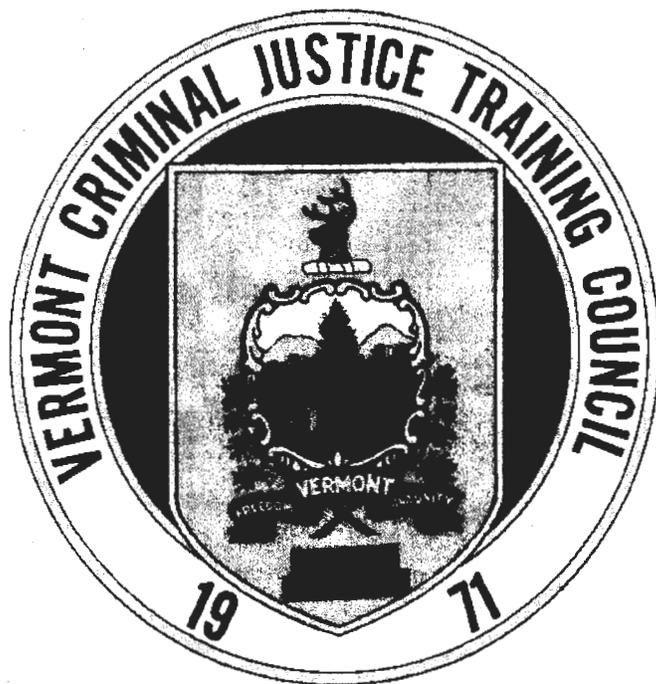


DUI DETECTION AND STANDARDIZED FIELD SOBRIETY TESTING



STUDENT MANUAL

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TABLE OF CONTENTS

SECTION I: INTRODUCTION AND OVERVIEW	3
GLOSSARY OF TERMS	8
SECTION II: DETECTION AND GENERAL DETERRENCE.....	11
DUI DETERRENCE: AN OVERVIEW	13
GENERAL DETERRENCE	15
THE SOLUTIONS	17
DUI DETERRENCE	20
DETERRENCE: THE INTERIM SOLUTION	20
THE FEAR OF BEING CAUGHT AND PUNISHED.....	20
HOW GREAT A RISK IS THERE?.....	21
HOW MUCH SHOULD THE PUBLIC FEAR?.....	22
CHANGING THE ODDS	22
DUI DETECTION: THE KEY TO DETERRENCE.....	23
CAN IT BE DONE, AND WILL IT WORK?.....	23
DETECTION: THE KEY TO DETERRENCE	24
PHYSIOLOGY OF ALCOHOL.....	25
A BRIEF OVERVIEW OF ALCOHOL	25
PHYSIOLOGIC PROCESSES.....	26
<i>Absorption</i>	27
<i>Distribution</i>	28
<i>Elimination</i>	28
DOSE-RESPONSE RELATIONSHIPS	29
SECTION III: THE LEGAL ENVIRONMENT.....	33
SECTION IV: OVERVIEW OF DETECTION	47
SECTION V: PHASE ONE [VEHICLE IN MOTION]	65
INITIAL OBSERVATIONS: VISUAL CUES TO DUI.....	68
VISUAL CUE DESCRIPTIONS	70
DIVIDED ATTENTION.....	74
RECOGNIZING AND DESCRIBING INITIAL CUE.....	75
THE STOPPING SEQUENCE	76

