Background: Violent behavior by patients is one of many occupational hazards faced by health care workers. Emergency department (ED) personnel are at high risk for patients carrying weapons, or exhibiting disruptive behavior or psychotic disorders. When systematic approaches to violent persons do not work, public safety officers (PSO) require additional means of elevated force to control dangerous behavior. The use of the electrical stun gun (TASER) offers an option that is more effective than baton but less lethal than a firearm. Its use has recently been criticized because of the association with deaths in custody.
Methods: We describe an approach to control workplace violence in a health care environment that includes staff education for early identification of potentially violent persons and initial approaches but allows for the use of TASER in select situations. We report the incidents of use of force in a Level 1 trauma center university hospital with 40,000 ED census.
Results: There were 107 PRE (12 month) and 149 POST (24 month) uses of force. During the POST, 92% were in clinical, 5 % in general public and 3% in exterior areas. Most involved patients (93%). In clinical areas, 56% were in the ED, 25 % inpatient and 11% outpatient areas. There were 30 displays and seven additional uses of the TASER, including two touches and five firings of probes, 77% for male subjects and 70% for psychiatric or ED patients. All displays or uses were reviewed in detail by multidisciplinary group and determined to be appropriate. There were no serious injuries in either safety personnel or patients that resulted from the use of the TASER. PSOs determined that the display of the TASER was able to de-escalate violent situations without the use of more elevated force.
Conclusions: A comprehensive approach to workplace violence that allows for the selected use of the TASER and requires mandatory reviews of all uses can be effectively implemented to help to control dangerous situations in heath care environments.

18 Risk Perception of US-Mexico Border Crossers

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Background: This study focused on risk perception of US-Mexico border crossers and builds on current research programs at The University of Arizona. No published studies have addressed specific risk processes (defined as perceived risk, intra-border crosser risk communications, Mexican government originated risk communications, and risk control actions) in US-Mexico border crossers.
Objectives: This project seeks to describe, analyze, and interpret border-crosser risk processes; and develop a multidimensional model to describe border-crosser perceived risk and risk communications. Additionally, the main motivation for crossing will be investigated.
Methods: The project used rigorously coded qualitative but anonymous interview data obtained from up to 10 recent border-crossers to elicit information about domains of perceived risk and risk communications that can be incorporated into a proposed model and used for future research and refinement of border-crosser behavior models. Because of the qualitative design, thematic saturation occurred before 10 subjects were entered. Interview data were translated from Spanish to English and data extracted in an attempt to reach thematic saturation.
Results: A model of risk processes was created and suggestions for future behavioral interventions to reduce border crosser heat and injury related morbidity and mortality are presented.
Conclusions: Risk perception of US-Mexico border-crossers can be modeled using a qualitative methodology. Themes derived that were most important included desires of border-crossers to be re-united with family members living in the US regardless of risk and the state of limbo of recently deported border crossers.

19 Behaviors that Influence Crash Injury Risk in Latino Adolescent Males: Analysis of the 2005 National Youth Risk Behavior Survey (YRBS)

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Objective: Motor vehicle crashes remain the leading cause of death for teens. Risk-taking behavior is known to contribute to fatal crashes in young drivers and occupants. The objective of this study was to analyze behaviors that influence the risk of crash injury in Latino adolescent males.
Method: The Youth Risk Behavior Survey (YRBS) is a multistage cluster sample of students in U.S. public and private high schools, with oversampling of Hispanics. Among other risk behavior topics, three questions are directly related to motor vehicle occupant crash injuries: use of seat belts, riding with a driver who had been drinking, and driving when drinking. Analysis was restricted to Hispanic and non-Hispanic Whites age ≥15 (n=8,520). Data were analyzed using Stata survey procedures that account for survey weights and clustering. Differences between groups were tested using linear regression, controlling for age, with post-estimation tests to compare Hispanic males to Hispanic females and to non-Hispanic White males.
Results: Thirteen percent of male Hispanics in this age group reported that they rarely or never wore a seat belt. The percentage of those who rarely or never wore a seat belt was 4% higher for male Hispanics than for female Hispanics.

