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The Epidemiology of Search and Rescue Incidents in the Grand Canyon National Park: Are Preventive Measures Making a Difference?

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clothing. We examined the possibility that this approach may actually increase skin contamination.

Methods: We experimented with various preparations of a non-toxic contamination simulant, Glow in the Dark Pigment (Risk Reactor, Huntington Beach, Calif.), until we found a reproducible model that reliably stained the surface of a hospital scrub shirt but did not cause significant soak-through and skin contamination. After developing the model, we applied the pigment to the subjects following our model. We confirmed the amount of skin contamination with a UV light. We then decontaminated subjects using a shower until their clothing was thoroughly saturated and evaluated the amount of contamination left on the clothing and on the skin using UV light.

Results: The optimal contamination model was one-half teaspoon of pigment and 15 milliliters of tap water. We had the most success when we applied the simulated contaminant by fingertip to the victim's shirt. We used this model with four different subjects and decontaminated them in a cold water shower, while fully clothed, until they were completely wet and dripping. In every case, pigment was left on the clothing even after decontamination. Additionally, while there was no pigment detectable on the skin before decontamination, we found significant amounts of pigment on the skin after decontamination. Showering the person while clothed spread the contaminants to not only the skin under the shirt but also to the lower extremities.

Conclusion: It may be unsafe to drench asymptomatic people who have been contaminated with a hazardous substance before removing their clothes. We have developed a model that investigators may use for further studies.

13 Does Acculturation Influence End-of-Life Treatment Preferences

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Background: Prior research has evaluated the willingness to accept or refuse life-sustaining therapy but have not included Spanish-speaking populations. These decisions in a clinical setting are often part of the advance directive discussion bringing the importance into the emergency department (ED). Health care disparities exist in this population, and best approaches to discussing end of life preferences are not clear.

Objectives: In this study we sought to identify healthcare decision-making patterns and the effect of acculturation in Latino patients.

Methods: This observational study used the WALT (Willingness to Accept Life Sustaining Treatment) survey to interview subjects at four outpatient clinics (geriatrics,

cardiology, HIV and oncology) that served patients with chronic, incurable illnesses. Subjects were asked hypothetical questions regarding their preferences for treatment selected against outcome and burden. The survey was administered in Spanish. This study was IRB approved.

Results: Two hundred and forty Latino subjects were surveyed, but three were excluded due to a lack of a medical diagnosis. The mean age of the subjects was 58. Seventy-seven percent of subjects were primarily Spanish speaking. Subjects spent a mean time in the USA of approximately 23 years. When measuring time in the US and country of origin there was no difference between groups in the decision making process.

Conclusions: Latino patients regardless of country of origin or time in the US were similar in acceptance or decline of life sustaining therapy. Future work should be done with focus groups to identify relevant cultural factors so that physicians can provide a culturally sensitive discussion of advance care plans. Limitations: There is always the potential for referral bias in that the patients willing to participate in the survey may have differed from the non-responders

14 The Epidemiology of Search and Rescue Incidents in the Grand Canyon National Park: Are Preventive Measures Making a Difference?

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Introduction: Grand Canyon National Park (GCNP) has more than four million visitors each year. Each year the park's Search and Rescue (SAR) office responds to more than 400 calls for help. In 1998 in response to this large number of incidents, the park employed a Preventive Search and Rescue (PSAR) program with the aim of decreasing the number of preventable incidents within its boundaries.

Objectives: The goals of this project are to create a comprehensive data base of GCNP SAR incidents that the park may continue to use and to quantify the effect that the preventive program has had on the number and types of these incidents.

Methods: We performed a retrospective review of GCNP SAR incident reports and corresponding emergency medical service reports from 1988 to 2005. For SAR incidents with multiple patients with different injury types, each patient was recorded as a discrete observation. For each observation 23 variables were recorded, including patient age and sex, type and geographical location of incident, mechanism and type of injury or illness, and extent and cost of SAR involvement. The data was compared using a two-sample T-test.

Results: The data set includes 6843 SAR incidents ranging from 262 to 474 incidents per year. Visitation during this time ranged from 3.5 million to 4.9 million people per year.

