swept, silica-rich dust. The effects on respiratory heath consequent on this exposure are largely unknown.
Objective To examine associations between environmental GMWD dust exposure and respiratory health effects in adults.
Methods This was a cross-sectional study of 93, 133 and 84 people in high (home <500 m from GMWD), moderate (500 m-1km) and low (>20 km) exposure groups respectively. We calculated a cumulative exposure index (CEI) based on exposure groups and years of residence. Participants were interviewed for respiratory symptoms, had chest X-rays (read by three experienced readers for tuberculosis and silicosis) and spirometry. We used multivariate logistic regression to examine the effect of dust exposure on respiratory health, and multiple linear regression to determine if CEI was associated with% predicted FEV1 and FVC. We adjusted for socioeconomic status, smoking and occupational and biomass fuel exposure.
Results Being in the high exposure group versus the low was associated with elevated adjusted odds ratios (aORs) for upper respiratory (aOR: 2.76, 95% CI: 1.28–5.97) and ocular symptoms (aOR: 4.68; 95% CI: 1.87–11.68), chest wheezing (aOR: 3.78; 95% CI: 1.60–8.96) and spirometry-diagnosed COPD (aOR: 8.17; 95% CI: 1.01–65.85). We found similar associations for the high versus medium exposure groups, but no significant associations in the medium relative to the low group. Exposure had no significant effect on the risks of chronic bronchitis and tuberculosis. We found similar significant results for CEI as for the exposure groups analyses. On linear regression, CEI was not associated with% predicted FEV1, but, surprisingly, FVC was positively associated with CEI. No participant had radiological features of silicosis.
Conclusion Residents residing <500 m from GMWDs had elevated aORs for respiratory health effects. Both exposure measures (exposure groups and CEI) yielded similar results.

O3A.6 RECENT ORGANIC DUST EXPOSURE AND PROGNOSIS OF ASTHMA AND CHRONIC OBSTRUCTIVE LUNG DISEASE (COPD). A NATIONWIDE REGISTER BASED FOLLOW-UP STUDY

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Background Air pollutants at work can contribute to onset of asthma and COPD. How occupational air pollutants affect the prognosis of asthma or COPD among exposed workers is not well established.
Objective We aimed, among individuals with a hospital diagnosis of asthma or COPD, to study the association between recent exposure to organic dust, and hospital readmission and overall mortality.
Methods The study population comprised individuals ever employed in farming or wood industry with asthma (n=4002) or COPD (n=2429) identified in the Danish national patient register of individuals born 1933–1977. Subjects were included the year immediately following their first asthma or COPD hospital contact (earliest in 1998) and followed until first asthma or COPD readmission, death, or December 31 st 2007. Exposure data was obtained through register-based industry codes from 1997–2007 combined with time-dependent farming and wood industry-specific exposure matrices. We used logistic regression analysis with discrete survival function adjusted for age, calendar year, sex, mineral dust exposure, socioeconomic status, and labour-force participation.
Results Among individuals with asthma, the risk of hospital readmission was slightly increased among the exposed vs. the non-exposed, RRadj 1.17 (0.91–1.50), but with no exposure trend. A non-significant decrease in mortality was seen for organic dust exposure and mortality for those individuals, RRadj 0.71 (0.24–2.06).

The risk of a COPD readmission among individuals with COPD was decreased among exposed vs. non-exposed individuals, RRadj 0.67 (0.46–0.98), but with no exposure trend. Mortality was non-significantly increased for exposed vs. non-exposed individuals with COPD, RRadj 1.59 (0.82–3.08).
Conclusion We did not observe significant associations between recent exposure to organic dust and readmission for COPD/asthma or overall mortality except for a decreased risk for COPD readmission. Selection effects are presumably playing a role. We did adjust for socioeconomic position and labour-force participation but not for smoking which is a limitation.

Burden of Occupational Disease and Injury

O3B.1 BURDEN OF WORK ABSENCE DUE TO COMPENSABLE ROAD TRAFFIC CRASHES IN VICTORIA, AUSTRALIA

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Background The burden of road traffic crashes (RTC) is commonly reported using fatalities and hospital admissions. Disruption to regular activities, such as work, is rarely reported, yet known to have significant economic and human costs. In the state of Victoria, Australia, people injured and unable to work due to RTC may have treatment and income support provided either through the RTC compensation system or through workers' compensation. By examining data from both systems, this study sought to determine the rate (per 1 00 000 working population) of RTC injury resulting in work absence, and to quantify the amount of working time lost to RTC injury.
Methods Data from each compensation system were harmonised. Analysis included claims from RTCs that occurred between July 1 2003 and June 30 2013 by 15–65 year olds who received at least one day of income support. Fatalities and rejected claims were excluded. Time lost was calculated as the total weeks of income support. Non-parametric tests were