New Training In Detection Of Illicit Drugs In Drivers

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Abstract
The prevalence of driving under the influence of drugs other than alcohol is growing worldwide. Typically police training programs include a variety of procedures to look and test for driving under the influence of alcohol, but these training programs rarely deal with other drugs. Under a grant from the National Institute on Drug Abuse an interactive CD-ROM based training program was developed to educate police officers in how to detect drugged drivers. This course is highly interactive building on SFST/Alcohol training and includes modules on drug classification, drug effects on behavior, training to conduct on-site drug tests, SFST refresher material, and an integrated examination.

Methods
The overall goal of this project was to develop, evaluate, and disseminate cost-efficient training programs for law enforcement agencies utilizing new drug testing technology to facilitate the detection of drugged drivers. To prevent drug-related traffic accidents, officials must be able to detect drivers under-the-influence of drugs as they routinely do now with alcohol detection devices. The availability of new drug-testing devices capable of providing immediate, accurate and reliable results provides a unique opportunity to apply this technology in the enforcement of drugs and driving laws. This research establishes the potential for innovative application of on-site testing technology in drugged driving detection and deterrence. The research was conducted over three phases. Phase I encompassed a feasibility study to develop training materials and curricula for DUI and generalist patrol officers and to synthesize the testing technology and procedures into existing instructional programs. Phase II evaluated the training curricula that was presented didactically and ultimately led to the development of a self-paced CD-Rom training course. Previous evaluations of this training curriculum were conducted by the Tampa Police Department and the results are summarized in the results section of this paper.

For Phase III, which is the subject of this paper, thirty-two police officers from the Hillsborough County Sheriff’s Department, Tampa, FL, USA were trained using the interactive CD-ROM self-paced course. Sixteen of the officers were DUI trained officers and 16 were generalist patrol
officers who had received some basic training in DUI detection as part of their initial training. All successfully completed the training and passed the final exam that was administered in Hillsborough Sheriff’s department computer training center. As part of the training all police officers participated in a practicum where each officer conducted an on-site drug test using Roche TesCup®. Upon completing the training The Walsh Group conducted a short focus group meeting with the officers to obtain feedback and comments on the training and to elicit recommended changes to the training course. The meeting also served to update the officers on the procedures and protocol to be used during the ensuing evaluation phase of the project.

This was followed by an evaluation period where officers used this training to conduct drug tests on DUI suspects meeting proscribed reasonable suspicion criteria. The Florida law permits some discretion regarding what constitutes reasonable suspicion for drug testing impaired drivers. For this evaluation police officers tested any driver arrested for DUI when one or more of the following criteria existed:

1. The driver tests less than .08 BAC.
2. The BAC level does not match the level of impairment; i.e. the driver exhibits unusual or abnormal behavior not attributed to the blood alcohol level indicated.
3. The driver admits to using illegal drugs.
4. Paraphernalia or drugs are present on the driver or in the car.

Original plans called for a 4-month evaluation period. However, this was extended to eight months as some officers who were trained in August 2001 were reassigned to other duties following the September 11 terrorist attacks. The protocol called for all persons who failed the SFST and were subsequently arrested for DUI and who met any of the above proscribed criteria were required to provide a specimen for a drug test. The arresting officer was responsible for collecting the urine specimen in the TesCup, conducting the drug test, and recording the required information and test results. Forms to document the information collected from the drug test were maintained at the central breath testing facility.

To evaluate the officers’ performance using the immunoassay kits, and for quality control purposes, aliquots of all specimens screening positive and 10% of all negatives were shipped to a forensic urine drug-testing laboratory certified by the US Department of Health and Human Services for reanalysis by immunoassay and confirmation by Gas Chromatography/Mass Spectrometry if the specimen was discordant. All other specimens that tested negative were discarded on site.

**Results**

In phase II 227 specimens were collected and analyzed. All drug analyses were conducted by the arresting officer who was trained didactically by the same curricula used subsequently in phase three. Breath alcohol data was also obtained for 97% of subjects providing urine (Seven of the 227 refused to give a breath sample). Historically approximately 30% of Hillsborough County Florida DUI suspects refuse to provide a breath sample for alcohol testing. In most cases those suspects who refused to give breath also refused to give urine.
Of the 227 urine specimens analyzed by DUI Officers, 32.5% (74) tested positive for illegal drugs. Marijuana (in 58% of positive specimens) and cocaine (in 49%) were the most frequently detected illegal drugs. Twelve specimens contained more than one illegal drug.