SECTION VI: PHASE TWO [PERSONAL CONTACT]	79
PERSONAL CONTACT	81
TYPICAL INVESTIGATION CLUES: THE DRIVER INTERVIEW	82
PRE-EXIT INTERVIEW TECHNIQUES	84
ADDITIONAL TECHNIQUES	85
THE EXIT SEQUENCE	86
SECTION VII: PHASE THREE [PRE-ARREST SCREENING]	89
PRE-ARREST SCREENING.....	91
<i>PSYCHOPHYSICAL TESTS</i>	91
<i>PRELIMINARY BREATH-TEST</i>	92
<i>THE ARREST DECISION</i>	92
<i>NYSTAGMUS</i>	92
DIVIDED ATTENTION TESTS	94
WALK-AND-TURN.....	95
ONE-LEG-STAND.....	96
PRELIMINARY BREATH TESTING	97
ADVANTAGES OF PBT.....	97
LIMITATIONS OF PBT	98
THE ARREST DECISION	99
SECTION VIII: CONCEPTS AND PRINCIPLES OF THE STANDARDIZED FIELD SOBRIETY TESTS	103
OVERVIEW OF NYSTAGMUS	107
PROCEDURES.....	109
<i>Estimating a 45-Degree Angle</i>	110
<i>Specific Procedures</i>	110
<i>Test Interpretation</i>	112
PROCEDURES FOR WALK-AND-TURN TEST	113
PROCEDURES FOR ONE-LEG STAND TEST	116

PREFACE

The procedures outlined in this manual describe how the Standardized Field Sobriety Tests (SFSTs) are to be administered under ideal conditions. We recognize that the SFSTs will not always be administered under ideal conditions in the field, because such conditions will not always exist. Even when administered under less than ideal conditions, they will generally serve as valid and useful indicators of impairment. Slight variations from the ideal, i.e., the inability to find a perfectly smooth surface at roadside, may have some affect on the evidentiary weight given to the results. However, this does not necessarily make the SFSTs invalid.

SESSION I
INTRODUCTION AND OVERVIEW

SESSION I

INTRODUCTION AND OVERVIEW

Upon successfully completing this session, the participant will be able to:

- o State the goals and objectives of the course.
- o Describe the course schedule and activities.
- o Demonstrate their pre-training knowledge of course topics.

CONTENT SEGMENTS

- A. Welcoming Remarks and Objectives
- B. Administrative Details
- C. Pre-Test

LEARNING ACTIVITIES

- o Instructor-Led Presentations
- o Written Examination

DWI DETECTION AND STANDARDIZED FIELD SOBRIETY TESTING

TRAINING GOALS AND OBJECTIVES

1. Ultimate Goal

To increase deterrence of DWI violations, and thereby reduce the number of crashes, deaths and injuries caused by impaired drivers.

2. Enforcement-Related Goals

- a. Understand enforcement's role in general DWI deterrence.
- b. Understand detection phases, clues and techniques.
- c. Understand requirements for organizing and presenting testimonial and documentary evidence in DWI cases.

3. Job Performance Objectives

As a result of this training, participants will become significantly better able to:

- a. Recognize and interpret evidence of DWI violations.
- b. Administer and interpret Standardized Field Sobriety Tests.
- c. Describe DWI evidence clearly and convincingly in written reports and verbal testimony.

4. Enabling Objectives

In pursuit of the job performance objectives, participants will come to:

- a. Understand the tasks and decisions of DWI detection.
- b. Recognize the magnitude and scope of DWI-related crashes, deaths, injuries, property loss and other social aspects of the DWI problem.
- c. Understand the deterrence effects of DWI enforcement.
- d. Understand the DWI enforcement legal environment.

- e. Know and recognize typical vehicle maneuvers and human indicators symptomatic of DWI that are associated with initial observation of vehicles in operation.
- f. Know and recognize typical reinforcing maneuvers and indicators that come to light during the stopping sequence.
- g. Know and recognize typical sensory and other clues of alcohol and/or other drug impairment that may be seen during face-to-face contact with DWI suspects.
- h. Know and recognize typical behavioral clues of alcohol and/or other drug impairment that may be seen during the suspect's exit from the vehicle.
- i. Understand the role and relevance of psychophysical testing in pre-arrest screening of DWI suspects.
- j. Understand the role and relevance of preliminary breath testing in pre-arrest screening of DWI suspects.
- k. Know and carry out appropriate administrative procedures for validated divided attention psychophysical tests.
- l. Know and carry out appropriate administrative procedures for the Horizontal Gaze Nystagmus test.
- m. Know and recognize typical clues of alcohol and/or other drug impairment that may be seen during administration of the Standardized Field Sobriety Tests.
- n. Understand the factors that may affect the accuracy of preliminary breath testing devices.
- o. Understand the elements of DWI prosecution and their relevance to DWI arrest reporting.
- p. Choose appropriate descriptive terms to convey relevant observations of DWI evidence.
- q. Write clear, descriptive narrative DWI arrest reports.

