The Hazelwood Health Study is a collaborative program of research led by the Monash University Schools of Public Health and Preventive Medicine (SPHPM) and Rural Health (SRH) in partnership with Federation University, the University of Tasmania and CSIRO.

The Hazelwood Health Study includes nine inter-related streams of research. They are the:

**Adult Survey**
Led by Monash University SPHPM, the Adult Survey aimed to collect self-reported respiratory, cardiovascular and psychological health information from all adults who were residents of Morwell, or selected regions of Sale, during the time of the mine fire in February and March 2014. Eligible adults were identified from the Victorian Electoral Roll. Sale was selected as a comparison community which was similar to Morwell in terms of population age and other characteristics, but minimally exposed to the mine fire smoke. Data collection for the Adult Survey took place between June 2016 and February 2017 and is now closed.

**Early Life Follow Up (ELF) Stream**
Led by the University of Tasmania, the ELF stream aims to investigate whether the mine fire smoke has impacted the health of infants born immediately before or during the mine fire event, in comparison with infants born after the event. The families of more than 500 infants from across the Latrobe Valley have already been recruited in to the ELF Stream, and data collection from those families is ongoing.

**Psychological Impacts**
The Psychological Impacts Stream is led by the School of Rural Health and involves two cohorts. The Schools Study aims to measure the psychological impact of the mine fire event on a cohort of school aged children from across the Latrobe Valley. The first round of data collection took place between September 2015 and March 2016, involving children in year levels 3, 5, 7 and 9 from 20 schools. The second round of data collection will take place between September and December 2017. An adult cohort has been drawn from the Adult Survey (described above). A sub-group of participants from the Adult Survey are being invited to undergo interviews about the psychological impact of the mine fire event.

**Older People**
Older people are often overlooked during emergency events and yet they may be more susceptible as a result of multiple factors including poor mobility, chronic health conditions, and social isolation. The aim of the Older People Stream is to assess the impact of the smoke event on older people, focusing particularly on a review of the policy decisions made during the event. Focus groups with over 90 local older people and community members and interviews with 17 local decision-makers have been completed and a Report of the research findings has been released. The stream is now working with the Community Wellbeing stream to look at ongoing impacts for older people and the broader community.
Hazelinks
The aim of Hazelinks is to use administrative health datasets to investigate the short, medium and long term health effects of the smoke from the mine fire on the wider Latrobe Valley community. This will be achieved by investigating changes in the pattern of health service use, and other health outcomes, based on routinely collected health databases such as those maintained by ambulance services, hospitals, Medicare, and cancer and death registries. Anonymous data extractions from these databases will provide the researchers with deidentified health service use data for the whole of Latrobe Valley (or sometimes larger regions). For example, if a person in the Latrobe Valley is diagnosed with a cancer, the researchers will receive deidentified information about that diagnosis such as the cancer type and date of diagnosis. For individuals who have participated in a relevant Hazelwood Health Study Stream and who have provided consent, the researchers will be able to access identified health service use records for those participants.

Respiratory Stream
The aims of the Respiratory Stream are to determine whether exposure to smoke from the Hazelwood coal mine fire is associated with respiratory symptoms, asthma control and lung inflammation, rate of decline in lung function and gas transfer and small airway function. The participants for the Respiratory Stream are being drawn from those residents from Morwell and Sale who participated in the Adult Survey. Participants will be randomly selected in such a way as to ensure that they are representative of the wider community. They will include adults of all ages, with and without a past history of respiratory disease. To ensure that the selection of participants it will not be possible for people to self-refer in to this study. Recruitment and testing commenced in Morwell in August 2017.

Cardiovascular Stream
The aims of the Cardiovascular Stream are to determine whether exposure to smoke from the Hazelwood coal mine fire is associated with blood pressure, abnormal Electrocardiographs (ECG), endothelial function (as a marker of early vascular disease) and inflammatory markers, such as C-Reactive Protein (CRP). The participants for the Cardiovascular Stream will be drawn from those Morwell and Sale residents who participated in the Adult Survey. Eligible participants will be men aged 55 and over, and women aged 60 and over, with and without a past history of cardiovascular disease. Within these parameters, participants will be randomly selected in such a way as to ensure that they are representative of the wider community. It will not be possible for people to self-refer in to this study. Recruitment and testing is commencing in Sale in September 2017.

Exposure Assessment
CSIRO Oceans & Atmosphere Flagship have been subcontracted to conduct an in-depth analysis of existing air quality datasets in order to:

i. Identify key pollutants relevant to health impacts;
ii. statistically analyse differences in pollutant concentrations measured at Morwell during smoke-impacted and non-smoke impacted periods (e.g. background ambient air quality in the Latrobe Valley); and
iii. compare pollutant concentrations measured at Morwell to other urban sites within Australia and assess of the impact of Morwell fire on ambient air quality.

Community Wellbeing Stream
Led by Federation University, this Stream works with community groups, community leaders, organisations and media across the Latrobe Valley to evaluate the impact of the mine fire event on community wellbeing, the effectiveness of rebuilding activities and analyses of communication sources and effectiveness during and after the event. Data collection by this Stream has primarily been by interview or focus group, and is ongoing.

For more information visit hazelwoodhealthstudy.org.au

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