The average number of SAR incidents per park visitor has decreased from 9.4 incidents per 100,000 visitors in the 10 years prior to 1998 to 7.6 per 100,000 visitors in the six years following ($p=0.02$).

Conclusions: The Grand Canyon National Park PSAR program seems to have decreased the incidence of visitor illness and injury, thereby decreasing the need for costly and potentially dangerous SAR responses.

15 A Needs-Assessment Questionnaire of Driving Fitness in Older Adults Presenting to the Emergency Department

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Background: Older adults (65 years and older) represent the fastest growing segment of the population. It is projected that by the year 2024 one in four drivers will be older adults. The Emergency Department (ED) may serve as a site for identifying older adults that need driving fitness evaluation and/or related intervention.

Objective: Conduct a needs assessment for driving fitness-related issues in older adults presenting to the ED.

Methods: A cross-sectional survey was conducted with English-speaking older adult patients presenting to a busy Southern California Level 1 Trauma Center and ED over a 10-month period starting February 2006. Inclusion criteria included medically stable older adults. Exclusion criteria included critically ill patients. Data was analyzed by using univariate descriptive analysis.

Results: Out of the 332 patients surveyed, 186 were 65-74 years, 109 were 75-84 years, 35 were 85 years or older and the age for two patients were not recorded. Thirty-six patients had never driven and were only asked for demographic information. When the 296 patients who had driven were asked who they consider the most qualified person to give driving advice, 33% considered their family/spouse, 24% themselves, and 14% the Department of Motor Vehicles. Only 1% felt the ED physician was the most qualified person to give driving advice. Among the 196 who currently drive, 61% would rate their driving confidence to be at 10 out of 10, 83% would limit their driving, 77% would stop driving if asked by a physician, and 43% would like the ED to refer them for further help with their driving.

Conclusion: Although the majority of patients were highly confident in their driving ability, nearly four out of five patients reported that they would be willing to limit and stop driving per physician recommendation. The discrepancy between the patients' confidence and their willingness to accept driving advice from physicians provides an opportunity for further driving-fitness research.

16 Patient Satisfaction with Routine Rapid HIV Testing in an Urban Emergency Department Using Streamlined Procedures and Pre-Existing Staff for Testing and Counseling

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Objective: To determine patient satisfaction with a voluntary rapid HIV testing program in an urban emergency department (ED).

Methods: Prospective observational study conducted in an urban academic ED. Between April 1, 2005 and March 31, 2006, nursing-initiated HIV screening was offered to eligible patients, beginning with the triage nurse. Exclusions were: age <12 years; acute psychiatric or medical illness and language barrier. Pre-test HIV information and counseling was provided in a brochure. Nurses obtained bedside written informed consent, performed the test (OraQuick Advance, oral swab) and disclosed negative results. For positive patients, emergency physicians or HIV counselors performed counseling and arranged follow-up care. Testing was performed and negative results were disclosed in both private and non-private clinical areas (curtained rooms, hallways), while positive results were disclosed in private rooms. After result disclosure, a satisfaction survey was administered to patients testing preliminary positive and to a convenience sample of patients testing negative. Patients were asked whether or not they felt HIV testing and disclosure was done in a private manner and to rate their overall satisfaction with testing on a 5-point scale.

Results: 6,381 HIV tests were performed with a 1% positivity rate. Fifty-seven of the 65 preliminary positive patients completed the survey (88%). One-hundred and five of the 178 patients testing negative who were approached completed the survey (59%). One-hundred percent (57/57) of patients testing preliminary positive and 99% (104/105) of those testing negative reported overall satisfaction with testing ($p=0.50$); 96% (55/57) of patients testing preliminary positive and 91% (96/105) of those testing negative felt that their results were disclosed in a private manner ($p=0.22$).

Conclusions: Perception of privacy was maintained despite testing and disclosure of negative results in a variety of clinical areas. Overall, patients are satisfied with streamlined ED testing procedures.

17 Evaluation of the Use of the TASER and Elevated Force to Control Workplace Violence in a Health Care Environment

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