5. Additional Training Goals and Objectives

- a. If the four-hour (Introduction to Drugs That Impair) or eight-hour (Drugs That Impair Driving) modules are presented as part of the SFST training program, the goals and objectives for those modules are listed in the appropriate manuals.

GLOSSARY OF TERMS

ALVEOLAR BREATH - Breath from the deepest part of the lung.

BLOOD ALCOHOL CONCENTRATION (BAC) - The percentage of alcohol in a person's blood.

BREATH ALCOHOL CONCENTRATION (BrAC) - The percentage of alcohol in a person's breath, taken from deep in the lungs.

CLUE - Something that leads to the solution of a problem.

CUE - A reminder or prompting as a signal to do something. A suggestion or a hint.

DIVIDED ATTENTION TEST - A test which requires the subject to concentrate on both mental and physical tasks at the same time.

DWI/DUI - The acronym "DWI" means driving while impaired and is synonymous with the acronym "DUI", driving under the influence or other acronyms used to denote impaired driving. These terms refer to any and all offenses involving the operation of vehicles by persons under the influence of alcohol and/or other drugs.

DWI DETECTION PROCESS - The entire process of identifying and gathering evidence to determine whether or not a suspect should be arrested for a DWI violation. The DWI detection process has three phases:

Phase One - Vehicle In Motion

Phase Two - Personal Contact

Phase Three - Pre-arrest Screening

EVIDENCE - Any means by which some alleged fact that has been submitted to investigation may either be established or disproved. Evidence of a DWI violation may be of various types:

- a. Physical (or real) evidence: something tangible, visible, or audible.
- b. Well established facts (judicial notice).
- c. Demonstrative evidence: demonstrations performed in the courtroom.
- d. Written matter or documentation.
- e. Testimony.

FIELD SOBRIETY TEST - Any one of several roadside tests that can be used to determine whether a suspect is impaired.

HORIZONTAL GAZE NYSTAGMUS (HGN) - An involuntary jerking of the eyes as they gaze toward the side.

ILLEGAL PER SE - Unlawful in and of itself. Used to describe a law which makes it illegal to drive while having a statutorily prohibited Blood Alcohol Concentration.

NYSTAGMUS - An involuntary jerking of the eyes.

ONE-LEG STAND (OLS) - A divided attention field sobriety test.

PERSONAL CONTACT - The second phase in the DWI detection process. In this phase the officer observes and interviews the driver face to face; determines whether to ask the driver to step from the vehicle; and observes the driver's exit and walk from the vehicle.

PRE-ARREST SCREENING - The third phase in the DWI detection process. In this phase the officer administers field sobriety tests to determine whether there is probable cause to arrest the driver for DWI, and administers or arranges for a preliminary breath test.

PRELIMINARY BREATH TEST (PBT) - A pre-arrest breath test administered during investigation of a possible DWI violator to obtain an indication of the person's blood alcohol concentration.

PSYCHOPHYSICAL - "Mind/Body." Used to describe field sobriety tests that measure a person's ability to perform both mental and physical tasks.

STANDARDIZED FIELD SOBRIETY TEST BATTERY - A battery of tests, Horizontal Gaze Nystagmus, Walk-and-Turn, and One-Leg Stand, administered and evaluated in a standardized manner to obtain validated indicators of impairment based on NHTSA research.

TIDAL BREATH - Breath from the upper part of the lungs and mouth.

