

Oral Presentations

Rurality and injury

16

THE BURDEN OF TRAFFIC CRASHES ON APPALACHIA: AN OVERLOOKED HEALTH DISPARITY IN THE REGION

Katherine Harmon, Wesley Kumfer. *University of North Carolina Highway Safety Research Center*

10.1136/injuryprev-2020-savir.1

Statement of Purpose The Appalachian Region (AR) has a higher premature fatality rate than the rest of the United States (US). While disparities related to chronic disease and other health conditions in Appalachia are well-described, an overlooked contributor to premature mortality are traffic crashes. Therefore, there is a need to examine the epidemiology of traffic fatalities in Appalachia and compare to the non-Appalachian US.

Methods/Approach We obtained 2013–2017 data from the Fatality Analysis Reporting System for the Appalachian and non-Appalachian US by county. To characterize differences between Appalachian and non-Appalachian counties, we calculated population-based fatality rates and rate ratios using multivariate Poisson regression. We also compared differences in crash characteristics using logistic regression.

Results For the period 2013–2017, the traffic fatality rate was 22% higher in the AR than in the non-AR (aRR: 1.22, 95% CI: 1.21–1.24). Traffic fatality rates were higher across all age groups and genders. Compared to non-Appalachian counties, the AR had higher fatality rates among motor vehicle occupants (aRR: 1.36, 95% CI 1.33–1.38) and motorcyclists (aRR: 1.16, 95% CI: 1.11–1.21), but lower rates among non-motorists (aRR: 0.75, 95% CI: 0.72–0.79).

Appalachian fatalities were more likely to have been in a vehicle >20 years old (OR: 1.28, 95% CI: 1.20–1.36) and to not have been wearing a seatbelt at the time of crash (OR: 1.31, 95% CI: 1.26–1.36); however, fatalities were less likely to have been in an alcohol-involved crash compared to non-Appalachian fatalities (OR: 0.66, 95% CI: 0.63–0.69).

Conclusion Appalachia has a higher burden of traffic fatalities than the rest of the US. While more research is needed, potential explanatory factors include vehicle age and lack of seatbelt use.

Significance/Contribution to Injury and Violence Prevention Science This is one of the first studies to perform an examination of the epidemiology of Appalachian traffic fatalities.

Spreading the word: health communication and education

18

LANGUAGE AND RAPE MYTH USE IN NEWS COVERAGE OF SEXUAL VIOLENCE IN THE UNITED STATES, 2014–2017

^{1,2}Grace Liu, ^{1,2}Olivia Egen, ²Laura M Mercer. ¹*Association of Schools and Programs of Public Health*; ²*CDC National Center for Injury Prevention and Control, Association of Schools and Programs of Public Health, Centers for Disease Control and Prevention*

10.1136/injuryprev-2020-savir.2

Statement of Purpose Explore the inclusion of rape myths and Language to Avoid terms (from the CDC's Reporting on Sexual Violence guide) in media coverage of sexual violence (SV). **Methods/Approach** A systematic random sample of SV-related articles published between 2014–2017 in the 48 most distributed newspaper outlets across the US were abstracted and coded (N=2600). We conducted chi-square analyses to explore associations between inclusion of Language to Avoid terms and rape myths (both general inclusion of any terms/myths and inclusion of specific terms/myths) with article framing [focus on specific SV incidents (episodic) vs. social context of SV (thematic)] and whether articles utilized news 'hooks' focusing on high-profile perpetrators or organizations involved in the SV incident (e.g., story of SV by a celebrity or professional athlete).

Results Nearly half of the articles (46.42%) used Language to Avoid terms and 13.5% included at least one rape myth. Compared to thematically-framed articles, articles using episodic frames were more likely to include rape myths (p=0.03) and, specifically, question the victim's credibility (p=0.002). Articles discussing SV perpetration by celebrities/professional athletes, government officials/military personnel, or individuals affiliated with churches or non-collegiate schools were more likely than articles not employing these news hooks to include rape myths and Language to Avoid terms.

Conclusions Rape myths and Language to Avoid terms still appear in SV reporting despite recent focus on their problematic use. Differences in use within articles framed episodically and articles focused on perpetrators or organizations involved in SV incidents highlight where more concerted efforts may be made to ensure accurate media representation on incidents of SV.

Significance and Contributions to Injury and Violence Prevention Science Media portrayal of SV can shape public conversation and propagate harmful social norms about the experience and perpetration of SV. Changing language used in SV reporting may help shift norms and perceptions of SV and support public health efforts to address and prevent future abuse.

Violence research and prevention in healthcare settings

26

BASILINE CHARACTERISTICS OF A RANDOMIZED CONTROL TRIAL OF TRAUMA RECIDIVISTS OUT OF A LEVEL 1 TRAUMA UNIT

Christopher St Vil. *University at Buffalo School of Social Work*

10.1136/injuryprev-2020-savir.3

Statement of Purpose Trauma recidivists are patients who present to an emergency room or trauma center on more than one occasion for different incidents of traumatic injury. One intervention that has shown promise in dealing with this issue has been the development of Hospital Based Violence Intervention Programs (HBVIP). The purpose of this presentation is to describe the implementation of a demonstration project to determine the impact of HBVIP services on victims of violent injury and to report baseline characteristics of the study sample.

