Found 23 Abstracts

CONTROL ID: 1061585
TITLE: White Middle-Age and Older Males at Highest Risk for Suicide
CURRENT TOPIC: Age and ethnic disparities related to injuries
ABSTRACT BODY:
BACKGROUND (study objectives, hypothesis, or a description of the problem): Suicides in the Commonwealth of Virginia have been steadily increasing over the years. Suicides typically exceed homicides two-to-one yet do not receive the same media or public health attention as homicides. While all races, ages, and genders are impacted, the vast majority of suicide victims are males, with the greatest level of risk seen in older and middle-age White males. Despite this clear increase in risk for middle-age and older White males, there are no targeted prevention funding for this population in Virginia.
METHODS (study design and appropriate statistical analysis): The Virginia Office of the Chief Medical Examiner (OCME) has jurisdiction over all suicides where death occurs in Virginia. These data were extracted from OCME cases using the Virginia Violent Death Reporting System (VVDRS). The VVDRS is the operation and reporting system of the National Violent Death Reporting System (NVDRS) within Virginia, and uses the same methodology, definitions, coding schema, and software application. The NVDRS is a project currently operating in 18 states, and is funded by the Centers for Disease Control and Prevention (CDC).
RESULTS (specific results in summary form): Over the study period of 2003-2008, there were 5,149 suicides of Virginia residents that fell under the jurisdiction of both the OCME and the purview of the VVDRS. Over 75% of these cases were male and two-thirds or 66% were White males, though White males comprised just 37% of Virginia's population. The 35-64 year old White male group was responsible for 36% of all suicides yet comprised only 15% of the Commonwealth's population.

The overall suicide rate (per 100,000) for Virginia males is 17.7 and is 20.4 for White males. Looking at the 35-64 year White male group the rate is 26.1 and is 37.9 for the 65+ age group. These rates are 2.1 and 3.1 times higher than that of 10-24 year old White males, respectively. Black males, the group with the next highest number of suicides, have much lower rates for these age groups.

In general, males have lower percentages of reported mental health problems (47% versus 71%) and history of suicide attempts (16% versus 33%) than their female counterparts. Examining only males, White males have higher percentages of mental health, physical health and alcohol problems than non-Whites.
CONCLUSIONS (description of the main outcome of the study): Suicides are completed by all races, genders and ages above 10 years old in Virginia, but by sheer numbers White males who are middle-age and older have the largest numbers of suicides and the highest rates of any gender-race grouping. In our society, it is unpopular to characterize White males as disadvantaged or as "high-risk", but suicide numbers reveal that 3,418 White males over six years chose to end their lives. Data show that every 6.6 out of 10 suicides are committed by White males. While Virginia's 35-64 year old White male population is 15% of the overall population, they account for 36% of all suicides. Funding in Virginia is focused on suicide prevention in youth, and while prevention needs to continue there, the human cost of neglecting the main risk group of middle to older age White males is counted in the thousands.
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CONTROL ID: 1061332
TITLE: Violent deaths among recently released prisoners
CURRENT TOPIC: Other injury
ABSTRACT BODY:
BACKGROUND (study objectives, hypothesis, or a description of the problem): In North Carolina, around 25,000 inmates are released from prison each year. Prisoners' reentry into their communities can be a stressful transition and possibly result in higher risk of mortality from violence. Limited information is known about violent deaths (homicide, suicide, legal intervention) among recently released prisoners. As home of the North Carolina Violent Death Reporting System (NC-VDRS), our state is uniquely positioned to link these cases to better understand and address this issue. Working with local researchers, NC-VDRS will be utilized to test this innovative linkage.
METHODS (study design and appropriate statistical analysis): A data file provided by the North Carolina Department of Corrections will be matched against the NC-VDRS dataset from 2006-2007. Standard methodologies will be used to perform the linkage process using social security number, last name, first name, and date of birth. Match attempts will be made for deaths which occurred within 12 months of release. Key data from both sources will be used to create a new matched data file. Using the data file, analyses will be completed to identify characteristics of recently released prisoners that may be predictive of an increased risk of violent death. A particular focus will be risk of violent deaths among recently released prisoners with histories of a mental illness.
RESULTS (specific results in summary form): Results from the linkage process and key findings around circumstances of death will be presented. Case studies will be presented based on the number of matched cases.
CONCLUSIONS (description of the main outcome of the study): The North Carolina Violent Death Reporting System has been linking data since it inception from vital records, medical examiner, and law enforcement. Linking additional data sets is a logical extension of this effort. Understanding the scope of the problem and identifying risk and causes of violent deaths among recently released prisoners could provide information for more focused intervention and prevention. This could not only improve the transition from prison to community, but also outcomes. This project provides an opportunity to create and strengthen partnerships with those working with an incarcerated population.
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AUTHORS (FIRST NAME, LAST NAME): Scott Proescholdbell

CONTROL ID: 1062172
TITLE: Boat-Related Carbon Monoxide Poisoning Surveillance in the United States
CURRENT TOPIC: Other injury
ABSTRACT BODY:
BACKGROUND (study objectives, hypothesis, or a description of the problem): Boating-related carbon monoxide (CO) exposure is a preventable, public health concern that can cause long term harm or death to victims. Exposed swimmers can become unconscious in water and drown. CO is a byproduct of incomplete fuel combustion from gasoline-powered engines and generators and is imperceptible to humans. Surveillance of boating-related CO poisoning is critical to inform prevention efforts, yet few epidemiologic studies have been conducted in this area. In order to assess the magnitude and burden of boating-related CO poisoning in the US, and to characterize the exposed populations, the Centers for Disease Control and Prevention (CDC) and the National Park Service (NPS) partnered to identify data sources and analyze the data.
METHODS (study design and appropriate statistical analysis): CDC and NPS compiled the most comprehensive collection of national marine-related CO exposures from news media, US Coast Guard data, and hyperbaric oxygen treatment facility reports. Cases were identified as illness in persons who experienced signs and symptoms consistent with CO poisoning and had known exposure to marine engine or generator exhaust. Descriptive analysis was conducted. We also performed a review of studies from the past 10 years on NIOSH health hazard evaluations and engineering reports related to CO poisonings to assess current knowledge of CO in marine environments nationwide.
RESULTS (specific results in summary form): From 1981–2010, preliminary data show that over 920 boating-related CO exposures were reported in 40 states. Of these, approximately 18% of exposures resulted in fatalities and occurred primarily among men. Men were also the majority (55%) of those exposed to CO. The average age of all exposed individuals was 28 years (range: <1–81); 35% were among children <18 years. Forty-three percent of reported exposures were associated with the use of marine generators and 25% were due to propulsion engine use. The review of health hazard boating-related studies also provided evidence that engineering solutions can effectively reduce CO exposures in marine environments.
CONCLUSIONS (description of the main outcome of the study): These estimates are likely an underestimation of the overall burden owing to the lack of reporting and recognition of CO poisoning. Findings from this analysis will contribute to our understanding of boating-related exposures and assist in guiding prevention efforts. The data also contribute to the growing body of evidence that shows that enhancing educational efforts—such as on the proper use of marine generators—and implementing engineering solutions for boats are the critical efforts needed to effectively reduce boating-related CO-related morbidity and mortality.
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CONTROL ID: 1062244
TITLE: Drowning and submersion surveillance in New York City
CURRENT TOPIC: Other injury
ABSTRACT BODY:

BACKGROUND (study objectives, hypothesis, or a description of the problem): Drowning became a reportable condition to the New York City (NYC) Department of Health and Mental Hygiene in 2009 in accordance with the World Health Organization's recommendation to track these incidents regardless of outcome.
METHODS (study design and appropriate statistical analysis): Eight years of NYC Death Certificates (2000-2008) where the primary or contributing cause of death was drowning were reviewed. Data from the corresponding Office of the Chief Medical Examiner files were abstracted. Cases involving children 0-4 years of age officially classified as intentional or undetermined were reclassified as unintentional if lack of adult supervision was a factor. Calls placed to Emergency Medical Services (EMS) (2001-2009) of final call type "drown" were also analyzed for temporal patterns.
RESULTS (specific results in summary form): 393 drowning cases were identified including: 140 unintentional drowning incidents; 141 suicides; 15 homicides; and 97 incidents of undetermined intent. Males represented 74% of all drowning cases. Males between 15 and 44 years represented half of both unintentional incidents (n=72) and drowning suicides (n=70). Less than one third of both unintentional incidents and drowning suicides were non-Hispanic Black. However, males of this group represented 42% of drowning suicides among those 15-44 years of age while non-Hispanic White males represented 54% of drowning suicides above the age of 45 (n=50). Unintentional drowning incidents occurred in: natural water including beaches and rivers (54%); bathtubs (31%); pools (11%); and other (4%). 83% of natural water incidents (n=76) were among males. Young males between 15 and 24 years represented 40% of these incidents. 79% of unintentional bathtub drowning incidents among adults (n=28) were among females. Two-thirds of bathtub incidents among children less than five years (n=16) were between seven and eighteen months and 43% were non-Hispanic Black. One third of pool drowning incidents (n=15), were of children 1 - 2 years. All three drowning incidents involving buckets were among children around one year of age. Ten unintentional incidents were transportation-related. 60% of unintentional drowning incidents occurring in natural waters with known month of injury (n=62) occurred in June and July. Among these incidents with recorded time of injury (n=46), 65% occurred in the late afternoon hours (3-8pm). Seasonal and time-of-day patterns from EMS drown call data support the same patterns.
CONCLUSIONS (description of the main outcome of the study): NYC specific data on home and recreational drowning incidents empowers prevention efforts. These data inform tailored prevention efforts targeting risk factors in high risk groups including women, young children and young adult men.

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CONTROL ID: 1058312

TITLE: Evaluation of the New York City Fire Department's Pre-Hospital Care Report System as an injury surveillance tool

CURRENT TOPIC: Other injury

ABSTRACT BODY:

BACKGROUND (study objectives, hypothesis, or a description of the problem): Injury is a leading cause of morbidity and mortality in New York City (NYC). Comprehensive understanding of injury requires consideration of data beyond the traditional vital statistics and hospital discharge databases. NYC's Fire Department (FDNY) is dispatched to over one million emergency medical service (EMS) runs annually. Electronic pre-hospital care reports (ePCRs) are generated for approximately 500,000 of these. ePCRs do not categorize injury causes by the International Statistical Classification of Diseases and Related and Health Problems, Clinical Modification (ICD-9-CM) taxonomy, but instead utilize a checklist of 36 injury cause categories that both overlap with (e.g., fall) and go beyond (e.g., domestic violence) ICD-9-CM. This evaluation assesses 1) ePCR data quality across years and 2) comparability of ePCR's demographic distribution to New York State's Statewide Planning and Research Cooperative System (SPARCS) outpatient discharge database.

METHODS (study design and appropriate statistical analysis): 2008 and 2009 FDNY ePCR data quality was determined by assessing completeness, validity (i.e., proportion of observations with plausible values), and consistency of select ePCR information fields such as age and injury consequence (e.g., head pain, wrist swelling) within and across each year. Furthermore, the demographic distribution for all injury causes combined as well as specific injury causes that overlap in each system were compared for 2008 (year for which data were available in both systems).

RESULTS (specific results in summary form): Preliminary analyses showed that ePCR data completeness and validity varied by information field and year; data quality diminished slightly from 2008 to 2009. Gender had the highest information quality, where 100% and 93.3% of encounters had complete and valid information in 2008 and 2009, respectively. Residential zip code had the lowest information quality, where 90.5% and 68.1% of encounters had complete and valid information in 2008 and 2009, respectively. Age and gender distribution differed for the two systems. For all injury causes combined, gender distribution was 45.8% and 45.0% female, and mean age was 38.7 and 32.6 years in ePCR and SPARCS, respectively. Differences were more pronounced for specific injury causes. For example, gender distribution of injured pedestrians was 40.9% and 48.5% female in ePCR and SPARCS, respectively. Mean age of people who fell was 50.5 and 35.3 years in ePCR and SPARCS, respectively.

CONCLUSIONS (description of the main outcome of the study): FDNY-EMS's ePCR has great potential for augmenting injury surveillance in NYC. The system offers detail on injury causes not captured in traditional systems; data quality seems moderately high. Moreover, the distribution disparity found may suggest that ePCR and SPARCS capture differing dimensions of NYC's injury burden; continued investigation is warranted to identify possible explanations for this disparity. In sum, ePCR shows promise as a tool for advancing injury surveillance and prevention in NYC

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CONTROL ID: 1062211

TITLE: Improving surveillance of intimate partner violence: A collaboration between the North Carolina Violent Death Reporting System and domestic violence prevention organizations

CURRENT TOPIC: Violence across the lifespan (e.g. child abuse, intimate partner violence, elder abuse, etc.)

ABSTRACT BODY:

BACKGROUND (study objectives, hypothesis, or a description of the problem): Intimate partner violence (IPV)/domestic violence (DV)is a significant public health problem in North Carolina (N.C.). Since 2004, the North Carolina Violent Death Reporting System (NC-VDRS) has identified more than 550 homicides associated with IPV, 64.9 percent of which were women. Currently, multiple surveillance systems track IPV/DV fatalities in the state, including the NC-VDRS, the N.C. Coalition Against Domestic Violence (NCCADV) and the N.C. Department of Justice (NC DOJ). One of the problems that can result from overlapping surveillance systems is a difference in the number of cases detected due to discrepancies in case definitions and criteria for inclusion. NC-VDRS has partnered with NCCADV to acquire a more thorough understanding of the problem by comparing differences in methods, definitions, and the data generated by each organization's respective surveillance systems.

METHODS (study design and appropriate statistical analysis): NC-VDRS, NCCADV, and the NC DOJ have used different methods and case definitions for obtaining the number of IPV/DV fatalities in N.C. NC-VDRS identified cases from data collected from vital records, the Office of the Chief Medical Examiner, and local law enforcement reports; NCCADV identified cases from media reports; and the NC DOJ identified cases from state-mandated DV-related homicide reports collected by law enforcement. The authors matched cases from the NC-VDRS and NCCADV using a probabilistic linkage method based on the decedent's last name, first name, county of residence, and date of incident/death. In addition the authors assessed dissimilarities in the case definitions for IPV/DV, narratives, and overall number of cases collected by the NC-VDRS, NCCADV, and NC DOJ systems.