VEHICLE IN MOTION - The first phase in the DWI detection process. In this phase the officer observes the vehicle in operation, determines whether to stop the vehicle, and observes the stopping sequence.

VERTICAL GAZE NYSTAGMUS - An involuntary jerking of the eyes (up and down) which occurs when the eyes gaze upward at maximum elevation.

WALK-AND-TURN (WAT) - A divided attention field sobriety test.

SESSION II
DETECTION AND GENERAL DETERRENCE

SESSION II

DETECTION AND GENERAL DETERRENCE

Upon successfully completing this session, the participant will be able to:

- o Describe the frequency of DWI violations and crashes.
- o Define General Deterrence.
- o Describe the Relationship between Detection and General Deterrence.
- o Describe a brief history of alcohol;
- o Identify common types of alcohols;
- o Describe the physiologic processes of absorption, distribution and elimination of alcohol in the human body;

CONTENT SEGMENTS

- A. The DWI Problem
- B. The Concept of General Deterrence
- C. Relating Detection to Deterrence Potential
- D. Evidence of Effective Detection and Effective Deterrence
- E. Physiology of Alcohol

LEARNING ACTIVITIES

- o Instructor-Led Presentations
- o Reading Assignments

DWI DETERRENCE: AN OVERVIEW

Each year, tens of thousands of people die in traffic crashes. Throughout the nation, alcohol is the major contributor to traffic fatalities. In 2002, alcohol-related fatalities rose to 17,419, representing 41 percent of all traffic fatalities. (NHTSA 2002 FARS data)

Impaired drivers are more likely than other drivers to take excessive risks such as speeding or turning abruptly. Impaired drivers also are more likely than other drivers to have slowed reaction times. They may not be able to react quickly enough to slow down before crashing and are less likely to wear seatbelts. On the average, two percent of drivers on the road at any given time are DWI. DWI violations and crashes are not simply the work of a relatively few "problem drinkers" or "problem drug users." Many people commit DWI, at least occasionally.

- o In a 1991 Gallup Survey of 9,028 drivers nationwide, 14% of the respondents reported they drove while close to or under the influence of alcohol within the last three months.

It is conservatively estimated that the typical DWI violator commits that offense about 80 times per year. In other words, the average DWI violator drives while under the influence once every four or five nights.

THE PROBLEM OF DWI

HOW WIDESPREAD IS DWI?

While not all of those who drive after drinking have a BAC of 0.08/0.10 or more, the presumptive or illegal per se limit for DWI in many states, some drivers do have BACs in excess of these limits.

A frequently quoted, and often misinterpreted, statistic places the average incidence of DWI at one driver in fifty. Averaged across all hours of the day and all days of the week, two percent of the drivers on the road are DWI.¹ That 1 in 50 figure is offered as evidence that a relatively small segment of America's drivers the so called "problem" group account for the majority of traffic deaths. There's nothing wrong with that figure as a statistical average, but police officers know that at certain times and places many more than two percent of drivers are impaired. National Highway Traffic Safety Administration research suggests that during the late night, weekend hours, as many as ten percent of drivers on the roads may be DWI.² On certain holiday weekends, and other critical times, the figure may go even higher.

HOW MANY? HOW OFTEN?

The issue of how many DWIs are on the road at any given time is an important

factor in measuring the magnitude of the problem. However, from an overall traffic safety perspective, the more important issue may be the number of drivers who ever commit DWI. Just how widespread is this violation? In enforcement terms, how many people do we need to deter?

Clearly, it is more than one in fifty. Although it may be true that, on the average, two percent of drivers are DWI at any given time, it certainly is not the same two percent every time. It is even more than one in ten. Not everyone who commits DWI is out on the road impaired every Friday and Saturday night. Some of them, at least, must skip an occasional weekend. Thus, the ten percent who show up, weekend after weekend, in the Friday and Saturday statistics must come from a larger pool of violators, each of whom "contributes" to the statistics on some nights, but not necessarily on all nights.

