

Tabled @ Hearing
28/10/15 - P MOLLER

Mr Panckhurst, Mrs Simpson, Mrs Couch-Lewis Apologies Sir David

Sir David and I want people to have effective, reliable, and affordable home heating. In any efforts to ensure healthy air the security of domestic heating must be maintained. The important issues with any pollutant are the severity of the problem it causes and the balance between the benefits and risks of any intervention. With your permission, rather than repeat our evidence I should like to speak to some central points.

Having spent 20 years assessing the evidence submitted on new medications seeking approval in N Z, I am interested in the quality of the evidence supporting the Air Plan and the potential benefits and potential risks of interventions.

WHO stated in 2013 that most evidence on sources of air pollution causing adverse health effects concerned motor vehicle emissions, especially diesel. Coal burning produces sulphate contaminated particles which have a strongly adverse effect on health. Residential wood combustion may be associated with respiratory and cardiovascular health. Long-term exposure over years to raised PM 2.5 is associated with mortality and morbidity. The evidence is weaker for PM 10.

So PM 2.5 can cause health problems after years of regular exposure to elevated levels. Whether PM 10 does is less certain. But both these potentially adverse agents lie at the margins of concern. They do not cause acute problems. The United States has allowed exceedances of PM10 up to 150 ug/cubic metre and Riddervold found no significant effect from 400ug/cubic metre in allergic subjects studied in an atmospheric chamber. PM2.5 and PM10 are quite useful to give an indication of the general level of pollution but as the National Institute of Water and Air has pointed out the monitoring sites need to be carefully chosen to give representative measures. They said: "In general, monitoring sites in NZ are located at peak sites that are particularly prone to occasional, atypical and unrepresentative events." Using this data can give the illusion that we need stricter controls so an annual average level gives a more appropriate assessment than a 24hr average..

By contrast, exposure to cold is an almost immediate danger to cardiac and respiratory health and there is a significant increase in deaths in the winter from cold exposure in the U K and New Zealand.

How should we deal with the issues?

Reduction of car emissions is difficult but better separation of high-density, high speed traffic corridors from housing is achievable, as are effective public transport systems.

Domestic coal burning has been banned. We would not expect a responsible environmental authority to allow the installation in central Christchurch of a burner that will consume over 13,000 tonnes of coal each year. It is even more galling because it is to service a hospital. How did this happen? I would suggest it is because Environment Canterbury has become so obsessed with PM10, under pressure from the Ministry for the Environment, that it has lost an appropriate perspective of the risks of different pollutants..

The obsession with PM 10 has also led to the vilification of wood-burning. This cheap and individually secure heating is especially important to the lowest economic quintile of our population. The actions of Environment Canterbury threaten this group. The Press has reported elderly people staying in bed for three days at a time to keep warm, because they could not afford electricity. Clearly, the financial assistance offered by Ecan did not reach these people. Along with that the cost of replacing burners at \$5-7,000 is prohibitive for some. This is particularly the case with the ~~expensive~~ ULEB burners ~~at possibly \$240,000~~ which ~~will~~ ^{could} make wood uneconomic as a heating source. The modest financial assistance offered appears to be short-term window dressing. The maintenance of affordable heating in the long-term is more important than short-term subsidies.

If we compare the adverse consequences of cold exposure to the theoretical consequences from PM2.5 which is not consistently raised in New Zealand, then the balance in favour of maintaining adequate heating is clear. If the weather had been cold at the time of the major earthquakes our health system could have faced an even worse calamity as a result of the increased dependence on electricity.

Attempts to discuss this in the New Zealand Medical Journal were ridiculed by the Ministry. Later attempts to engage the Ministry in direct discussion were cast aside. Subsequent publications which the Ministry has endorsed attempt to reinforce the decisions made in 2003. It is as if evidence contrary to those decisions has been proscribed.

Whilst Ministries may not wish to change policy decisions it is surprising that in a matter dependent on science there was not enough flexibility to change with improvements in scientific understanding.

Unfortunately in 2003 the Ministry decided that PM 10 was **the** cause of ill-health on the basis of the "weight of evidence." "Weight of evidence" is not generally accepted as a good or sufficient reason to determine causation and this was particularly the case with the epidemiological evidence on which it relied. The Ministry then imposed very strict levels and allowed these target levels of particles to be exceeded much less frequently than in Europe or America. As well as this the targets were changed from guidelines to standards for enforcement.

Our inability to make a dent in these rigid, anachronistic standards remained inexplicable until the minutes of a meeting in March 2000 reviewing air quality guidelines was obtained under the Official Information Act. It states:

"Arguments for standards include that they provide greater certainty, they make it easier for regional councils to develop regional air quality plans, they are seen as giving greater status to air quality as an environmental issue, they could provide more leverage for the Ministry for the Environment to influence the policies of other departments, and they would be viewed favourably internationally to demonstrate New Zealand's seriousness towards environmental management."

The decision to impose standards was thus a political one and little to do with the good of the people.

The scientific evidence on which the National Environmental Standards for Air Quality was based was incomplete and inadequate. The extreme commitment to them has led to serious problems for the people, especially those who are less affluent and

suffer fuel poverty. The health of the elderly, the very young and those with cardiac and respiratory disorders has been put at risk.

Recommendations.

1. Those measures in the proposed Canterbury Air Regional Plan which derive from the regulations for PM10 should be deferred. In doing this Canterbury would be joining Auckland.

This may give sufficient stimulus for a sensible response in Wellington. However it will be difficult to get a well-qualified, truly independent review of the issues.

2. The concept of a standard should be dropped and PM2.5 measured at reliable and representative sites to be used as an annual average guideline.
3. Noxious chemicals (eg SO₂, NO₂) should be monitored in localities at risk.
4. The requirement for wood-burner replacement should be suspended *and people should be allowed choice in their home heating unless it has reliably been shown to be unsafe.*

5. *There is an issue which is probably not open to discussion here. It concerns the Resource Management Act. Actions taken under this Act can have a profound effect on Public Health, yet the Ministry of Health has no more input into these decisions than any citizen.*