RESULTS (specific results in summary form): The NC-VDRS, NCCADV, and the NC DOJ contain minor, but important, differences in the methods used to obtain cases, case definitions, and the type of information collected. For example, in 2008, NCCADV, NC-VDRS, and NC DOJ identified 80, 125, and 131 IPV/DV-related fatalities, respectively. The presentation will highlight the specific differences between the data collection systems and will present the selected results of linking the NC-VDRS and NCCADV systems including demographic and circumstance characteristics of both the victims and suspects.

CONCLUSIONS (description of the main outcome of the study): Despite a decrease in the overall rate of homicide, the rate of deaths associated with IPV/DV has remained relatively steady since 2004. One step in the right direction is linking data from multiple sources for the development of viable prevention and control strategies. This project demonstrates the utility of NC-VDRS, NCCADV, and NC DOJ for IPV/DV surveillance and highlights the importance of intra-agency collaboration.

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CONTROL ID: 1061779

TITLE: Homicide incident profiles of four municipalities in northeastern Puerto Rico: Supporting crime prevention programs

CURRENT TOPIC: Violence across the lifespan (e.g. child abuse, intimate partner violence, elder abuse, etc.)

ABSTRACT BODY:

BACKGROUND (study objectives, hypothesis, or a description of the problem): The homicide incident rate in Puerto Rico is among the highest in the United States. The island is divided into thirteen law enforcement regions to facilitate local police operations. The Carolina law enforcement region (CLER) comprises the municipalities of Canóvanas, Carolina, Loíza and Trujillo Alto; police authorities identified this region as a high crime area impacting communities, tourism and area economy. This study aimed at identifying and analyzing CLER homicide trends and incident characteristics for the years 2007 to 2009 to assist law enforcement agencies and local governments in mapping crime prevention strategies and programs.

METHODS (study design and appropriate statistical analysis): The CLER database was the main data source for this descriptive study. A total of 310 homicide incidents were recorded for the years 2007-2009. Data analyzed per incident included the number of victims and their demographics; weapon used; municipality, day of the week and time of occurrence, among others. Excel, ARC GIS 9.3, and Epi-Info 2000 were used for the statistical analysis.

RESULTS (specific results in summary form): In 2007-2009, the average homicide incident rate for CLER was 31.4 per 100,000 persons. While the homicide incident rate per 100,000 persons per municipality was: Trujillo Alto 22.5, Carolina 24.7, Canóvanas 35.4 and Loíza 76.8. Two thirds of incidents (65%) happened between 12:01pm and 11:59pm, with most of them occurring between 6:00pm and 11:59pm (39%). Among all homicides victims, 96% were males; while the age distribution showed that 69% of all victims were between the ages of 15 and 29. The number of homicide incidents with double or multiple victims for 2007, 2008 and 2009 was three, nine, and eleven respectively.

CONCLUSIONS (description of the main outcome of the study): Data indicated that afternoon and night posed a higher risk for homicide incidents in the CLER. Young adult males (15-29 years of age) are the main victims of homicides in this region. Additionally, homicide incidents with double or multiple victims had a significant increased from 2007-2009. Special attention needs to be given to the municipality of Loiza, it had the highest homicide rate as compared to that of other municipalities and the entire CLER rate. Outcomes of this study provide a baseline and input for mapping and restructuring crime intervention strategies and prevention plans.

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CONTROL ID: 1059448
TITLE: Risk Factors for Prescription Opioid Death — Utah, 2008–2009
CURRENT TOPIC: Unintentional drug poisoning deaths
ABSTRACT BODY:
BACKGROUND (study objectives, hypothesis, or a description of the problem): Deaths from prescription opioids in Utah increased from 51 in 2000 to 263 in 2009 (>500%). Prevention efforts are hindered by an inadequate understanding of risk factors for overdose death.
METHODS (study design and appropriate statistical analysis): Characteristics of prescription opioid overdose decedents from 2008–2009 were gathered from medical examiner records and next-of-kin interviews. Decedents (N = 254) were compared with persons reporting prescription opioid use in the past year (N = 1,308) on state-added Utah 2008 Behavioral Risk Factor Surveillance System (BRFSS) questions. Exposure prevalence ratios (EPRs) and 95% confidence intervals (CIs) were calculated.
RESULTS (specific results in summary form): The majority (81%) of decedents had chronic pain; among those prescribed opioids, decedents were more likely to have chronic pain than opioid-using BRFSS respondents (EPR: 3.0; 95% CI: 2.6–3.3). Decedents were more likely than opioid-using BRFSS respondents to smoke daily (EPR: 5.6; 95% CI: 4.4–6.9), not graduate from high school (EPR: 9.0; 95% CI: 6.1–11.8), live alone (EPR: 3.5; 95% CI: 2.9–4.0), obtain opioids from nonprescription sources (EPR: 3.8; 95% CI: 2.8–4.7), and use opioids more than prescribed (EPR: 16.5; 95% CI: 9.3–23.7). Among females, decedents more often than opioid-using BRFSS respondents had a BMI ≥30 (EPR: 1.6; 95% CI: 1.3–1.8) and were aged 45–54 years (EPR: 2.3; 95% CI: 1.9–2.7).
CONCLUSIONS (description of the main outcome of the study): Chronic pain was common among decedents. The observed association with smoking might be confounded by other factors and deserves further study. When prescribing chronic opioid therapy, healthcare providers should be alert for risk factors among patients (e.g., low education level, living alone, obesity [females], being aged 45–54 years [females], obtaining opioids from nonprescription sources, and using opioids more than prescribed).
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AUTHORS (FIRST NAME, LAST NAME): William A. Lanier

CONTROL ID: 1060190
TITLE: Unintentional drug poisoning trends in Nebraska, 2000–09
CURRENT TOPIC: Unintentional drug poisoning deaths
ABSTRACT BODY:
BACKGROUND (study objectives, hypothesis, or a description of the problem): The national rate of unintentional drug poisoning deaths has increased approximately 5-fold since the 1990s. This study tracks unintentional drug poisonings among Nebraskans over a 10-year period to determine if this state is following a similar pattern and to identify prevention priorities.
METHODS (study design and appropriate statistical analysis): Drug poisoning information was collected from death certificates, hospital and emergency department discharge data, and Nebraska Regional Poison Center call data for analyses. Frequencies, age-adjusted rates and age-specific rates were calculated to describe trends of unintentional drug poisonings among Nebraskans during 2000–09. Cases include poisonings from both prescription and nonprescription drugs. Only poison center calls regarding confirmed exposure cases that were not treated in a health care facility were included in analyses.
RESULTS (specific results in summary form): Over the 10-year period, the death rate due to unintentional drug poisonings increased 3-fold among males (2009 death rate: 3 per 100,000 population) and 5-fold among females (2009 death rate: 5 per 100,000 population) while the hospitalization rate due to unintentional drug poisonings increased 2-fold among males (2009 rate: 13 per 100,000 population) and females (2009 rate: 17 per 100,000 population). The overall rates of emergency department visits (2009 rates: 44 per 100,000 population [male]; 51 per 100,000 population [female]) and poison center calls (2009 rates: 8 per 100 total calls [male]; 9 per 100 total calls [female]) due to unintentional drug poisonings did not substantially change over the study period. Compared to other age groups, the greatest increase in unintentional drug poisoning rates was observed among those 55-74 years during 2000–09; death, hospitalization, and emergency department visit rates increased 9-fold, 3-fold, and 3-fold, respectively. Opioid analgesics accounted for 1% of PCC calls, 2% of emergency room visits, 4% of hospitalizations, and 37% of deaths due to unintentional drug poisonings in 2000 and accounted for 2% of poison control center calls, 6% of emergency room visits, 20% of hospitalizations, and 60% of deaths due to unintentional drug poisonings in 2009.
CONCLUSIONS (description of the main outcome of the study): The greatest unintentional drug poisoning rate increases were associated with the most severe outcomes, hospitalizations and death. Interventions should address the 55-74 years age group due to the important increase in drug poisoning rates observed among this group. Finally, drug poisoning prevention efforts in Nebraska should focus on the control of opioid analgesics as this class of drug has been associated with a notable increase in unintentional poisonings.
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CONTROL ID: 1061652

