Trauma Victims and Blood Alcohol Testing:

Attitudes and Practices of IHS Physicians

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Introduction

Many injuries are related to the misuse of alcohol.[1] In 40% of fatal highway crashes at least one driver is legally intoxicated.[2] For males ages 25-34, the rate for alcohol-related motor vehicle crash deaths among American Indians/Alaska Natives is 2.8 times higher than that for the general U.S. population.[3] Vehicle injuries were alcohol-related 61.5% of the time on an undisclosed reservation (ranging from 42.3% in 1989 to 70.8% in 1991).[4] Alcohol involvement was more likely for males than females[1,3,4] and for male drivers than female drivers.[4]

Many emergency departments and trauma centers do not routinely test for alcohol in injured patients, arguing that the presence of alcohol does not affect patient management or outcome, may invade patients' rights to privacy, and is unlikely to result in any effective alcohol intervention.[5,6] However, studies indicate that knowing the patient's blood alcohol level does affect patient care. According to Jurkovich *et al*, "Acute intoxication appears to alter the physician's initial assessment of injury severity, resulting in an increased use of invasive diagnostic and therapeutic procedures."[7]

Waller,[2] in the Journal of Trauma, had the following to say about the care of trauma victims:

> Both acute ingestion and chronic abuse of alcohol increase the frequency and severity of injury, and may complicate patient management by mimicking head trauma, masking intra-abdominal injury, causing circulatory collapse, reducing immune response, altering hepatic metabolism, or causing delirium tremens.
>
> Proper management of a trauma patient with alcohol includes blood alcohol concentration (BAC) determination, careful history taking for alcoholism with referral for further evaluation or treatment when indicated, and determination whether other drugs are also being used. Failure to do these may put a physician at legal risk both for improper care to the patient and for exposing others to injury if the patient crashes after being discharged from the emergency department while still impaired by alcohol.

Soderstrom and Cowley[5] point out that the American College of Surgeons considers it "essential" that level 1 and 2 trauma centers provide "drug and alcohol screening." Simel and Feussner[6] agree that the blood alcohol level should be determined in trauma victims and respond to concerns about legal implications by pointing out that:

> When blood alcohol concentrations are used to provide realistic individualized patient guidelines regarding drunken driving, legal issues become moot: the patient's health becomes the only motivating factor, and the use of blood alcohol concentrations becomes equivalent to any other laboratory test obtained

> for diagnosis and treatment.

They go on to say:

> It is possible, given a blood alcohol concentration, to predict on average how long it will take for the level to decrease to a specified level. This information can be used to provide impaired patients with a written "driving prescription" indicating the minimum time during which driving should be avoided....

Purpose of Study

The purpose of this study was to determine the general attitudes and practices of Indian Health Service (IHS) physicians related to ordering a blood alcohol test on trauma patients seen in the emergency room.

Methods

Addresses of IHS-employed physicians were obtained from the IHS Division of Health Professions Recruitment and Training in Rockville, Maryland. Tribally-employed physicians were not included because a mailing list was unavailable. A two-page questionnaire was sent to all 927 IHS-employed physicians. A case study was presented, and physicians were asked if they would order a blood alcohol test on the hypothetical patient. Other questions addressed the following issues: the effect of sex, age, employment status, and tribal status on the ordering of BACs; perceived confidentiality of IHS medical records; fear of being sued; the presence or absence of a policy on blood alcohol testing at their facility; and their willingness to support an Agency-wide policy for ordering a blood alcohol test routinely on patients seen in the emergency room for severe trauma. The questionnaire also addressed the demographic breakdown of the IHS physicians by years of service, personnel category (e.g., Commissioned Corps or Civil Service), and speciality training.

The questions were developed after consultation with IHS injury prevention specialists, alcohol treatment specialists, physicians, and injury epidemiologists. The questionnaire was mailed in September 1993. The data obtained were analyzed with the CDC/WHO Epi Info Version 5 statistical software for the percentages of responses to each question.[8]

Results

Of the 927 questionnaires mailed to all currently employed IHS physicians, 518 (56%) were returned. One hundred and four respondents indicated they did not work in the emergency room; they were deleted from the study. A total of 414 responses were analyzed.

Table 1 displays the survey questions and results. The questions have been grouped as physician *practices*, *attitudes*, *logistics*, and *concerns* (Table 1). Table 2 displays the characteristics of the physician sample according to their employment status, years of service, and speciality training.

Table 1. Responses to survey questions.

Practices	
1.* Would you order a blood alcohol test on the above patient?	
Yes	71.6%

2.* Are you more likely to order a blood alcohol test on a man or a woman with injuries?

Man	8.3%
No Pref	91.7%

3.* Are you more likely to order a blood alcohol test on an adult or a teenager with injuries?

