

the calculation of task-specific injury rates with exposure time denominators rather than overall person-time denominators (which underestimate injury risk). Task-specific injury rates per 100 hours of actual exposure time varied from less than one to more than 10 injury events. Task-specific rates with respect to age, sex, and other youth-based factors have been analyzed and will be presented.

### G4.3

**Title: A Case-Control Study of Injuries among Central Ohio Farm Youth**

Authors: Crawford JM, Wilkins III JR, Koechlin K, Shotts L, Elliott M, Bean TL

In 1999, a longitudinal study of injury risk among farm youth was undertaken in central Ohio. Youth were recruited through OSU Extension (4-H Youth Development), were asked to complete a Self-Administered Questionnaire (SAQ), and were administered developmental tests (IQ, strength, hearing, balance, neurobehavioral status, and anthropometry). In addition, they were asked to prospectively record daily agricultural work activities and all unintentional injuries for a period of 13 weeks. A total of 407 youth provided (nearly) complete data. Among the items on the SAQ were details of injuries occurring during the lifetime of the youth which required medical treatment. The present study compared youth reporting being injured in the 2 years prior to enrollment in the study (n=121) to those reporting no injuries or injuries that occurred more than 5 years prior to enrollment (n=214). A logistic regression model found elevated risk of injury associated with youth frequently engaging in high-risk behavior (OR=1.96, 95% CI 0.96-3.99), sometimes engaging in high-risk behavior (OR=2.06, 95% CI 1.08-3.92), high parental rating of youth physical skills (OR=1.83, 95% CI 1.05-3.20), low youth perceived risk of ever using alcohol, tobacco and other drugs (OR=1.90, 95% CI 1.06-3.41), low adult perceived risk of cleaning/bedding animal stalls by hand (OR=1.82, 95% CI 1.05-3.18), being in the 3rd or 4th quartile of national age- and sex-specific Body Mass Index norms (OR=2.07, 95% CI 1.12-3.82), strongest tertile of shoulder strength (OR=2.27, 95% CI 1.18-4.37), being in the 3rd or 4th tertile of postural sway length [having less balance] (OR=1.95, 95% CI 1.07-3.54), and authoritarian parenting style (OR=1.89, 95% CI 1.07-3.33). The adjusted OR for the continuous age variable was 0.83 (95% CI 0.71-0.97). These results suggest that youth developmental factors, youth and adult attitudes about risk, and parenting style may influence risk of medically-attended injury.

### G4.4

**Title: Summer Work and Injury among Youth on Family Farms**

Authors: Zierold KM, Garman S, Anderson HA.

In the United States, farming ranks among the industries with the highest rates of worker injury and death. Working on family farms children of all ages do many hazardous tasks, including driving tractors, working in grain bins, working with animals, and planting and harvesting crops. Limited information exists on work and injury among children working on family farms.

In October 2001, a cross-sectional survey was administered to five school districts and one large urban school in Wisconsin. In total, there were 562 middle school children aged 10-14 years old and 398 high school students aged 15-19 years old reported working on family farms. The tasks most commonly reported among both groups were (1) harvesting and planting crops, (2) working with animals, (3) lawn mowing and (4) painting. When asked about working with hazardous materials, 31% of middle school children responded "Yes" and 41% of high school students responded "Yes."

Overall, 24% of middle school students reported being injured at work and 31% of high school students reported being injured at work. Many of these injuries were severe enough to affect the students work, play, or school activities for 3 or more days. Variables that were significantly associated with injury included being male, being non-white, having a near-miss experience, being asked to do something dangerous, working after 7pm at night, and working 10 or more hours per week.

As the federal laws are now, restrictions to youth in agricultural employment do not apply to youth who are employed by their parents on a farm owned or operated by their parents. Based on the prevalence of injury and the severity of injury occurring on family farms, review of child labor laws is warranted.

### G4.5

**Title: Risk Factors for Farm Work-Related Injuries: A Nested Case Control Study in the Agricultural Health Study Cohort**

Authors: Sprince NL, Zwerling C, Whitten PS, Lynch CF, Burmeister LF, Thu K, Logsdon-Sackett N, Park H, Gillette P, Alavanja MCR

This case-control study, nested in the Agricultural Health Study, aimed to assess risk factors for farm-related injuries among Iowa farmers. Out of 5970 eligible farmers, 431 injured cases and 473 controls were identified. Of the 431 injured subjects, 377 reported a single injury over the past year, while the remaining subjects reported two or more injuries over the past year. Fifty-two subjects required hospitalization for their injury. Hand, finger, and back injuries were the most frequent. Machinery-re-