TITLE: Unintentional Drug Poisoning Deaths in New York City (2005-2009):
Drug Combinations and Related Characteristics

CURRENT TOPIC: Unintentional drug poisoning deaths

ABSTRACT BODY:

BACKGROUND (study objectives, hypothesis, or a description of the problem): In New York City (NYC), unintentional drug poisoning is the fourth leading cause of adult death and accounts for 1.5% of all NYC deaths. Nearly all deaths involve multiple substances. The objectives of this proposed presentation are: to identify drug and alcohol combinations involved in unintentional poisoning deaths; to characterize associated individual decedent characteristics, geographic variations and other ecologic factors and; to compare deaths where alcohol is involved and where it is not. Significant trend data will be presented.

METHODS (study design and appropriate statistical analysis): A retrospective review of data was conducted from two linked sources: NYC death certificates, and death files from the Office of the Chief Medical Examiner. Deaths reported here include poisonings from both illicit and licit drugs. All deaths occurred in NYC during 2005-2009; the death certificate recorded the manner of death as “accidental,” and ICD-10 codes from multiple-cause files were used. The medical examiner data provided toxicologic information for each fatality. In deaths caused by drug intoxication, when the toxicology results reveal the presence of more than one substance in concentrations greater than trace amounts, it is customary to include all the identified substances in the causes of death.

RESULTS (specific results in summary form): Nearly all (98%) of fatalities involved multiple substances. Seven out of ten deaths involved an opioid; heroin was most commonly present, involved in nearly half (47%) of deaths, followed by methadone (28%) and other prescription opioids (20%). Cocaine was involved in 59% of deaths, alcohol in 40%, and benzodiazepines in 30%. The most common drug combination involved benzodiazepines and opioids (90%), and primarily heroin (51%). While only one-quarter of cocaine involved deaths (24%) included benzodiazepines, alcohol was involved in more than half (53%) and heroin in 41%. Half of deaths involving prescription opioids also involved benzodiazepines (50%) and cocaine (47%). Distinct demographic differences were associated with different drug combinations. For example, deaths among white males were more likely to involve a combination of benzodiazepines and heroin, or prescription opioids and cocaine. Deaths among Hispanic males were more likely to involve combinations of heroin-alcohol and cocaine-heroin. Overall, the group aged 45-54 years had the highest rates for these combinations.

CONCLUSIONS (description of the main outcome of the study): Given that the majority of unintentional drug poisoning deaths involve multiple substances, identifying common drug combinations is critical to understanding patterns of risk and for informing intervention/prevention efforts. Some drug combinations, such as multiple central nervous system depressants (eg, opioids and benzodiazepines) increase risk for a fatal overdose

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CONTROL ID: 1061743

TITLE: Safe States Alliance Improves Poison Surveillance through its Seventh Injury Surveillance Workgroup (ISW7) on Poisoning

CURRENT TOPIC: Unintentional drug poisoning deaths

ABSTRACT BODY:

BACKGROUND (study objectives, hypothesis, or a description of the problem): The goal of the Safe State's Alliance's (SSA) Poison Injury Surveillance Workgroup (ISW) is to promote better surveillance around poisoning in our states and nation with an emphasis on drug poisonings. In order to do that the ISW is developing a framework for states and national-level organizations to use that includes: a conceptual definition of all types of poisoning that differentiates by type of exposure, and where possible, by intent, chronic, and acute; poisoning surveillance and risk factor data sources at the national and state level; and an operationalized definition for drug poisoning using ICD9-CM and ICD-10 for as many poison data sources as possible.

METHODS (study design and appropriate statistical analysis): The Workgroup developed a proposed conceptual definition of a poisoning: a poisoning is an exposure to any extrinsic chemical and radioactive substance that results in at least one related adverse clinical effect. This includes: acute and chronic exposures, and other adverse drug events, exposures to venoms and other biological toxins (Toxin exposures include bacterial foodborne intoxications, eg., staphylococcal food poisoning and botulism, as well as seafood "poisoning," eg., ciguatera and scombroid fish poisoning), exposures to radioactive substances incorporated into the body, and extrinsic substances include solids, liquids or gases and natural (ie plant) or synthetic chemicals. This excludes: bites and stings without envenomation and infections (e.g., food and waterborne infections such as hepatitis A, cryptosporidiosis, and salmonella, and infections resulting from the injection of drugs).

Safe State's Poison ISW is composed of approximately 15 members from private, state, federal, and national organizations. Each member brings a unique perspective to poison surveillance and years of experience. The Poison ISW will continue to meet throughout the first half of 2011 to improve overall poisoning surveillance and develop a consensus report.

RESULTS (specific results in summary form): The ISW7 will be creating a Poison Data Sources Reference Manual that will contain information on the following poisoning data systems: National Poison Data System, Workers Compensation Laws, Child Death Review, Drug Abuse Warning Network, Nationwide Emergency Department Sample, Nationwide Inpatient Sample, Medical Examiner Data, National Ambulatory Medical Care Survey, Mortality (ICD-9 and ICD-10), National Electronic Injury Surveillance System, National Emergency Medical Services, National Hospital Ambulatory Medical Care Survey, National Hospital Discharge Survey, National Institute for Occupational Safety and Health - Sentinel Event Notification System for Occupational Risk (SENSOR), National Violent Death Reporting System, North Carolina – NC Detect State, Emergency Department State Hospital Discharge, State Death Certificates, Automation of Reports and Consolidated Orders System, Behavioral Risk Factor Surveillance System, Fatal Analysis Reporting System, National Survey on Drug Use and Health, Occupational Drug Use, Youth Risk Behavior Surveillance System, and the Adverse Event Reporting System. The ISW7 will also create SAS code templates so that others can mimic the definition of a poisoning that is created in the ISW's final report.

CONCLUSIONS (description of the main outcome of the study): The work of the ISW will allow an in-depth understanding of poisoning in the US and how it has changed overtime, currently being heavily influenced by drug poisoning. The final consensus report from the ISW will provide standardize definitions and practices among groups working to address unintentional poisonings, especially poisonings that are drug-related. The final report will also provide a standard method for public health officials to understand the magnitude of the problem in their jurisdiction.

