

My name is Nicholas Guyett, I was a resident of Ocean Grove through my childhood and into my early 20s. I have moved back there in recent years to raise my family. I love where I live and have a deep sense of connection to the area. I am friends with several people from the area around my age who have had cancer, some of whom died as a result.

I wish to address Point C of the Terms of Reference of this enquiry, with specific concern centred around the approach and outcome of the Victorian Chief Health Officer's (VCHO) investigation of cancer rates on the Bellarine Peninsula. I do not dispute the evidence used, and have relied upon the same evidence for this submission. I have drawn said evidence from the Australian Cancer Atlas, and the Federal Government's Australian Institute of Health and Welfare. Link supplied;

<https://www.aihw.gov.au/reports/cancer/cancer-data-in-australia/contents/summary>

My concern is that the VCHO's report did not investigate higher than normal rates of cancer in young people, it looked at the population average. On Page 11 of the VCHO's report within the Results section, the second sentence notes that "Age standardised rates were reviewed by SA2 and sex." I believe this age standardisation skews the results, and led the CHO to incorrectly conclude that "There was no evidence of a higher overall cancer incidence rate in any of the areas".

I attended a public consultation session the VCHO's office conducted in Barwon Heads on 25/2/19. I appreciated the time and effort the VCHO and his staff took there. When I enquired as to the reason for age standardisation, the response was polite and essentially that;

- The sample sizes are too small to investigate further,
- margins of error increase and confidence intervals of the results decrease with too small a sample size.

I understand this explanation – if one person in a household of two gets the flu, it's incorrect to say that 50% of people in Australia have the flu.

However, I believe in this instance age standardisation has led to skewed results. To give an example of this, a room of 100 people containing 50 one year olds and 50 ninety year olds have an average age of 45. But the characteristics of this room is very different to a room of one hundred 45 year olds. Yet the statistics tell us they have the same average age, and would lead us to conclude they have a statistically similar range of health issues, and indeed cancer occurrence.

Concerns around a potential cancer cluster on the Bellarine Peninsula are not based around a representative age sample of the wider population. Concerns centre on a specific cohort of age, typically being 24-34 years old at the time of diagnosis. Across Australia, this age cohort experiences a very small incidence of cancer, as per the Australian Cancer Atlas. People in this age group typically experience cancer at a rate of 0.1% (30-34 age group, all persons, incidence, 103.1 per 100,000). Compared to people in the 65-69 age bracket, a rate of 1.7% (1707.5 per 100,000).

Data from the 'Cancer data in Australia' website, accessed 27/02/2020;

<https://www.aihw.gov.au/reports/cancer/cancer-data-in-australia/contents/summary>

All cancers combined, persons (sex not selected for), 2015 incidence, age specific rate 30-34 is 103.1 per 100,000.

All cancers combined, persons (sex not selected for), 2015 incidence, age specific rate 65-69 is 1707.5 per 100,000.

Based on this low incidence rate and the number of people in the 24-34 year age bracket in Ocean Grove - Barwon Heads (as per 2016 Census), we would expect to see around 2.1 diagnosis of cancer each year, and a mortality rate of 0.225 people per year. Over a ten year period based on data from the above website we would expect 21 diagnosis and 2.3 deaths for this age group. (Data for age cohorts 24-29 and 30-34 have been summed together). I will leave it to the Committee to verify the actual rates as against the media reports, but it is my firm belief that the diagnosis and mortality rates have far exceed the expected rate above.

I understand there is variation and a random aspect to cancer occurrence. I accept the VCHO's statement on page 11 of their report "There is a random aspect to the incidence of disease and this means that there are areas and groups who may have higher rates than average and other areas with lower rates." However I do not accept that age standardised rates draw suitable conclusions in this instance. As previously mentioned sample size is an issue, yet the calculations can be done and confidence intervals calculated and published alongside the results.

The Ocean Grove - Barwon Heads statistical area has a lower than average number of people in the 25-29 and 30-34 year age groups, compared to the rest of Australia.

It also has a higher than average number of people in every age bracket from 55 years old and onwards, with a single small exception for the 75-79 years cohort. This higher than average number of older people means that Ocean Grove - Barwon Heads should have a higher than average incidence of cancer, as people in the older age cohorts are far more likely to be diagnosed.

Data sourced from the 2016 Census;

https://quickstats.censusdata.abs.gov.au/census_services/getproduct/census/2016/quickstat/203031050

The Ocean Grove - Barwon Heads area also has higher socioeconomic indicators (income, level of educational attainment, home ownership, etc). This leads me to believe that the older group actually have a lower rate of cancer as they have the economic means to improve their long term health outcomes. The higher rate of cancer in young people is then unknowingly concealed as far as the statistics are concerned. This theory is a hypothesis, and I don't have further data at hand to support this, but it may help explain the conclusion the VCHO reached.

It is my position, supported by the above that there was a cancer cluster. I have no theory as to the cause, so I will not speculate. I also believe that the risk has now passed. It would seem to me that this cluster impacted a specific age cohort during a specific window of time, which now seems to have closed as we are not seeing such incidence and mortality rates as we once did.

I thank the Committee for accepting my submission and for their time with this Enquiry. I would be happy to address the Committee should they have any questions regarding my submission.