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D-dimer was only ordered on 39% of all patients; 17% were negative (<0.5), 47% intermediate (0.6-2.0) and 36% positive (>2.0). Only one patient with a negative D-dimer and three patients with an intermediate D-dimer had PE. CTAs obtained in low and intermediate D-dimer groups comprised 25% of the total. Of the ED patients, 21 had PE (9%); 50% in the high group, 15% in the intermediate group and 2% in the low group. In the ED, 59% had a D-dimer drawn; 21% were negative, 54% intermediate and 25% positive.

Conclusion: CTA is fast, diagnostic and widely available for evaluation of acute PE. Wells criteria stratify patients and guide the PE workup. Our data show suboptimal use of Wells criteria and subjective overestimation of PE probability prior to CTA. Negative D-dimer also does not deter unnecessary CTA. This represents a paradigm shift in which clinical tools are supplanted by imaging that, while noninvasive, is not without cost or risk. While no definitive acceptable positivity rate for CTA has been established, we feel 10% represents use of CTA as a screening rather than diagnostic test, equating to ineffective resource utilization and unnecessary radiation exposure.

10 Distribution of Emergency Department Diagnoses Presenting to Oregon Emergency Departments

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Objective: To examine the distribution of diagnoses that present to Oregon emergency departments (EDs).

Methods: Claims data on 2,299,151 visits to a representative sample of 21 Oregon EDs from August 2001 through February 2005 were analyzed using a cross-sectional approach. The AHRQ multi-level CCS data tool was used to define diagnostic categories. Frequencies were examined for the most common diagnostic categories at each CCS level and at the level of ICD9 classification.

Results: The top five most common CCS Level 1 diagnostic categories were injury and poisoning (28%), diseases of the respiratory system (12%), signs/symptoms (11%), neurological diseases (8%), and diseases of the circulatory system (8%). In looking at injury and poisoning, the most common diagnoses in this category included sprains and strains (7% of all visits), open wounds (6%), superficial injuries and contusions (5%), and fractures (4%). The majority of respiratory diagnoses consisted of asthma (1%) and respiratory infections (7%) - including upper respiratory infections (4%), pneumonia (2%), and acute bronchitis (1%). Other common diagnoses included abdominal pain (4%), headaches (3%), spondylosis/disc disorder (3%), nonspecific chest pain (3%), otitis media (2%), teeth and jaw complaints (2%), urinary tract infections (2%), cellulitis/abscess (2%) and dysrhythmias (1%).

Conclusion: From a public health perspective in the state of Oregon, injury prevention programs may have a significant impact on ED use. The high volume of visits for upper respiratory infections, teeth complaints, and disc disorders highlights the role of the ED as a safety net for patients who cannot get care elsewhere. In addition, lack of access to primary care may be a contributing factor for the 28,818 visits for asthma, illustrating how lack of access can promote acute exacerbations of chronic conditions that are seen in the ED.

11 Length of Stay Following Trauma Is not Affected by Ethnicity When Controlled for Ethanol Intoxication

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Introduction: Studies have demonstrated that, from pre-hospital mortality rates to emergency department (ED) evaluation to post-injury recovery, trauma care is fraught with examples of the health care race gap. Many of these studies have not properly controlled for ethanol and drug intoxication. We completed a study to address race differences on length of stay and mortality in traumatized patients, controlling for ethanol intoxication.

Methods: Data were entered prospectively in the Trauma One by Lancet database by research assistants (RNs, etc.) following any level one trauma patient seen in the ED from January 1, 2001 to October 31, 2005. Data were analyzed using SPSS 15.0 (SPSS, Inc, Chicago, IL). Descriptive statistics as well as logistic regression predicting odds of > two days length of stay (LOS) were conducted. Ethanol use was defined as blood alcohol level greater than 10 mg/DL. Race was self-described by patients or families.

Results: A total of 6,102 patients were analyzed. Mean age was 29.8 [SD 17.5] years, and 3,364 (55.1%) of patients were male. Univariate odds ratios with regard to length of stay (95% Confidence Interval) were: Native American 1.08 (.903, 1.30), Asian .681 (.390, 1.19), Black .786 (.594, 1.04), Hispanic .731 (.640, .836) and White was used as the reference. In multivariate analysis adjusting for age, sex, alcohol and drug status, and injury severity, however, race was no longer a significant predictor of LOS. A total of 156 (2.6%) died. Age, alcohol and drug use, and injury severity were associated with risk of mortality. No statistically significant differences were noted among different ethnicities with regard to risk of death.

Conclusions: There is not a significant difference between Native American and White patients following trauma. Although a slight trend was noted in increased LOS in Native Americans in comparison to Whites, this trend was eliminated when ethanol use was controlled.