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SSA = Safe States Alliance.

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CONTROL ID: 1062533
TITLE: Unintentional Drug Poisoning Mortality in New York City: A Comparison Case definitions and Death Certificate Date with Medical Examiner Records (2009)
CURRENT TOPIC: Unintentional drug poisoning deaths
ABSTRACT BODY:
BACKGROUND (study objectives, hypothesis, or a description of the problem): Drug poisoning is the second leading cause of injury death in the United States, and in New York City (NYC), it is the fourth leading cause of premature adult death. Nevertheless, recording deaths from acute poisoning is not always straightforward. This presentation aims to accomplish two primary objectives: 1) to compare three case definitions for “unintentional drug poisoning” deaths, and: 2) to compare ICD-10 codes abstracted from death certificates with toxicology data abstracted from medical examiner files.

METHODS (study design and appropriate statistical analysis): NYC Department of Health and Mental Hygiene (DOHMH) conducted a retrospective review of data from two linked sources: death certificates (DC) and medical examiner (ME) files. This investigation yielded findings influenced by the case definition used, as follows: Definition 1: DC includes multiple cause codes for “poisoning by a psychoactive substance (excluding alcohol or tobacco)” (ICD-10 codes X40-X44) or a “mental or behavioral disorder due to a psychoactive substance” (ICD-10 codes F11-16, F18-19, excluding the 4th character .2 dependence and .6 amnesic syndrome), and records manner of death as “accidental.” Cases using this definition were confirmed at the ME’s office using toxicology data, and are referred to as the “gold standard.” Definition 2: DC includes only selected underlying X-codes. Definition 3: DC includes selected underlying X-codes and F codes, and records manner of death as “accidental.” Further, toxicology findings abstracted from ME files were compared with ICD-10 “nature of injury” codes listed on the DC (T36-T50).

RESULTS (specific results in summary form): Definition 1: There were 636 unintentional drug poisoning cases selected from DC multiple-cause data and confirmed with ME files, including 599 X-codes and 37 F-codes. By comparison, Definition 2: Under-reported by 49 cases because only X-codes were included (N= 562), and Definition 3: Over-reported 99 cases involving F-codes, which were “natural” manner, and under-reported 37 cases involving X-codes, because the analysis included underlying causes only (N=698). Toxicology analysis confirmed all DC were incomplete, but varied by substance. In particular, T-codes were missing from 60% of heroin cases and 84% of alcohol cases. For other drugs, approximately one-third of cases were missing T-codes, respectively (32% of benzodiazepines, 32% of methadone, 28% of other opioid analgesics, 22% of cocaine).
CONCLUSIONS (description of the main outcome of the study): Our findings indicate that restricting unintentional drug poisoning case analyses to underlying cause and/or X-codes only results in substantial under-reporting of deaths. DC data alone lacks specificity, and often under-counts substances involved. Synthetic drugs tend to have few or no metabolites, and are consequently more frequently captured on DC.
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CONTROL ID: 1052460
TITLE: Fatal poisonings due to multiple substances, Ohio, 2000 - 2008
CURRENT TOPIC: Unintentional drug poisoning deaths
ABSTRACT BODY:
BACKGROUND (study objectives, hypothesis, or a description of the problem): From 2000 to 2008, the number of Ohio poisoning deaths increased by 173% (from 702 to 1913, respectively). Approximately 73% of these poisoning deaths were classified as unintentional and involving drugs/medications. For each of the study years, more than 80% of poisonings were associated with at least two different drugs. We sought to describe use patterns among these presumably, for the most part, recreational drug users.
METHODS (study design and appropriate statistical analysis): We identified ICD10-defined poisoning cases from the Ohio Department of Health Vital Statistics Office 2000-08 death records. Narcotic and psychodysleptic codes T40.0 – T51.9 were examined to distinguish specific drug involvement to enable characterization of fatal poisonings associated with multiple drug use.
RESULTS (specific results in summary form): For the nine year period, there were 11,431 poisoning deaths in Ohio. Cocaine was involved in 1910 of these deaths; opioids were noted in 4385; benzodiazepines, 975 and; ethanol, 981. Cocaine and opioids were implicated in 802 deaths; benzodiazepines and opioids were found in 752 and benzodiazepines, opioids and cocaine poisoning were noted on 116 death certificates. There were 10 persons who died from poisoning with all four of these drugs in their body. However, for the study period, we also found nearly 3000 death certificates that reported no specific drug poisoning information, i.e. with only ICD10 code T50.9 - other and unspecified drugs documented.
CONCLUSIONS (description of the main outcome of the study): More than 24% (n=2798) of drug deaths in Ohio for this period involved at least two of our drugs of interest: cocaine, opioids, ethanol, and benzodiazepines. As disquieting as this toll is, it may represent only half of the actual total attributable to these substances; approximately 26% of poisoning-related death certificates are lacking in information on the specific type of drugs involved. Improvements in identifying all fatality associated drugs on death certificates would provide a better understanding of poisonings, particularly those attributable to multiple substances.
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Edward Socie, MS - Ohio Department of Health
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CONTROL ID: 1056352

TITLE: The epidemiology of traumatic brain injuries in New York State

CURRENT TOPIC: Traumatic brain injury (e.g. war, sports, abusive head trauma, etc.)

ABSTRACT BODY:

BACKGROUND (study objectives, hypothesis, or a description of the problem): A traumatic brain injury (TBI) is an injury to the brain or skull caused by an external force such as a strike or impact. Unlike other injuries such as broken legs or cut fingers that can heal, brain injuries are often permanent and disabling. The leading causes of TBI continue to be falls, motor vehicle crashes, and assaults.

METHODS (study design and appropriate statistical analysis): NY multiple causes of death data, inpatient hospital discharge data, and outpatient emergency department (ED) discharge data were used to track the incidence and rate of TBI in New York State. Hospital data was linked to police and motorist crash report data to further investigate the contributing factors of motor vehicle crashes that lead to increased risk of sustaining a brain injury.

RESULTS (specific results in summary form): Annually in NY, TBIs result in more than 2,100 deaths, 18,500 hospitalizations, and 82,000 ED visits among residents, a rate of 11.0 deaths, 96.2 hospitalizations, and 425.4 ED visits per 100,000 residents. Hospitalization charges for TBIs average $37,839 and ED charges average $1,909 per stay, totaling more than $860 million in annual charges. Males are 2.7 times more likely to die, 1.7 times more likely to be hospitalized, and 1.3 times more likely to need treatment at an ED due to a TBI. The highest rate of TBI deaths occurs among adults aged 65 years and older, at 30.5 per 100,000 residents in this age group. The incidence rate for older New Yorkers is three times greater than for any other age group. Among hospitalized residents, the highest rate of TBIs are to children under one year of age and to adults 65 years and older, at 179.7 and 266.3 per 100,000 residents, respectively. The two highest rates of TBI-related ED visits are to children less than one and between one and four years old, at 1,447.0 and 973.6 per 100,000 residents. In motor vehicle crashes, unrestrained vehicle occupants were three times more likely to sustain a TBI than vehicle occupants that bucked-up. Alcohol and speed related crashes were associated with the highest risk of a TBI.

