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## ASHCA/NIOSH CONFERENCE: SELECTED ABSTRACTS

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### AGING AND DISABLED WORKERS

#### Obstructive Sleep Apnea Indicators and Injury in Older Farmers

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The purpose of this study was to explore the relationship between sleep apnea indicators and injury in older farmers from Kentucky and South Carolina. The cross-sectional study focused on survey data collected during the fourth wave of data collected for the study entitled Sustained Work Indicators of Older Farmers (Reed, R01 OH07534-01). Subjects included in the current study reported at least one day of farm work during the preceding year ( $n = 756$ ). The primary outcome variable was the reported occurrence of injuries because of farm work in the past year. The main explanatory variables of interest included the following sleep characteristics: reported snoring, gasping, snorting, or breathing while asleep; trouble sleeping; consumption of sleep medications; trouble staying awake during daytime; and self-rated overall sleep quality. Descriptive statistics were calculated for the outcome and explanatory variables. Bivariate association tests between the outcome and explanatory variables were conducted using simple logistic regressions. Explanatory variables that showed significant association with the outcome in the bivariate analyses were then used to fit an initial multivariable logistic regression model. Just over 10% of respondents reported an injury related to farming in the previous year. Significant bivariate associations were detected between the occurrence of injuries and number of days of farm work; number of hours of farm work during the last week; male gender; arthritis or rheumatism conditions; stopped breathing while sleeping; and problems staying awake during the past month. In the final multivariable model, “apneic periods during sleep” ( $p = <.05$ ) and “problems staying awake last month” ( $p = <.01$ ) were retained. Sleep problems were associated with injury in this sample of older farmers. Future studies are necessary to screen and diagnose older farmers with OSA to empirically determine the effect of this sleep disorder on injury.

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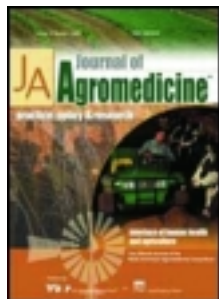
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#### An Assessment Process to Estimate the Secondary Potential of Assistive Technology Adopted by Farmers with Disabilities

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Farmers with disabilities frequently fabricate or modify devices and worksites – referred to collectively as assistive technology (AT) in order to continue performing required tasks on their farms. In some cases these AT have been documented to cause secondary injury. Further, some farmers with disabilities are not able to fully benefit from traditional funding sources, such as vocational rehabilitation agencies, because such one-of-a-kind or personally fabricated technologies fall outside “normally” funded-services whose primary concerns include the reliability of the AT and/or the potential liability issues if injuries occur. It is believed that an assessment process with the appropriate empirical support to indicate the potential for secondary injuries with a reasonable degree of reliability may decrease the frequency and severity of injuries as well as reduce barriers to achieving employment and independence. Also, the validated assessment process can be a resource to train rehabilitation professionals in identifying potential injury hazards on both commercially available and locally fabricated AT used in the farm workplace. Hence the research goal was ‘to develop a strategy supported by empirical data to identify potential AT-related hazards and the potential for work-related secondary injuries for farmers who adopt personally or locally fabricated AT to compensate for disabling conditions, through a consistent assessment process’. On-site case studies of 19 farmers with disabilities who fabricated AT for personal use were completed, and potential causative factors for secondary injuries were identified. A survey of 43 rehabilitation professionals, experienced in working with farmers



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