

typical US day workers (Sleep in America Poll, 2012, 6:44 on workdays, 7:35 on free days), and this may help to explain higher than expected alertness / sleepiness scores at the time of injury.

C5.4

Title: Differences in work and lifestyle schedules which may be associated with an elevated risk of injury in multiple job holders compared with single job holders. Findings from the American Time Use Survey

Authors: Helen Marucci-Wellman, Tin-Chi Lin, Joanna Willets, Melanye Brennan, Santosh Verma

Objectives: In 2012, 8.5% of the employed workforce in the U.S. worked in more than one job during a one-week period. In a prior study, using data from the U.S. National Health Interview Survey, authors found that workers with more than one job in a one-week period (MJH) had a higher risk of injury both on and off the job compared with single job holders (SJH). The rate remained elevated even after controlling for hours worked. There are several potential reasons why work in multiple jobs is associated with an increased risk of injury, including the possibility of fatigue due to extra hours worked, less time sleeping, and working odd shifts in order to fit multiple jobs into a work week.

Methods: In this study using information from the American Time Use Survey 2003-2011, we explored differences in time use patterns between MJH and SJH. We classified workers into 6 workgroups depending on whether they were a SJH or MJH and whether they worked their primary, other, multiple or neither job on the diary day. We use multivariate regression models to determine if the difference in the duration spent in an activity between MJH and SJH is significantly different, controlling for other work or demographic factors and also examine differences in time of day spent in each activity.

Results: We found MJH working multiple jobs on the diary day worked, on average, more than 2 additional hours a day (2.25 hours weekday, 2.75 hours weekend, $p < .05$), odd hours of the day (5pm to 7am), with more work travel time (10 minutes weekday, 9 minutes weekend, $p < .05$) and less sleep (-45 minutes, weekday, -62 minutes, weekend, $p < .05$) and time for other household and leisure activities than SJH ($p < .05$). This workgroup also had the highest participation in work and travel during *non-regular hours*, (5pm to 7am).

Conclusions: There were large differences in time use patterns for MJH compared with SJH. MJH may be at heightened risk of fatigue and injury due to long work hours concurrent with long daily commutes, working multiple shifts and less sleep and leisure time for recovery.

DAY TWO: WEDNESDAY, MAY 20, 2015

Session D1.0

Title: **Underreporting of Injuries – Federal Perspective**
Moderator: Audrey Reichard

D1.1

Title: **NIOSH research on occupational injury and illness underreporting**

Authors: Suzanne Marsh, Audrey Reichard, Ruchi Bhandari

Objective: NIOSH initiated two follow back studies of emergency department (ED) patients in 2010: (i) to identify incentives and disincentives for reporting work-related injuries (Barriers study), and (ii) to assess the prevalence of underreporting work-related injuries and illnesses to ED staff, employers, and/or other authorities (Congressional study). This presentation provides an update on these projects.

Methodology: Both studies used the occupational supplement to the National Electronic Injury Surveillance System (NEISS-Work), which is a surveillance system for estimating work-related injuries and illnesses treated in EDs. NEISS-Work is populated with data collected through a national stratified probability sample of U.S. hospitals. Potential respondents for the two studies were sampled from NEISS-Work and screened for eligibility during initial telephone interview questions. Eligibility criteria for the Barriers study included workers with acute injuries and excluded self-employed workers, workers on farms, and volunteers. Barriers data were analyzed as a case series. Eligibility criteria for the Congressional study included self-employed workers and workers with illnesses. Congressional data were re-weighted to represent national estimates of ED treated work-related injuries and illnesses.

Results: From the Barriers study telephone interviews, 401 respondents met the eligibility criteria. Of these, 99% indicated that they reported their injury to their employer. From the Congressional study telephone interviews, 2,598 respondents met the eligibility criteria. Most (95%) were not self-employed, 96% of which indicated that they reported their injury or illness to their employer. Workers who reported that they were self-employed were generally not covered by workers' compensation.

