The aim of this study was to assess the role of OSAS in the occurrence of road traffic accidents in sleeping drivers of commercial heavy vehicles, such as bus and truck drivers. This cross-sectional and case-control study was carried out on 760 truck and bus drivers who were involved in a road accident between 2009 and 2011 in Yazd, Iran. In this study, we used polysomnography for assessing patients with suspected sleep disorders, including sleep apnea. The stage of sleep was assessed by electroencephalography. The findings indicated that among 760 drivers, 91 drivers had more than 10 EES score. Among 91 drivers, 35 drivers involved in one accident and 38 drivers had no history of accident in the study period. Driving at night had a significant association with road accident occurrence in the participating drivers (p=0.01). Drivers who had sleepiness and especially OSAS had a higher chance of involvement in accidents. However, OSAS was not an independent predictor of road accidents.

### Poster Presentation

**Risk Assessment**

**0317** APPLICATION OF FAILURE MODE AND EFFECT ANALYSIS (FMEA) TO ASSESS OCCUPATIONAL RISKS IN OIL REFINERY

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Abstract Failure Modes and Effect Analysis (FMEA) is a systematic method for identifying the factors that a product or process encounters with them and identifying their results and effects. The aim of this study is to evaluate the potential occupational risks in different parts of the oil refinery in central Iran by using risk assessment techniques. This cross-sectional study was conducted in Shiraz Refinery and relationship RPN (Risk Priority Number) with tasks such as milling, welding, transportation handling, and etc. were studied in this company. The findings showed that transportation and handling and then external surface scraping achieved the highest of RPN before and after corrective measures (200, 210) and (72, 84) respectively. While RPN for welding and drilling (punching the external surfaces) before and after corrective measures are (144, 120) and (24, 36) respectively. But hazard severity curve show tasks with lower RPN in comparison with those have higher RPN are more important of injury severity. Some of tasks e.g. handling, transportation and milling have high RPN and by using effective control measures can eliminate or control hazards. Then Failure Modes and Effect Analysis is a useful and efficient for hazard assessment.

### Oral Presentation

**Other**

**0318** OCCUPATIONAL EPIDEMIOLOGY RESEARCH IN THE NEW "LOW-CARBON" ECONOMY.

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Abstract Occupational health risks posed by climate change have focused on heat-related illness and mortality, and a growing body of evidence shows substantial risks to health and economic productivity for many countries. Since the 2015 Paris Agreement on climate change, the shift away from fossil fuel-based economies has accelerated. Potential population health benefits from improved air quality, more physically active urban commuting and reduced future heating of the planet are substantial. However, unquantified is the extent that technologies in renewable energy sources pose risks to workers. A comparison between fossil fuel-related job risks and those stemming from renewable energy-related jobs will be presented. Gaps in knowledge will be identified to help guide the safest path for workers in our evolving low-carbon society.

Note this abstract is part of the Mini-Symposium, Climate Change impacts on Occupational Health via workplace heat (Tord Kjellstrom, organiser).

### Poster Presentation

**Pesticides**

**0320** INDIRECT PARENT-MEDIATED PATHWAYS OF CHILD EXPOSURE TO 2,4-D AND CHLORPYRIFOS IN FARM FAMILIES

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Abstract To reduce children’s exposure to pesticides used on farms, identifying and interrupting exposure pathways is critical. We evaluated applicator (parent) exposure as a determinant of...