

The Latrobe Early Life Follow-up Cohort Study Vol 1 Research Summary

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Analysis aims

We aimed to find out if some pregnancy or birth outcomes in children from the Latrobe Valley were affected by exposure to smoke from the mine fire.

Meet the team

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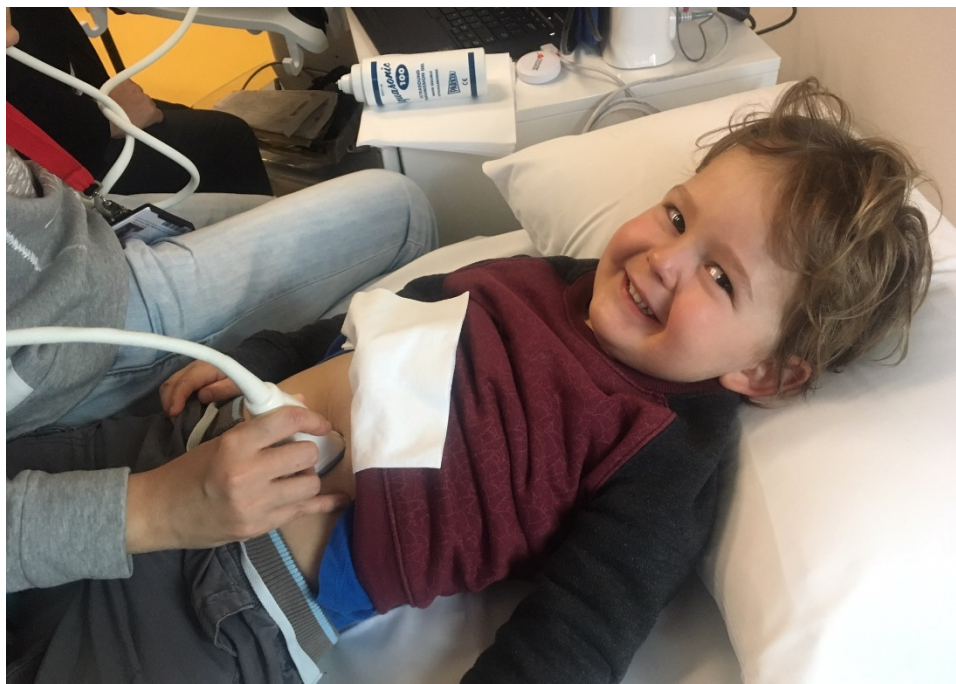
The Hazelwood Health Study is a collaborative program of research led by the Monash University Schools of Public Health and Preventive Medicine and Rural Health in partnership with Federation University, the Menzies Institute for Medical Research at the University of Tasmania, The University of Adelaide and the CSIRO.



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 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

Of the 548 children included in the study, 199 were born to mothers who were pregnant at the time of the fire and 190 were aged less than 2 years at the time of the fire. The remainder were not exposed to fire-smoke either before or after their birth. Most parents (74% of mothers and 59% of fathers) reported that their stress increased in response to the mine fire, especially those living closest to the fire. We did not find an association between mothers' exposure to smoke from the mine fire and birth before full term (37 weeks), birth weight at term, or weight for stage of pregnancy. The analysis took into account the possible influence of risk factors like age of mothers, and smoking during pregnancy.

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

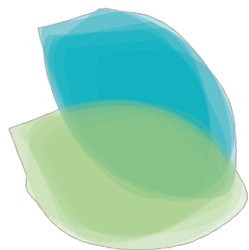
Website: www.hazelwoodhealthstudy.org.au/study-reports



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What we did

We surveyed the parents of a sample children from the Latrobe Valley who were born between 1 March 2012 and 31 December 2015. This period included the coal mine fire in February 2014. We estimated how much smoke each child may have been exposed to by matching their home address with the daily estimated amount of air pollution in that area. We asked the parents to tell us about their own age, education, smoking status and other things that can affect birth outcomes. We also asked the parents to tell us at how many weeks their child was born and their child's weight at birth. We used standard statistical tests to look for possible associations between smoke exposure and birth outcomes.

This research was led by the Menzies Institute for Medical Research at the University of Tasmania and funded by the Victorian Department of Health and Human Services.

Considerations

These initial results are reassuring. If there was an impact on birth outcomes, the size of that impact was not big enough to be detected in this study. However, this study was relatively small. Small studies cannot always identify very small associations that might be present.

Where to from here

The next step is to do a larger study of hospital records for babies born in the Latrobe Valley. This will cover the same time-period as our survey. Looking at hospital records will enable us to research a wider range of birth related outcomes, and include a larger number of births.

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.