Thirty-eight percent of male Hispanics age 15-18 years reported riding in the preceding 30 days with a driver who had been drinking (35% of those 15 yrs, 42% of those 18 yrs). The percent who rode with a drinking driver was 11% higher for male Hispanics than for male non-Hispanics. Fifteen percent of male Hispanics reported driving when drinking in the preceding 30 days (9% of 15 yrs. and 24% of 18 yrs). The percent who drove when drinking was 8% higher for male Hispanics than for female Hispanic.
Conclusion: While Latino adolescent males are subjected to the risk of crash injury by their own behavior, the data suggests that they are also subjected to significant risk by their willingness to ride with impaired drivers. These findings have implications for ED-based interventions.

20 Determining the Quality of Comprehensive Care for Non-Traumatic Chest Pain through a Composite Measure

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Background: Comprehensive care for non-traumatic chest pain is becoming increasingly important as a quality indicator for the inpatient setting. These quality measures, which are based on evidence-based guidelines that improve patient outcomes, have not been extended to the pre-hospital arena. Previous studies have indicated that pre-hospital care providers may not adequately utilize aspirin for patients with cardiac ischemia[1]. A potential cause of this oversight could be a lack of appreciation of a cardiac cause to chest pain.
Objective: To determine how well paramedics in an urban, public hospital system delivered high quality care for patients with non-traumatic chest pain.
Methods: Patients with a primary complaint of non-traumatic chest pain between January and March of 2006 were systematically randomized and a retrospective audit was completed. Seven parameters were identified by the medical direction of the Denver Health Paramedic Division. A composite metric was created to assess comprehensiveness of care. The bundle score was considered unmet if any single variable was not present.
Results: Two-hundred and ninety-two patient care reports were evaluated. Overall, 95.4% of the patients were provided with oxygen, 61.2% were given aspirin, 98.6% had lung sounds assessed, 99.7% had vital signs recorded, 85.8% had an IV established, 93.0% received an ECG, and 78.1% were assessed for cardiac risk factors. The overall composite measure was met in 36.5% of the patients. The bundle score ranged from 22.0% in patients 20-39 years old to 42.0% in patients older than 50 years.
Conclusions: In the pre-hospital setting, there was good adherence to individual metrics yet poor adherence to the composite measure. Future studies are needed to determine appropriateness of certain interventions on medical chest pain patients and the implications of the composite intervention on optimizing outcome.

1. McVaney K, Macht M, Colwell C, Pons P. Treatment of suspected cardiac ischemia with aspirin by paramedics in an urban emergency medical services system. *Pre-hospital Emergency Care*. 2005; 9:282-284.

21 Analysis of Ambulance Response for Patients with Medical Chest Pain Based on the Severity of Potential Cardiac Symptoms

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Background: When patients call 911 with a complaint of chest pain, they generally receive an ambulance responding emergently. However, less than 10% of these calls result in an emergent return to the hospital. Studies have shown that emergent response whether to or from a scene results in an increase in ambulance accidents and litigation[1].
Objective: To determine if the implementation of an EMD (Emergency Medical Dispatch) system resulted in a decrease in emergent responses to the source of the 911 call.
Methods: This study is based on a retrospective audit of non-traumatic chest pain calls. A pre-post intervention design was used with the EMD system going into effect on July 1, 2006. Baseline data obtained from the first and third quarter of 2006 represented the post-EMD intervention. Systematic randomization was used within each quarter to select the cases. Calls were identified as being chest pain in nature because of the type of patient that the healthcare provider noted in the patient care report.
Results: Out of the 292 patient care reports reviewed in the first quarter, 262 of the calls (89.7%) were responded to emergently. However, none of these calls (0%) returned to a hospital emergently. From the third quarter, 296 cases were reviewed. Outgoing emergent responses were used in 242 calls (81.7%) and 21 calls (7.1%) returned emergently to a hospital.
Conclusions: Patients complaining of medical chest pain often do not need an outgoing emergent response. Further understanding of when an emergent response is necessary for the patients complaining of non-traumatic chest pain will help