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IS SPORTS-RELATED VIOLENCE A PUBLIC HEALTH ISSUE OR IS IT "JUST PART OF THE GAME?" \*R D Comstock, C Knox, and S Fields (Center for Injury Research and Policy, Columbus Children's Research Institute, Columbus, OH, 43205)

Although sports-related violence (hazing, foul play, and brawling) has a high likelihood of resulting in injury, death, or psychological harm, it has not yet been acknowledged as a public health problem. Our objective was to review a case-series of several highly publicized sports-related violence incidents. We chose 6 recent cases to demonstrate variations of sports-related violence. Case 1: In 2003, hazing among high school girls' touch football players resulted in injuries to 5 girls including a broken ankle and a laceration requiring 10 stitches when younger players were slapped, punched, and covered in paint, mud, and feces. Case 2: In 1998, hazing during a pro-football team's training camp resulted in injuries to 3 players including a bloody nose, blurred vision, and a laceration requiring 14 stitches when 5 rookies were forced to run a gantlet with pillowcases over their heads while veteran players hit them with bags of coins. Case 3: In 1999, a 15 year-old high school hockey player pushed an opponent into the boards after the buzzer sounded, leaving him paralyzed. Case 4: In 2004, a professional hockey player intentionally struck an opponent's head resulting in a broken neck and a concussion. Case 5: In 2004, a pro-basketball game ended in a brawl involving players and fans resulting in injuries to nine fans. Case 6: In 2004, a brawl involving players and fans at a high school boys' basketball game resulted in minor injuries. Sports-related violence occurs among athletes of all sexes, ages, sports, and levels of competition. Like all forms of interpersonal violence, sports-related violence is preventable. However, this complex subset of violence will require multidisciplinary research into the roles played by the athlete, the coach, the referee, the school administration and/or sports governing body, the culture and ethics of the sport, the built environment, the fans, etc. Further research into this emerging field is needed.

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SURVEILLANCE OF INJURY BURDEN AND RISK FACTORS FOR AGRICULTURAL INJURY AMONG CHILDREN AND YOUTH: REGIONAL RURAL INJURY STUDY - II. \*S G Gerberich, T R Church, B H Alexander, A S Masten, C M Renier, K F Carlson, A D Ryan, S J Mongin (University of Minnesota, Minneapolis, MN 55455)

This surveillance effort was conducted among agricultural households to: determine the injury burden for all injuries and risk factors for agriculture-related injury, among persons less than 20 (<20) years of age; and monitor changes, between 1999 and 2001. Data for all injury events and demographics were collected by computer-assisted telephone interview, from a cohort of agricultural operation household members, in a five-state Midwest region. Exposure data were collected, simultaneously, through a nested case-control study. Injury rates were adjusted for within-household correlation. Adjustment analyses addressed potential biases. Case-control data were analyzed using multivariate methods. For 1999 and 2001, respectively, 8,313 and 7,812 persons incurred 1,191 and 1,138 injury events. Annualized injury rates per 1,000 persons for <20 years, were 146.0 and 144.8. Primary sources of agriculture-related injuries were: animals (41%; 32%) and falls (31%; 32%); in 1999 and 2001, 16% and 19%, respectively, identified >7 days of lost agricultural work time, associated with agriculture-related injuries and 17% and 15% for other injuries. From case (n=203; 222) - control (n=755; 1131) data, in respective years, increased risks (ORs and 95% CIs) were: operating/riding in a motor vehicle (3.7, 2.2-6.2; 2.8, 1.7-4.8); riding on (1.8, 1.2-2.6; 1.3, 0.9-1.9) or operating a tractor (1.6, 1.02-2.5; 2.0, 1.2-3.1); operating large (1.5, 0.9-2.3; 1.6, 1.0-2.6) and small (1.4, 0.9-2.1; 1.7, 1.1-2.7) equipment; working with horses (2.3, 1.5-3.4; 2.0, 1.3-3.0), sheep (2.3, 1.2-4.3; 2.0, 1.2-3.3), beef cattle (2.0, 1.4-2.9; 2.1, 1.4-2.9) and dairy cattle (1.4, 0.9-2.2; 1.5, 0.9-2.5). Identification of the total injury burden, on agricultural operations, and risk factors for agriculture-related injuries, suggest opportunities for interventions and further research.

