and cold houses. Richmond: Nelson Marlborough District Health Board Public Health Service

² Wilton E. 2015. Potential impacts of management measures: Heating, household and fuel poverty data for Nelson 2014. Envirolink Report NCC089. Prepared for Nelson City Council. Christchurch: Environet Ltd

Neither the concentration limits set by government, nor the World Health Organization's air quality guidelines, define levels of exposure that are entirely safe for the whole population.

...This damage occurs across a lifetime, from a baby's first weeks in the womb all the way through to the years of older age"3

The NMDHB-PHS notes that there is a strong relationship between poor air quality, adverse health impacts and increased hospital admissions.⁴ Accordingly, work to improve and maintain local air quality (amongst other activities such as addressing cold homes) needs to be ongoing.

Yours sincerely

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³ Royal College of Physicians. 2016. Every breath we take: The lifelong impact of air pollution. Report of a working party. London: Royal College of Physicians

⁴ Ministry for the Environment & Statistics New Zealand. 2015. New Zealand's environmental reporting series: Environment Actearoa 2015. Wellington: Ministry for the Environment & Statistics New Zealand