Methods/Approach This demonstration project is a funded study, employing a randomized control trial research design to determine the effectiveness of an enhanced Hospital Based Violence Intervention model versus a treatment as usual model. The enhanced intervention provides case management whereas the treatment as usual intervention provides only a referral card.

Results A number of preliminary baseline data points will be presented and discussed, including but not limited to mechanism of injury, trauma type, whether surgery was needed, percentage of patients who present as trauma recidivists, levels of life satisfaction and other selected variables.

Conclusions The lack of evaluations on the effectiveness of HBVIPs has left significant gaps in our understanding on whether these programs in fact have an impact on rates of violent victimization. This on-going longitudinal study seeks to fill that gap by comparing a case-management led intervention to a referral only model.

Significance and Contributions to Injury and Violence Prevention Science Trauma recidivism and re-current violent injury are public health issues that have significant implications for the lives of victims, their families, and the overall community. The evaluation of HBVIPs are an important step in developing the evidence base for interventions that seek to mitigate rates of violent injury and recidivism.

Mental health consequences of violence

33 IMPACT OF MENTAL ILLNESS IN THE RISK OF INCIDENT COMORBID DRUG USE DISORDER IN INDIVIDUALS WHO SURVIVE FIREARM INJURY

Bindu Kalesan. *Boston University*

10.1136/injuryprev-2020-savir.4

Statement of Purpose To determine the risk of emergency department (ED) or hospital readmission with new Drug Use Disorder (DUD) among patients who survive an index firearm injury, with and without mental illness at baseline, and if the risk varies based on treatment pathway.

Methods We conducted a retrospective cohort study of drug-use naïve patients surviving index firearm injury treated in emergency departments (ED) in California from 2006–2010. We compared patients with and without mental illness at baseline and treatment pathway (ED alone and ED+hospitalization). Of the 18,941 treated in ED alone and 10,370 with ED+hospitalization, 1,875 (9.9%) and 2,568 (24.8%) had pre-existing mental illness at index injury.

Results Patients with mental illness had a greater risk of readmission with new DUD at one year [5.6% vs 2.1%; adjusted Hazard Ratio (aHR) 2.04 (95% CI 1.60, 2.60)] than those without. In patients not hospitalized, 7.7% of those with mental illness were readmitted with incident DUD versus 2.2% for those without (aHR=2.99, 95% CI 2.18, 4.09). No such risk was demonstrated in hospitalized patients. The risk of readmission with incident opioid use at 1-year among patients with and without mental illness was 1.5% versus 0.6%, [aHR=1.81 (95% CI 1.13, 2.90)].

Conclusion Patients exposed to firearm injury with mental illness have an increased risk of 1-year readmission with new

DUD when treated in ED without hospitalization. This vulnerable population may benefit from an additional evaluation, treatment, and possible hospitalization, to reduce the risk of future DUD.

Significance Our study reveals the impact of identifying patients with pre-existing mental illness at the time of firearm injury, considering mental illness in treatment decisions, and addressing mental illness as a risk factor for post-injury complications, regardless of their injury severity, to avoid the development of drug use and dependence that may lead to further adverse outcomes.

Firearm violence

34 MEDICAID ENROLLMENT AFTER FIREARM INJURY INCREASES LIKELIHOOD OF READMISSION AMONG ADOLESCENTS

Bindu Kalesan. *Boston University*

10.1136/injuryprev-2020-savir.5

Statement of Purpose A substantial proportion of adolescents in the US who are hospitalized for firearm injury and survive require subsequent hospitalizations, but lack health insurance. However, they become eligible for Medicaid through a post-injury enrollment policy. The impact of Medicaid conversions in this population has not been evaluated. We determined the difference in the likelihood of hospital readmissions among adolescents surviving firearm injury hospitalization by health insurance, and whether this likelihood changed after postinjury Medicaid conversion.

Methods/Approach We conducted a retrospective cohort study using data from the National Readmissions Database (2011–2014). We used Cox proportional hazards regression to assess the association of insurance status (Medicaid, private insurance, or uninsured) with time to readmission within 180 days of discharge, among adolescents (10–19 years of age) discharged alive after treatment of a firearm injury.

Results We compared 6,840 Medicaid-insured patients to 2,969 privately-insured patients and 2,664 uninsured patients in a cohort of adolescents hospitalized due to firearm injury. There was no difference in the likelihood of readmission within 180-days after discharge among the three groups, considering insurance designation at the time of the injury. Based on postinjury payer conversion, the likelihood of readmissions did not vary between the Medicaid and private insurance groups, while the likelihood was 75% greater in the Medicaid group versus uninsured group (adjusted hazard ratio=1.75, 95% CI 1.24, 2.48).

Conclusion Medicaid bears the financial burden of treatment for firearm injuries, providing subsequent treatment to adolescents after firearm injury.

Significance Adolescents surviving a firearm injury are discharged from the hospital to adverse environmental stressors with disability and face competing decisions to spend on health versus paying utilities, rent, etc. to survive. Conversion to Medicaid in this vulnerable group of adolescents may allow them to obtain treatment so that they can recover.