

feasibility of facilitator implementation, and to determine practicality of a PRE/POST questionnaire as a future method to evaluate efficacy of this newly adapted program. Parents provided ratings of the program (e.g., helpfulness, utility, increase in knowledge, would they recommend the program), and facilitators provided ratings and written responses (e.g., preparation, clarity, improvements that could be made). Results suggest that overall both parents and facilitators rated the program positively. Major themes identified by facilitators suggest that the questionnaire should be significantly shortened and simplified to account for low literacy in this population specifically. Additionally, the limits of existing session length for this community programming is a barrier to implementing a thorough questionnaire evaluation. Moving forward, literacy level will be reduced overall, and alternatives to a questionnaire format will be explored. Conducting research within community setting constraints is discussed. This research has identified what remains to be addressed for the purposes of a large scale evaluation of a well-received program. This program has the potential to provide large scale publicly funded parenting programs with evidence based intervention to reduce the rates of unintentional injury in children among vulnerable parenting populations.

114 ADVERSE CHILDHOOD EXPERIENCES AND ADULT ADVERSITIES CLUSTERS BY GENDER

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The overarching goal of this study is to better understand how adverse childhood experiences and adult adversities cluster together by gender.

Methods/Approach We used latent class analysis (LCA) in the College Student Health Survey (CSHS), a large state surveillance system of 2- and 4-year Minnesota college students to identify clusters of childhood adversities plus highly correlated adult adversities among emerging adults aged 18–24. Exploratory LCA was conducted in 2015 data and replicated with 2018 data. Given observed differences between men and women with regard to experiences of adversities, the analyses were stratified by gender.

Results In the 2015 sample, the seven-class and five-class models were selected for females and males, respectively, based on fit statistics and class interpretability. Both females and males had a low adversity and childhood household dysfunction with childhood emotional abuse clusters. The low adversity clusters made up the highest prevalence in each sample, 48% for females and 66% for males. In females, the remaining clusters included childhood household mental illness, high adversities, adult sexual abuse, childhood emotional abuse, and high adult adversities with low child adversities. In contrast, in males, the remaining clusters were childhood household alcohol abuse, child physical and emotional abuse, and intimate partner emotional abuse. The classes identified in the 2015 sample replicated well in the 2018 sample.

Conclusions The assessment of adversity clusters revealed distinct patterns of lifetime adversity by gender. These different patterns may have different impacts throughout life that are not captured by a simple summed score of the number of adversities.

Significance and Contributions to Injury and Violence Prevention Science The unique pattern of adversity from those with different backgrounds is important to prevent adversity and to advance understanding of its impacts across different populations.

115 USING NATIONAL VITAL STATISTICS SYSTEM (NVSS) MORTALITY DATA TO ESTIMATE COUNTY-LEVEL TRENDS IN DRUG-SPECIFIC OVERDOSE MORTALITY: CONSIDERATIONS AND LIMITATIONS

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Statement of Purpose Researchers often use National Vital Statistics System (NVSS) mortality data to examine county-level opioid-involved overdose mortality rates. Limitations such as small counts and county-level variation in reporting the specific drugs involved are not always considered. This study describes county-level death counts and variation in drug reporting, and possible implications when making county-level comparisons.

Methods/Approach NVSS mortality data from 2015–2017 were analyzed. Drug overdose deaths were identified using the International Classification of Diseases, 10th Revision underlying cause-of-death codes X40–X44, X60–X64, X85 and Y10–Y18. Drug specificity was calculated by determining the percent of drug overdose deaths with a multiple cause code of T36–T50.8. **Results** Of 3,149 counties, only 1,574 (50%) had 10 or more drug overdose deaths in 3 years, 1,261 (40%) had fewer than 10, and 314 (10%) had zero. Drug specificity was 86% overall. For counties with at least one death, drug specificity was 0–50% for 469 counties (17%), 51–85% for 644 (23%), 86–99% for 730 (26%) and 100% for 992 (35%). Compared to counties with high specificity (>85%), counties with lower specificity were more likely to be rural, located in Public Health Regions 5–9, have county coroners as the state system for medicolegal death investigation, and less likely to have a state medical examiner.

Conclusions Even with 3-year aggregate data, half of the counties had fewer than 10 overdose deaths, and therefore possibly unstable rate estimates. Counties with lower specificity in drug reporting differed from counties with high specificity. These differences might lead to biases when reporting county-level drug-specific overdose rates.

Significance and Contributions to Injury and Violence Prevention Science Low counts and differences in specificity of drug reporting should be considered when comparing county-level drug-specific overdose rates. Aggregation, imputation, modeling and other statistical techniques to account for these limitations may be warranted.

119 DOES EXPOSURE TO GENERAL WARNINGS IN FRAMED MESSAGES REDUCE RISK BEHAVIOURS IN SCHOOL-AGED CHILDREN?

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Statement of Purpose Framed safety messages (gain- or loss-framed) can counteract the increase in risk taking that occurs

when children are in a heightened positive mood. In previous research, framed safety messages have consisted of behaviourally targeted messages that emphasize avoiding risk behaviors leading to specific injuries and outcomes. The current study examined whether more general warning messages in framed contexts had a differential effect on reducing risk taking in children when in a heightened positive mood.