\* = Presenter; S = The work was completed while the presenter was a student

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FATAL WRONG-WAY COLLISIONS ON NEW MEXICO'S INTERSTATE HIGHWAYS, 1990-1999. \*S Lathrop, T Dick, K Nolte (University of New Mexico, Albuquerque, NM 87131)

Following several highly publicized wrong-way collisions on New Mexico's three interstate highways, we reviewed medical examiner files from January 1, 1990 through December 31, 1999 to determine mortality rates and risk factors associated with drivers traveling the wrong direction on interstates. All other non-pedestrian interstate motor vehicle crashes served as a control group. Covariates of interest in bivariable and multivariable logistic regression included demographic information about the decedents, decedent location in the vehicle, time and weather at the time of the collision, seatbelt use, and blood alcohol concentration. During the 1990s, 44 of 759 (5.8%) motor vehicle fatalities on New Mexico's interstates were due to a driver proceeding in the incorrect direction on an interstate. American Indians were at greater risk of dying in wrong-way collisions than other New Mexicans, with a cause-specific age-adjusted mortality rate of 0.15 per 100,000 population, compared to 0.05 for white non-Hispanics and 0.03 for white Hispanics. Drivers of vehicles traveling the wrong way on the interstates had significantly higher blood alcohol concentrations than the drivers with whom they collided ( $p < 0.002$ ), but 25% of these drivers were also legally intoxicated. Compared to other interstate collision fatalities, wrong-way collision decedents were significantly more likely to have been over the legal blood alcohol concentration limit (adjusted odds ratio=4.3, 95% confidence interval: 2.09, 8.7) and have been in automobiles (aOR=4.8, 95% CI: 2.29, 10.1). Wrong-way collisions were significantly more likely to have occurred between 9:00 PM and 5:00 AM (aOR=8.9, 95% CI: 4.10, 20.2). Prevention strategies aimed at reducing the incidence of driving while intoxicated, with special consideration given to areas surrounding American Indian reservations, as well as improved lighting and signage at entrance and exit ramps, could help reduce the occurrence of wrong-way collisions.

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INJURIES AMONG CANADIAN ABORIGINAL ON-RESERVE CHILDREN AND YOUTH: FINDINGS FROM THE FIRST NATIONS AND INUIT REGIONAL HEALTH SURVEY. \*A Ritchie, J Reading, B Elias (University of Toronto, Toronto, Ontario, M5G 1L5)

The study of injuries among Canadian Aboriginal children and youth has received an under-proportional representation of attention in spite of its high burden and preventable nature (British Medical Journal, 2003;327:419-422). To investigate the lifetime prevalence of preventable injuries among a national sample of on-reserve children and youth under the age of 18, analysis of the 1997 First Nations and Inuit Regional Health Survey was conducted. Each child was randomly selected from each household using a two-staged sampling procedure. Data were generated through proxy responses of the participants' primary care giver for 3,791 children/youth. Bivariate analyses were conducted to assess the association between injuries and several environmental and demographic variables and indices. Occurrences of the six injuries explored were uncovered. Rates of bone injuries were the most common (13%), while the prevalence of injuries from a serious head injury, serious burn injury, an injury where the child almost drowned or needed to be rescued, serious cold weather injury and the loss of limb/vision/hearing due to an injury were 4%, 3%, 3%, 2%, and 1% respectively. The results also demonstrated children/youth with reported injuries were more likely not to get along with family members, have behavioural problems, live in smaller communities and live in a community with the least percentage of adequate houses ( $p < 0.01$ ). These rates presented indicate that Aboriginal children/youth living on-reserve are injured more compared to results presented in the National Longitudinal Survey of Children and Youth (2000/1).

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