Conclusion: This approach offered advantages including the ability to collect information directly from workers, capture less severe injuries not reported elsewhere, and capture all worker types. Challenges included low response rates due to little incentive to participate and the fact that the surveys were difficult to administer over the phone. An additional challenge will be faced in presenting results from these studies because the findings are not corroborating with previous underreporting

research. Nonetheless, our approach does provide useful insights that could be applied to similar studies in the future.

D1.2

Title: Underreporting of worker injuries: An OSHA priority

Authors: Kathleen Fagan, Michael Hodgson

A 2009 Government Accounting Office (GAO) report, along with several published studies, have documented that many worker injuries go unrecorded on the OSHA 300 logs and consequently are underreported in Bureau of Labor Statistics (BLS) reports. OSHA conducted a two-year Recordkeeping National Emphasis Program (NEP) to investigate the extent and causes of employer under-recording of occupational injuries and illnesses. 405 Federal inspections and 171 State inspections were conducted under the NEP. The inspections included record reviews, interviews of workers and management, and walk-throughs. OSHA found recordkeeping violations in 50% of the facilities inspected. OSHA also found that disciplinary and absentee programs had a substantial negative affect on employee injury reporting. Employee interviews conducted during the NEP indicated that a substantial number of workplace injuries and illnesses are never reported to employers, in part due to workers' fear of retaliation. OSHA has made it clear that reporting an injury or illness is a protected right under the Whistle blower Act and has taken the position to discourage incentive and absentee programs that discourage injury reporting. To improve tracking of workplace injuries and illnesses, OSHA has proposed an amendment to the OSHA recordkeeping regulations to add requirements for the electronic submission by employers of injury and illness information. Findings of the recordkeeping NEP and an update of the proposed rule will be presented. In addition, systematic work arising from off-shore oil and gas, poultry, and meatpacking enforcement cases will define a typology of under-reporting. These case studies will illustrate how company policies regarding medical management influence underreporting.

D1.3

Title: Overview of the BLS SOII Undercount Research Program

Author: Hilery Simpson

The Survey of Occupational Injuries and Illnesses (SOII), conducted annually by the Bureau of Labor Statistics (BLS), provides national and state estimates of nonfatal injuries and illness that occur to workers in private industry and state and local government establishments. The completeness of the SOII has come under criticism in recent years as outside research pointed to an undercount of SOII eligible occupational injuries and

illness when matched against workers compensation records.

In 2009, Congress identified funding for the BLS, NIOSH and OSHA to establish an ongoing research program devoted to investigating underreporting issues related to workplace injuries and illnesses. In addition to research conducted within the agency, BLS has partnered with outside researchers, including state workforce agencies and private contractors, to establish this program. In the initial round, BLS partnered with three states and one contractor to match SOII cases to workers' compensation records, conduct a pilot test using multiple data sources to identify all amputations and carpal tunnel syndrome cases (regardless of SOII eligibility), and interview a small number of employers about their injury and illness recordkeeping practices. In the second round, BLS partnered with four states and expanded the interviews on employer recordkeeping practices in order to get quantitative results for all employers in these four states. In the third round, BLS is working with a contractor to conduct a national follow-back survey on various injury and illness recordkeeping practices using a sample of 2013 SOII respondents, and to study the feasibility of contacting workers directly to collect occupational injury and illness data.

Results from SOII to Workers' Compensation matching studies in the first round indicate that SOII misses some eligible cases, but the magnitude of the undercount varied considerably depending on the methodology employed. Employer responses to the interviews conducted by BLS state partners in the second round point toward a widespread misunderstanding of OSHA injury and illness recordkeeping rules. BLS anticipates initial results from the follow-back study with a sample of 2013 respondents and employee data collection research in late 2015 or early 2016.

Session D2.0

Title: Motor Vehicles – Agriculture/ATVs

Moderator: Tony McKenzie

D2.1

Title: A population-based study of all-terrain vehicle exposure in a rural Iowa county

Authors: Charles Jennissen, Justin Chau, Karisa Harland, Gerene Denning

Objectives: All-terrain vehicle (ATV) crashes are common in agricultural communities, but few studies have reported on who is being exposed and may be at greatest injury risk. This study was performed to determine the epidemiology of ATV exposure and crashes in a rural county.

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