Adult	6.6%
Teen	3.9%
No Pref	89.5%

4.* Are you more likely to order a blood alcohol test if your patient is an IHS employee?

Yes	1.7%

5.* Would you order a blood alcohol test if the patient was a high ranking tribal official?

Yes	84.9%

6. Would you routinely (at least 80% of the time) order a blood alcohol test on emergency room patients that have been admitted for trauma?

Yes	47.3%

Attitudes

7. Do you support the development of an IHS policy requiring that all patients examined in the emergency room immediately after an injury be required to have a blood alcohol test performed on them?

Yes	38.3%

8. Do you believe that alcohol misuse contributes to injuries?

Yes	99.5%

9. Do you believe that knowing the patient's blood alcohol level is helpful when evaluating your patient?

Yes	90.5%

10. Do you believe you can assist in reducing the injury rate by ordering a blood alcohol test on patients seen in the emergency room?

Yes	26.9%

11. Do you believe that a breathalizer test produces a valid measure of a patient's blood alcohol level?

Yes	59.7%

Logistics

12.* Is there a policy within you facility governing the ordering of the blood alcohol test on patients seen for trauma?

Yes	21.2%
No	45.5%
Don't know	33.3%

13.* Does your laboratory have the ability to analyze a blood alcohol test STAT?

Yes	83.2%

14. Does your emergency room have access to a breathalizer?

Yes	12.6%

Concerns

15.* Do you believe that patient confidentiality can be compromised if you order a blood alcohol test?
Yes 37.1%

16. Do you believe that IHS medical records are kept confidential?
Yes 49.2%

17. Do you believe that you may be involved in litigation if you order a blood alcohol test on the patient?
Yes 22.5%

* The questions identified with the asterisks were related directly to the injury scenario described in the text.

Table 2. Characteristics of physician sample, N=414, 1993.

Employment Category

Commissioned Corps	48.2%
Civil Service	49.9%
Tribal Employee	0.7%
Contract Physician	1.2%

Years of Service

Less than 5 Years	43.5%
Between 5 and 10 Years	30.3%
Between 10 and 15 Years	13.4%
More than 15 Years	12.9%

Speciality

Family Medicine	41.2%
General Medical Officer	8.0%
Internal Medicine	18.2%
Pediatrics	9.7%
Emergency Room	5.8%
Other	17.0%

The injury scenario presented in the questionnaire stated: "Please complete the questionnaire assuming the following scenario for the first eight questions [identified by asterisks in Table 1]. You are attending a patient in your emergency room; your patient has been injured within the past 30 minutes. Your patient's injuries are severe and the patient must be admitted to a hospital for further care." Seventy-one percent of the responding physicians would order a blood alcohol test on the patient described in the injury scenario and more than 90% of the physicians believe that knowing the blood alcohol concentration is helpful when evaluating a patient. Forty-seven percent of the physicians would routinely order a blood alcohol test on patients seen for trauma. Thirty-eight percent of the physicians support a policy requiring that all patients examined in the emergency room for an injury be required to have a blood alcohol test. Twenty-two percent of the physicians believe that they will be involved in litigation if they order a blood alcohol test on a patient.

Discussion and Recommendations

No generalizations can be made about the entire IHS physician population or the nonrespondents. Since no tribally-employed physicians were included, we can make no assumptions about their attitudes related to the issues addressed in this study.

The majority of IHS physicians who responded to our survey would not routinely order a BAC even though they believe that knowing the patient's blood alcohol level is generally helpful in assessing the patient. The majority of IHS physicians do not want an Agency-wide policy requiring the ordering of a blood alcohol test. It is unclear why there is this paradoxical attitude toward BACs. Further study of this topic may need to include an attempt to explore this dichotomy.

Additional studies could attempt to determine physicians' perceptions about their role in injury prevention, their attitudes about alcohol users and abusers, their attitudes about treatment effectiveness for persons who abuse alcohol, their knowledge about the local resources for treatment, and the relationship between these issues and the willingness of the physician to routinely do BACs. Policies related to obtaining BACs could be acquired from those facilities that have them, and questions addressing compliance with the policies and the perceived benefits/problems could be asked. In future studies, tribally-employed physicians should be included to determine if there are any differences in responses between IHS- and tribally-employed physicians. It would also be useful to survey tribal health boards or tribal councils to determine their perceptions about these issues.

There are medical, epidemiological, and possibly legal justifications for ordering a BAC on trauma patients. Physicians are in the position of protecting not only the individual patient but all who may come in contact with an alcohol impaired driver. Physicians must consider a holistic approach of caring for both the individual and the community. Assessing the BAC in trauma incidents provides an opportunity to diagnose and treat more accurately, and to offer referral for counseling and support services; while documenting a relationship between risk factors and disease provides the community with the information it needs to recognize problems and develop effective community-based interventions.

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