

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.