Methods/Approach 39 children (7–9 years) were exposed to a safety message (gain- or loss-frame) regarding play behaviors on an obstacle course. Children's risk-taking running the obstacle course was measured before and after a positive mood induction.

Results Participants who were exposed to loss-framed safety messages in both the general and behaviorally targeted groups demonstrated a significantly lower level of risk taking compared to baseline, whereas participants who were exposed to gain-framed safety messages in both groups performed at baseline levels. Regardless of whether children were exposed to general or behaviorally specific messages, gain and loss messaging counteracted the increase in risk taking when in a positive mood, but loss messages produced greater reductions in risk taking than gain messages.

Conclusion The results indicate that general messages can be as effective as behaviorally specific messages. Moreover, the loss-framed safety message had a greater effect on reducing risk-taking in children when in a heightened positive mood than the gain-framed safety message.

Significance and Contributions The results suggest that placing an emphasis on specific risk-taking behaviors and outcomes is not necessary in order to reduce risk-taking behaviours in school-aged children during play situations. This makes this intervention approach feasible to apply in situations in which there are a variety of potential risk behaviors which makes targeting a specific one likely to limit effectiveness of the intervention.

123 NO HIT ZONES: AN INNOVATIVE APPROACH TO VIOLENCE PREVENTION

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Statement of Purpose No Hit Zones (NHZs) are an emergent and highly promising public health strategy designed to change community-level social norms regarding the acceptability of physical punishment of children, an important approach for child physical abuse (CPA) prevention. NHZs are a multi-tiered strategic approach designed to: (1) promote an environment of safety such that no one will be hit, or witness hitting, within an organizational or community setting, and (2) reduce acceptance and use of PP within that setting, thereby ultimately reducing the incidence of CPA. This presentation will discuss the benefits and challenges of NHZ implementation, training resources available to implement an NHZ, and preliminary results from a NHZ evaluation at Children's Hospital of New Orleans.

Methods/Approach Training resources developed and results from a short-term evaluation of the NHZ intervention will be presented. Pre- and post-assessments were administered to all medical center staff invited to participate in the study (n=507) before and after a mandatory NHZ training.

Measures were included to assess staff attitudes toward physical punishment, attitudes toward medical staff intervention when parents hit children, medical center policy and access to information on discipline, frequency of witnessing a parent hitting a child on the medical center property and whether or not they had intervened.

Results A pre-post analysis was completed via paired t-test, with significant results ($p < 0.001$) for a reduction in positive attitudes toward physical punishment, an increase in positive attitudes toward medical staff intervention when parents hit children, and willingness to intervene.

Conclusions The current results demonstrate promise for NHZs in reducing community-level risk for CPA.

Significance and Contributions to Violence and Injury Prevention Science NHZs are an innovative approach to family violence prevention at the community level. This presentation will discuss development of and preliminary results from the intervention evaluation.

125 EMERGENCY MEDICAL RESPONSE TO US SPORTS INJURIES: PATIENTS, PLACES, AND PROCEDURES

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Statement of Purpose Emergency medical services (EMS) often respond to injuries sustained during sports. Characterizing such incidents can help schools/organizations and EMS agencies anticipate sports-related pre-hospital care needs, and coordinate their responses.

Methods/Approach We identified EMS runs associated with team sports (ICD-10 activity code Y93.6x), to a school, athletic field, or another athletic facility, using National Emergency Medical Services Information System 2017 data. We characterized incidents by patient characteristics, incident location, and pre-hospital medical procedures; we used ICD-10 diagnosis codes and SNOMED procedure codes.

Results Of 1107 EMS runs identified, the median patient age was 17 years (interquartile range 14–29), 29.5% of patients were female, and 46.7% were white. The most common locations were athletic fields (517 incidents, 46.7%) and schools (330, 29.8%). Initial diagnoses were non-specific: the most common primary symptom was 'pain, unspecified' (34.7%), and the most common primary impression was 'injury, unspecified' (53.7%). Of 1656 procedures recorded, 287 (17.3%) were conducted prior to EMS arrival. The most common pre-EMS procedure was splinting (32.4% of pre-EMS procedures), and the most common EMS procedures were gaining intravenous access (33.7%) and electrocardiographic monitoring (22.6%).

Conclusions The vast majority of sports-related EMS responses were for teens and young adults, at known athletic venues, for musculoskeletal injuries and pain. Pre-EMS care often focused on stabilizing the injury, while EMS care often involved advanced assessment and pain relief/fluid administration. National EMS data, while informative, often lacked diagnostic detail, and the specific type of athletic facility; combining EMS data with hospital diagnoses, when available, would enable greater precision.

Significance and Contributions to Injury and Violence Prevention Science Characterizing sports-related EMS responses allows organizations with responsibility for athlete health and safety