Nearly ninety percent (200/227) of the population was legally drunk (BAC’s equal to or greater than 0.08). Of those that were legally drunk thirty percent (60/200) also tested positive for one or more illegal drugs.

During phase III [as of April 15, 2002] 58 specimens have been collected and analyzed. Of these 79.3% are positive for at least one drug. Marijuana (in and 56.8% of positive specimens) and cocaine (in 22.4%) were the most frequently detected illegal drugs. Eighteen specimens contained more than one illegal drug. Four of the population was legally drunk (BAC’s equal to or greater than 0.08). However, in this population 61.4% had a measurable BAC >.01. Breath alcohol data was obtained for all but one of the subjects.

<table>
<thead>
<tr>
<th></th>
<th>Phase Two</th>
<th>Phase Three</th>
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<tbody>
<tr>
<td>Specimens tested for drugs</td>
<td>N = 227</td>
<td>N = 58</td>
</tr>
<tr>
<td>Specimens tested for alcohol</td>
<td>N = 220</td>
<td>N = 57</td>
</tr>
<tr>
<td>Positive for at least one drug</td>
<td>32.5%</td>
<td>79.3%</td>
</tr>
<tr>
<td>Positive for Marijuana</td>
<td>58%</td>
<td>56.8%</td>
</tr>
<tr>
<td>Positive for Cocaine</td>
<td>49%</td>
<td>22.4%</td>
</tr>
<tr>
<td>Positive for multiple drugs</td>
<td>5.2%</td>
<td>31%</td>
</tr>
<tr>
<td>BAC &gt; .08</td>
<td>88.1%</td>
<td>7%</td>
</tr>
<tr>
<td>BAC &gt; .01</td>
<td>NA</td>
<td>61.4%</td>
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Police Officers demonstrated good skills in using the on-site kits and ninety-three percent of specimens testing positive on-site were confirmed by the laboratory analysis. All negative control specimens sent to the lab were confirmed as negative.

Discussion
The results of this study provide further documentation of the prevalence of illegal drug use by drivers arrested on suspicion of driving under-the-influence. In phase two nearly one-third of all legally drunk drivers were also using illegal drugs, and more than one-half of those who had low or no alcohol in their system. These data replicate earlier findings (Walsh, et al 1997, Marquet et al, 1998, and Risser, et al, 1998) with regard to overall prevalence and the fact that cannabis appears to be the most frequently detected drug. Unfortunately because of the refusal rates to provide breath and urine samples these prevalence rates should be considered as a minimum estimate of the true prevalence. The preliminary results in phase three of the study demonstrate that when probable suspicion criteria are used by the police officers in choosing which suspects will be tested for illicit drugs, the positive rate more than doubles. The results of this study also demonstrate that DUI trained police officers using the CD-ROM self paced training course can obtain and test urine specimens for drugs of abuse using immunoassay technology with a high degree of accuracy and reliability. Based on our observations and the DUI officers subjective impressions drug testing could be easily integrated into routine police operations.
Phase three also clearly demonstrates the feasibility of using new training technology, such as CD-ROM self paced courses, as a means to reach more police officers including generalist patrol officers to impact the drugged driving population. The average time spent in completing the course by the Hillsborough Sheriff Department officers was 124 minutes. Based upon the overall evaluation provided by the 27 police officers who completed the training course evaluation 13 officers thought the training was very close to what was expected, 26 thought the course was beneficial and 22 thought the course was about the right length. Several of the officers commented that a section documenting various scenarios an officer might encounter in which he or she may have to determine cause would be beneficial. The following picture files display the introduction page to the CD-ROM training and the “Main Menu”.

Figure 1. Interactive Training for Police Officers  (Introduction Screen)
In our view, to prevent drug-related traffic accidents, law enforcement officials should be able to detect drivers under-the-influence of drugs as they routinely do now with alcohol detection devices. More than 50% of the subjects who were able to pass the breath alcohol test had in fact been using illegal drugs and typically would not have been charged with DUI. In phase three police officers were able to detect a greater percentage of the subjects (nearly 80%) who had been using drugs by applying some basic probable cause criteria. The availability of on-site drug-testing devices that are capable of providing immediate accurate and reliable results provides a unique opportunity to effectively apply this technology in traffic safety and the enforcement of drugs and driving laws. The routine availability of drug testing for DUI and DRE officers could be used as a powerful prevention tool to detect and deter drugged driving behavior.

References
1. Samyn, N., Viaene, B, Vandevenne, and Verstraete, A. Inventory of state-of-the-art road side drug testing equipment, ROSITA Project, funded by the European Commission under the Transport RTD Programme, www.ebft.unipd.it/rosita/html

