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Online Program 331718 Assessing the health effects of rotating shift work among petroleum workers

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Meeting Information

When:

October 31 - November 04, 2015

Where:

Chicago, IL

Monday, November 2, 2015

[Katherine McNamara, CIH](#), Department of Environmental Health Sciences, University of California Los Angeles, Los Angeles, CA

Objective: Refinery operators work extended, rotating shifts with significant overtime. This study characterizes work schedules and prevalence of chronic disease in the study population, and explores associations between work hours, fatigue, and health and quality of life outcomes.

Methods: We assessed the health impacts of extended shifts, shift rotation, and overtime among refinery workers using a self-reported health questionnaire administered to the United Steelworkers' Oil Sector members in 15 states. Reported work schedules, annual estimates of overtime worked, typical sleep schedules and an evaluation of sleep quality were used to estimate fatigue exposure. Self reported diagnoses of cardiovascular disease (CVD), hypertension, diabetes, and gastro-intestinal illness were used to calculate disease prevalence within the workforce. Job stress and quality of life indicators were measured, and a depression assessment was performed.

Results: Exposures will be estimated based on shift assignments, overtime estimates, work histories, hours slept and sleep quality scores. Disease prevalence will be calculated based on current health symptoms, biometrics, and known medical diagnoses. Responses will be coded according to national surveys for CVD, diabetes, and blood pressure. Calculated disease prevalence rates will be compared to day shift workers from the surveyed population, rotating shift workers in other industries, and the general public.

Conclusions: This study has accessed a large workforce with a significant exposure to work related fatigue. Our detailed assessment of their past and current exposure, recovery periods, and health and mental status is novel and will generate valuable insights and address known data gaps within this susceptible population.

Learning Areas:

Advocacy for health and health education
Chronic disease management and prevention
Environmental health sciences
Occupational health and safety
Public health or related organizational policy, standards, or other guidelines
Public health or related research

Learning Objectives:

Identify the mental and physical health effects associated with rotating shiftwork Assess exposures to fatigue in the workplace Design fatigue management programs that help reduce hazardous exposures to fatigue

Keyword(s): Occupational Health and Safety, Workplace

Presenting author's disclosure statement:

Qualified on the content I am responsible for because: I am a board certified industrial hygienist experienced in exposure assessment, and a doctoral candidate in Environmental Health Sciences. My dissertation project uses self reported health information to assess the impacts of a hazardous work organization factor.

Any relevant financial relationships? No

I agree to comply with the American Public Health Association Conflict of Interest and Commercial Support Guidelines, and to disclose to the participants any off-label or experimental uses of a commercial product or service discussed in my presentation.

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