Hazelwood HEALTH STUDY

Baseline Cancer Incidence Analysis **Research Summary**

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Meet the team

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The analysis aims

The aim of this analysis was to provide information on cancer patterns in Latrobe City and surrounding areas prior to the Hazelwood Mine fire in 2014.

Understanding the baseline, or pre-mine fire, rates of cancers in these areas will be important when interpreting the rates of cancer that occur after the mine fire.

Background

The fire in the Morwell open cut brown coal mine adjacent to the Hazelwood Power Station blanketed the town of Morwell and the surrounding area in smoke and ash for six weeks in February and March 2014. The smoke event was recognised as one of the most significant air quality incidents in Victoria's history, with the concentration of smoke contaminants reaching high levels.

The smoke event caused considerable community concern within Morwell and the broader community. In response to these concerns, and following extensive community consultation, the Hazelwood Health Study (HHS) was established to examine the impacts of the mine fire. The HHS involves multiple research streams targeting different health outcomes and different vulnerable groups.

What we found

Results showed the overall numbers of baseline, pre-mine fire, cancers in Latrobe City and combined surrounding areas (Baw Baw, Gippsland-South West, and Wellington) to be similar to the expected number of overall cancers in the rural and regional Victorian population.

A higher rate of mesothelioma was observed in males in Latrobe City when compared to the expected rate in the rural and regional Victorian population. The excess of mesothelioma is most likely due to past asbestos exposure, as this is the only known cause of mesothelioma found in Australia. This may relate to past asbestos exposure in the power industry or other worksites in the region or domestic exposure due to asbestos-containing building materials.

For males, the observed number of bladder cancers was also higher than expected in Latrobe City.

For females in Latrobe City, an excess of liver, lung and overall blood cancers was observed. The number of cancers in the surrounding areas were similar to those expected in the rural and regional Victorian population for the main cancer groups.

Given the many analyses done for this report some results may be a chance finding. However future analyses of linked cancer data will assist in determining the validity of the current findings.

A full report describing the findings from this analysis can be found at hazelwoodhealthstudy.org.au/study-findings/study-reports

What we did

A data extract from the Victorian Cancer Registry for the period 1 January 2009 to 31 December 2013 was analysed. Analysis included Latrobe City (main exposure area), as well as the surrounding areas of Baw Baw, Gippsland-South West and Wellington combined. The three areas surrounding Latrobe City have been shown to include areas which had some exposure during the fire and therefore were included in analysis (combined). The date range and geographical boundaries of the analysis were selected to capture cancer rates in Latrobe City and surrounding areas before the fire period.

The analysis compared the number of recorded cancers (for the main types of cancers) in Latrobe City and combined surrounding areas with the number of cancers that would be expected in the Victorian rural and regional population (based on rural and regional counts by age group and sex).

This research was funded by the Victorian Department of Health and Human Services.

Considerations

As cancer reporting in Victoria became mandatory in 1982, the Victorian Cancer Registry data used in the analysis are very complete for the relevant years, which is a strength of this analysis.

One limitation is that risk factor information was not available to further investigate possible causes of the excess cancers observed. A further limitation is that only Victorian cancer data were included in this analysis, so that cancers occurring in Latrobe City residents who later moved interstate and had their cancer diagnosed there would not be identified.

Where to from here

This first analysis of Victorian Cancer Registry data provides an overview of cancer rates in Latrobe City and surrounding areas prior to the Hazelwood Mine fire in 2014. Because many cancers are slow to develop, it is anticipated that analyses of post mine-fire cancer rates, in the Latrobe City and surrounding areas, will take place in 2018 and again in 2023. Undertaking those analysis at earlier dates is unlikely to yield meaningful findings.

HHS results will be shared with relevant organisations to ensure that findings are used to shape services for the future health of the Latrobe Valley.