CONCLUSIONS (description of the main outcome of the study): TBI continues to be a significant public health problem in NY. The continued surveillance of TBI in NYS allows for the targeted implementation of programs and interventions that can prevent many of the deaths and disabilities caused by a brain injury. Therefore, there is an ongoing need to collect and analyze data related to TBI.

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CONTROL ID: 1062059
TITLE: Sports and recreation-related, ED-treated Tbi's among the young, Ohio 2002-09
CURRENT TOPIC: Traumatic brain injury (e.g. war, sports, abusive head trauma, etc.)
ABSTRACT BODY:
BACKGROUND (study objectives, hypothesis, or a description of the problem): The Centers for Disease Control recently noted that traumatic brain injury (TBI)-related Emergency Department (ED) visits (14%), hospitalizations (19%), and deaths (27%) each increased from 2002 to 2006. This study was undertaken to determine if a similar rise in ED-treated TBIs continues in Ohio, and to better understand the circumstances associated with TBIs that occur among youth pursuing sports and recreation activities.
METHODS (study design and appropriate statistical analysis): The Ohio Hospital Association provided the state health department with data on ED visits from 2002 through 2009. After limiting the analysis to residents 18 or younger treated for TBI resulting from sports/recreation activities, five broad injury circumstance categories were developed: non-traffic pedal cycle; traffic-related pedal cycle; recreation, no mention of wheels; sports, no mention of wheels; and wheeled recreation. Age group, sex, year, resident county urbanality, treatment charges, insurance status, discharge destination, and injury intent were examined to determine their relationships with these injury circumstances.
RESULTS (specific results in summary form): On average, nearly 4000 Ohioans 18 or younger were treated in EDs for sports/recreation-related TBIs each year, with a dramatic increase over the course of the study period: from 2859 in 2002 to 6040 in 2009, a jump of 111%. Sports, no mention of wheels, (which is based on three ICD9-CM codes capturing general sports-related fall & striking against injuries) were by far the most common circumstance (57%) and associated with the greatest increase, (142% from 2002-09). Traffic-related pedal cycle injuries resulted in nearly twice the treatment charges (mean =$2648) as TBIs associated with any of the other injury categories.
CONCLUSIONS (description of the main outcome of the study): ED-treated TBIs among the study population have risen alarmingly. However, it is not clear how much of this is attributable to increasing incidence and how much to growing concern among the general public and medical community regarding the effects of untreated TBI. Regardless, these results justify further evaluation of the benefits of developing more stringent safeguards for young bicyclist, athletes, and recreationists, particularly helmet laws.
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CONTROL ID: 1054743
TITLE: Traumatic Brain Injury in Nebraska 2004-2008
CURRENT TOPIC: Traumatic brain injury (e.g. war, sports, abusive head trauma, etc.)
ABSTRACT BODY:
BACKGROUND (study objectives, hypothesis, or a description of the problem): Traumatic brain injury (TBI) is a serious public health problem in the United States. Each year, about 1.5 million Americans sustain a TBI and about 50,000 die as a result. Furthermore, about 5.3 million Americans are currently living with a TBI-related disability. The purpose of this study is to inform public health practitioners, policymakers, and the general public about the burden of traumatic brain injury in Nebraska in order to design and implement effective prevention measures against TBI across the state.
METHODS (study design and appropriate statistical analysis): Death certificates and hospital discharge data were analyzed to summarize the frequency, age-specific rates, and age-adjusted rates for traumatic brain injury deaths, hospitalizations, and emergency department (ED) visits among Nebraska residents. Fatal and non-fatal traumatic brain injury was defined in accordance with the Centers for Disease Control and Prevention (CDC) and State and Territorial Injury Prevention Directors Association (STIPDA) State Injury Indicators: Instructions for Preparing 2005 Data (2007).
RESULTS (specific results in summary form): From 2004–2008, 1,610 Nebraskans died as a result of a traumatic brain injury. The leading cause of TBI death was motor vehicle crashes (n=591), followed by firearms (n=419) and falls (n=383). These three causes accounted for more than 85% of all TBI deaths. During this same time period, there were 4,750 hospitalizations and 30,265 emergency department (ED) visits for TBI. Importantly, TBI-related hospitalizations and ED visits increased from 42.2 hospitalizations and 255.0 ED visits per 100,000 persons in 2004, to 62.0 hospitalizations and 412.5 ED visits per 100,000 persons in 2008. Unintentional falls accounted for over half (53%) of all TBI-related hospitalizations and ED visits. Motor vehicle crashes and struck by/against injuries were the second and third leading causes of TBI-related hospitalizations, respectively, while struck by/against injuries and motor vehicle crashes were the second and third leading causes for TBI-related ED visits, respectively. Although TBIs due to unintentional falls were more common, in general, TBIs resulting from motor vehicle crashes and firearms were more serious (more likely to result in death or hospitalization).
CONCLUSIONS (description of the main outcome of the study): Although Nebraska's rates are, on average, lower than national TBI rates, Nebraska hospitalization and ED visit rates have been climbing dramatically in recent years. In an effort to decrease the incidence of TBI in Nebraska, public health organizations across the state are encouraged to implement evidence-based strategies to prevent motor vehicle traffic crashes, firearms, unintentional falls, and struck by/against injuries.
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AUTHORS (FIRST NAME, LAST NAME): Ericka Welsh

CONTROL ID: 1060285
TITLE: Violent deaths among Native Americans in Oklahoma
CURRENT TOPIC: Injury related issues in Native Americans
ABSTRACT BODY:
BACKGROUND (study objectives, hypothesis, or a description of the problem): Violent deaths in the U.S. occur disproportionately among Native Americans (NA). From 2004-2007, the violence-related injury death rate among NA was 10% higher than the national average rate. Oklahoma has one of the highest concentrations of NA in the U.S. The objective of this study was to describe the characteristics of violent deaths among NA and compare to non-NA in Oklahoma.
METHODS (study design and appropriate statistical analysis): We used data from the Oklahoma Violent Death Reporting System, which includes suicides, homicides, undetermined manner deaths, unintentional firearm injury deaths and legal intervention deaths. Cases included Oklahoma residents who died in Oklahoma during 2004-2008. Race was categorized into 2 groups: NA and non-NA. The non-NA category included white, black, Asian, Pacific islanders and other races combined. Rates were calculated using the Census Bridged race population data.
RESULTS (specific results in summary form): There were 4560 violent deaths among Oklahoma residents. Ten percent of victims were NA. Seventy-four percent of violent deaths among NA were male. The overall rate of violent death among NA was 17% higher than the rate among non-NA (28.1 and 24.0 per 100,000 population, respectively). The violent death rate among NA 25-44 years of age was 50% higher than the rate among their non-NA counterpart. The suicide rate among NA was 4% less than the rate among non-NA. However, the suicide rate among NA 10-24 years of age was 78% higher than the rate among non-NA in that age group. The homicide rate among NA was 20% higher than the rate among non-NA. The homicide rate among NA 25-44 years of age was 1.9 times higher than the homicide rate among non-NA in that age group. The undetermined manner death rate among NA was more than twice the rate among non-NA. NA children 0-4 years of age had the highest rate of undetermined manner death. NA victims were significantly more likely to be single/never married than non-NA (OR=1.63, 95% CI, 1.33-1.98), have lower educational attainment (OR=1.62, 95% CI, 1.23-2.14) and be using alcohol at the time of death (OR=1.85, 95% CI, 1.47-2.32). There was no significant difference among NA victims and non-NA victims for drug use at the time of death, OR=1.17,(95% CI, 0.92-1.49).
CONCLUSIONS (description of the main outcome of the study): The rates of homicide, youth suicide and undetermined manner death among NA in Oklahoma were disproportionately higher than the rates among non-NA. Violent death prevention programs should target NA populations particularly children, youths and adults less than 45 years of age.
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CONTROL ID: 1060667
TITLE: Infant deaths identified in violent death surveillance, Oklahoma, 2004-2007
CURRENT TOPIC: Injury related infant and childhood morbidity and mortality
ABSTRACT BODY:
BACKGROUND (study objectives, hypothesis, or a description of the problem): Oklahoma's infant mortality rate has been above the U.S. rate since 1992 (8.5 and 6.8, respectively, in 2007). A leading cause of infant mortality is sudden unexplained infant death (SUID). Nearly half of SUID is due to sudden infant death syndrome (SIDS). The percentage of SUID due to SIDS has been decreasing due to a diagnostic shift towards other designations such as "undetermined manner." The Oklahoma Violent Death Reporting System (OK-VDRS) provides data on undetermined manner deaths. The objective of this study was to analyze OK-VDRS data on infant deaths to inform prevention.
METHODS (study design and appropriate statistical analysis): OK-VDRS data are collected from medical examiner reports, death certificates, police reports, and child fatality review on all suicides, homicides, undetermined manner deaths, unintentional firearm deaths, and legal interventions that occur in the state. A descriptive analysis of OK-VDRS data was conducted for infant deaths (<1 year of age). Cases included Oklahoma residents who died in Oklahoma. Demographics, racial disparity, and circumstances surrounding the deaths were examined.
RESULTS (specific results in summary form): During 2004-2007, 392 child (<18) deaths were identified in OK-VDRS. Fifty-three percent of these deaths were infants (1.0 per 1000 live births). The majority of the infant deaths (89%) were ruled as undetermined manner; 11% were homicides. Native American and black infants were disproportionately represented among these deaths. Native American and black infants had significantly higher risk than white infants (RR=2.38 and RR=2.24, respectively). Hispanic infants had significantly lower risk (RR=0.54) than non-Hispanics. Among the undetermined manner infant deaths studied, 61% were 1-3 months of age; 89% were in an unsafe sleeping environment or an unsafe sleeping position. Co-sleeping with adults or other children was the most common unsafe sleep environment (70%). Of the 22 infant homicides, 12 were female and 10 were male. Black infants had a higher homicide rate than white infants but it was not significant. A parent was the suspect in 77% of the homicides. Data from child fatality review was available for 156 (76%) of the infant deaths. A prior Child Protective Services report had been filed on the infant's household in 43% of the cases and child abuse had been substantiated in 22% of the infant's households.
CONCLUSIONS (description of the main outcome of the study): Efforts to prevent infant deaths should include promoting safe sleep. Preventing sleep-related deaths could have saved as many as 180 infants (45 infants per year) and lower infant mortality in Oklahoma by 10%. Studies to identify modifiable risk factors for infant homicide are needed.
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CONTROL ID: 1062028

TITLE: Disparities Among Traumatic Brain Injury Hospitalizations in Children and Young Adults, Pennsylvania 2000-2007

CURRENT TOPIC: Injury related infant and childhood morbidity and mortality

ABSTRACT BODY:

BACKGROUND (study objectives, hypothesis, or a description of the problem): Traumatic brain injury (TBI) poses a significant public health problem in the United States, accounting for 1.1 million emergency department visits, 235,000 hospitalizations, and 50,000 deaths per year. This study examines the differences in rates of TBI between White and African-Americans and male and female children and the mechanisms of injury that contribute most to these differences.

METHODS (study design and appropriate statistical analysis): Data for this study came from acute-care hospital discharge data reported to the Pennsylvania Health Care Cost Containment Council from 2000-2007. Persons from birth to 19 years of age who were hospitalized as a result of a TBI using the CDC case definition of TBI were included in this study. Data on patients who died before hospital admission, or were treated and released from emergency departments, were not included in this study. Variables analyzed include age, gender, race, mechanism of injury, and incidence.

RESULTS (specific results in summary form): Among TBI discharges in Pennsylvania (N=25,232), for persons <20 years of age, 67.2% were male and 70.6% were White. African-Americans had a higher overall rate of hospitalizations due to TBI than whites (102 vs. 74.6 per 100,000, p<0.05), and the rate of hospitalizations due to TBI was higher for African-Americans than Whites in all age categories.

African-Americans had a higher hospitalization rate for motor vehicle accident-related TBI than African-Americans (42.9 vs. 38.8 per 100,000, p<0.5). African-Americans also had a more than 4-fold higher hospitalization rate for assault-related TBI (19.1 vs. 4.1 per 100,000, p>0.5) and for motor vehicle/pedestrian-related TBI (17.0 vs. 4.2 per 100,000, p<0.5). The disparity between Whites and African Americans persisted across all age groups for motor vehicle/pedestrian and assaults, but was variable within age groups for motor vehicle related TBI. There were also disparities between males and females related to TBI hospitalizations (127.7 for males vs. 64.8 per 100,000 for females, p< .05). Hospitalization rates for assault-related TBI were more than three times higher in males than females (11.1 vs. 3 per 100,000, p< 0.5).

CONCLUSIONS (description of the main outcome of the study): These findings suggest that there are age, gender, and racial disparities among young people hospitalized in Pennsylvania with a traumatic brain injury.

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CONTROL ID: 1032613

TITLE: Acute Exertional Rhabdomyolysis and Triceps Compartment Syndrome Among High School Football Players — Oregon, 2010

CURRENT TOPIC: Injury related infant and childhood morbidity and mortality

ABSTRACT BODY:

BACKGROUND (study objectives, hypothesis, or a description of the problem): Although rare, overexertion can lead to sufficient muscle injury to cause rhabdomyolysis and compartment syndrome (CS). In August 2010, a cluster of rhabdomyolysis and CS occurred among high school football players. To help prevent future morbidity among the estimated 7.5 million high school sports participants, we investigated causal and contributory factors for illness.

METHODS (study design and appropriate statistical analysis): We reviewed hospital records and interviewed team members by using a standardized questionnaire. Rhabdomyolysis was defined as myalgia plus creatine kinase (CK) >2,320 U/L. CS was defined as clinical diagnosis that required fasciotomy. After discharge, we tested 4 patients' urine for performance-enhancing drugs (PED) and conducted an environmental investigation of school facilities.

RESULTS (specific results in summary form): Among 43 players, 40 (93%) completed questionnaires, and 22 (51%) experienced rhabdomyolysis (peak CK range: 2,434–42,000 U/L). All 22 patients had upper-arm myalgia; 12 were hospitalized; 3 experienced triceps CS; none experienced renal failure. Illnesses started 1–3 days after an intense triceps exercise, which occurred in a non-air–conditioned room with outside temperature 92°F. Among 19 players receiving at least one vote from a teammate(s) as 1 of the 3 hardest working players, 13 (68%) experienced rhabdomyolysis, compared with 7 (33%) of 21 not considered to work hardest (relative risk: 2.1; 95% confidence interval: 1.0–4.0). Creatine supplement use, reported by 10 (25%) players, was not associated with rhabdomyolysis. No player acknowledged use of alcohol, illicit drugs, or PED; all PED tests were negative. Environmental investigation did not identify any factors contributing to illness.

CONCLUSIONS (description of the main outcome of the study): The triceps exercise and hot conditions caused rhabdomyolysis and CS. Greater awareness of specific exercise hazards and prevention strategies can minimize the risk for clinically significant muscle injury.

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CONTROL ID: 1061581
TITLE: Magic behind motor vehicle crash fatality trend: A closer look at Nebraska crash data
CURRENT TOPIC: Injuries resulting from motor vehicle or other transportation modes (ATV, bike, etc.)
ABSTRACT BODY:
BACKGROUND (study objectives, hypothesis, or a description of the problem): Nebraska motor vehicle crash fatality generally declined in the last decade, with a record low of 186 deaths in 2010. In this study, we examined state wide crash data from 2001 to 2010 to explore factors that contributed to the fatality decrease.
METHODS (study design and appropriate statistical analysis): The 2001-2010 Nebraska crash data were extracted from Nebraska Crash Outcome Data Evaluation System (CODES). Injury severities (fatal, severe, and minor) resulted from crashes were compared over the 10 years. Trend of fatality was examined by various human and environmental factors, including age, gender, alcohol involvement, and safety belt use, as well as location, type and time of crashes.
RESULTS (specific results in summary form): Number of severe and minor injuries declined consistently in the last 10 years. There appeared to be considerable fluctuation in number of fatalities, although the overall trend was declining. Lower numbers of annual crash deaths coincided with cold winter(s) and significant social events, such as economic recession.
CONCLUSIONS (description of the main outcome of the study): Environmental factors appeared to be a one of the major contributors to the trend of motor vehicle crash fatality. Further analysis is required to confirm the findings.
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CONTROL ID: 1060635
TITLE: Blood alcohol testing among motor vehicle crash fatalities in Fulton County, Georgia, 1990-2007
CURRENT TOPIC: Injuries resulting from motor vehicle or other transportation modes (ATV, bike, etc.)
ABSTRACT BODY:
BACKGROUND (study objectives, hypothesis, or a description of the problem): Alcohol-related motor vehicle crashes resulted in 11,773 deaths and accounted for 32% of all crash fatalities in the United States in 2008. The cost of alcohol-related motor vehicle crashes is estimated to be $51 billion per year. We conducted a retrospective cross-sectional study to determine alcohol involvement in motor vehicle crash fatalities in Fulton County, Georgia. Our objectives were to obtain decedent characteristics, calculate ante- and postmortem blood alcohol testing prevalence, and assess the validity of postmortem blood alcohol testing among motor vehicle crash fatalities.
METHODS (study design and appropriate statistical analysis): Motor vehicle crash fatality data were obtained from the Fulton County Medical Examiner's Office for 1990-2007. Antemortem blood alcohol test results were collected from hospitals for decedents that survived long enough to enter the healthcare environment. Descriptive analyses were conducted to determine decedent characteristics, road user type, and to calculate the prevalence of ante- and postmortem blood alcohol testing among motor vehicle crash fatalities. A McNemar's test was used to assess the validity of postmortem blood alcohol testing. Analyses were conducted using SAS 9.1.
RESULTS (specific results in summary form): Of 1,007 motor vehicle crash fatalities during 1990-2007, 69% were male, 51% were drivers, 64% were taken to the main county hospital, and 48% survived more than six hours. Nineteen percent of decedents had antemortem blood alcohol testing, 69% had postmortem alcohol testing, and 11% had both ante- and postmortem blood alcohol testing. Forty percent of antemortem and 18% of postmortem tests indicated alcohol-impairment with a whole blood alcohol level ≥ 0.08 g/dL. There were too few motor vehicle crash fatalities (N = 33) with both ante- and postmortem blood alcohol test results to reliably assess the validity of postmortem blood alcohol testing.
CONCLUSIONS (description of the main outcome of the study): Among Fulton County motor vehicle crash fatalities, the prevalence of antemortem blood alcohol testing was much lower than the prevalence in a national sample of trauma patients. Barriers to routine alcohol testing in trauma centers should be further explored, as this may be useful for improving surveillance of alcohol-related crash fatalities and identifying surviving problem drinkers for treatment.
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AUTHORS (FIRST NAME, LAST NAME): Bonnie Hatcher

CONTROL ID: 1060061
TITLE: Evidence-based environmental strategies reduce underage drinking and accidental death and injury among youth
CURRENT TOPIC: Data impact on policy making and communicating data for policy change
ABSTRACT BODY:
KEY OBJECTIVES: 1) Define and Describe Environmental Strategies that are found to be effective reducing alcohol related death and injury among youth
2) Examine the relationship of policy and enforcement to public health outcomes and available services to support this work.
3) Share an interactive database tool for visual representation and mapping of underage drinking and injury/violence data
BRIEF SUMMARY: According to the Center for Disease Control and Prevention (CDC-P) accidents and unintentional injuries are the leading cause of death for youth 15 to 24, followed by homicide and suicide. Alcohol abuse is implicated in all three causes of death with alcohol consumption being a factor in 26% to 41% deaths from motor vehicle crashes. Alcohol is used by more young people in the United States than tobacco or illicit drugs with 24% percent of high school students admitting to episodic and binge drinking in 2009 in the U.S. Youth Risk Behavior Survey. Additional research shows that short term effects of alcohol use has been linked to unintentional injuries, physical fights, academic and occupational problems and illegal behavior.

Long term alcohol misuse (positively correlated with early onset of alcohol use) is associated with liver disease, cancer, cardiovascular disease, and neurologic damages as well as psychiatric problems such as depression, anxiety and antisocial personality disorder. Use of alcohol by underage youth has a high societal as well as individual cost that demands a comprehensive public health response.
This presentation will define “Environmental Strategies” and discuss the collective meta-research into specific environmental strategies that can be implemented by communities and states to reduce youth access to alcohol and strengthen alcohol policies and their enforcement to limit access.

These approaches, reviewed and prioritized in the PIRE/OJJDP document “Strategies Overview to Reducing Underage Drinking” vary in the strength of evidence supporting their use. Such timely topics of debate as alcohol tax increases and limiting number of alcohol outlets show strong evidence of efficacy in saving young lives. This is timely as many States discuss privatizing their State Alcohol Sales thus reducing alcohol sales control.

The presenters will share examples of state and local Success Stories in which communities achieved positive gains through the implementation of evidence based environmental strategies including: compliance checks, social host policies, managing festivals and community events, graduated licensing and Zero tolerance policies, strengthen college policies, using GIS mapping to identify problem areas, and state tax policies. The importance of interdisciplinary coalitions with the input of visual epidemiological data is discussed and Dr Sandeep Kasat will share PIRE's free interactive database tool for easy representation of data as applied to youth alcohol issues.
In addition the presentation will highlight the research and technical assistance services available to the public Underage Drinking Enforcement Training Center (UDETC) at Pacific Institute of Research and Evaluation.

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