An analysis of BAC roadside survey data suggests that the average DWI violator commits the violation approximately 80 times each year.³ Undoubtedly, there are some who drive impaired virtually everyday; others commit the violation less often. It is likely that at least one quarter of all American motorists drive while impaired at least once in their lives. That figure falls approximately midway between the 55 percent of drivers who at least occasionally drive after drinking and the ten percent of weekend, nighttime drivers who have BACs above the so called legal limit.

- 1 Borkenstein, R.F., et al, Role of Drinking Driver in Traffic Accidents. Bloomington IN: Department of Police Administration, Indiana University, March 1964.
- 2 Alcohol Highway Safety Workshop, Participant's Workbook Problem Status. NHTSA, 1980.
- 3 DWI Law Enforcement Training: Instructor's Manual. NHTSA. August 1974. P.139.

Our estimated one in four drivers includes everyone who drives impaired everyday, as well as everyone who commits the violation just once and never offends again; and it includes everyone in between. In short, it includes everyone who ever runs the risk of being involved in a crash while impaired.

SOCIETY'S PROBLEM AND THE SOLUTION

It really doesn't matter whether this one in four estimate is reasonably accurate (in fact, it is probably low). The fact is that far more than two percent of American drivers actively contribute to the DWI problem. DWI is a crime committed by a substantial segment of Americans. It has been and remains a popular crime; one that many people from all walks and stations of life commit. DWI is a crime that

can be fought successfully only through a societal approach of comprehensive community-based programs.

GENERAL DETERRENCE

One approach to reducing the number of drinking drivers is general deterrence of DWI. General deterrence of DWI is based in the driving public's fear of being arrested. If enough violators come to believe that there is a good chance that they will get caught, at least some of them will stop committing DWI at least some of the time. However, unless there is a real risk of arrest, there will not be much fear of arrest.

Law enforcement officers must arrest enough violators enough of the time to convince the general public that they will get caught, sooner or later, if they continue to drive while impaired.

How many DWI violators must be arrested in order to convince the public that there is a real risk of arrest for DWI? Several programs have demonstrated that significant deterrence can be achieved by arresting one DWI violator for every 400 DWI violations committed. Currently, however, for every DWI violator arrested, there are between 500 and 2,000 DWI violations committed. (See Exhibit 2-1) When the chances of being arrested are one in two thousand, the average DWI violator really has little to fear.

EXHIBIT 2-1



Chances of a DWI violator being arrested are as low as 1 in 2000.

Why is the DWI arrest to violations ratio (1:2000) so low? There are three noteworthy reasons.

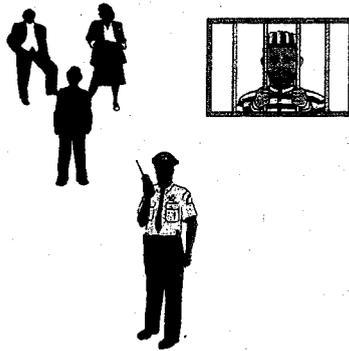
- o DWI violators vastly outnumber police officers. It is not possible to arrest every drinking driver each time they commit DWI.
- o Some officers are not highly skilled at DWI detection. They fail to recognize and arrest many DWI violators.
- o Some officers are not motivated to detect and arrest DWI violators.

SIGNIFICANT FINDINGS

In a 1975 study conducted in Fort Lauderdale, Florida, only 22 percent of traffic violators who were stopped with BACs between 0.10 and 0.20 were arrested for DWI. The remainder were cited for other violations, even though they were legally impaired. In this study breath tests were administered to the violators by researchers after the police officers had completed their investigations. The officers failed to detect 78 percent of the DWI violators they investigated.

The implication of this study, and of other similar studies, is that for every DWI violator actually arrested for DWI, three others are contacted by police officers, but are not arrested for DWI. (See Exhibit 2-2.) It is clear that significant improvement in the arrest rate could be achieved if officers were more skilled at DWI detection.

EXHIBIT 2-2



For every DWI violator arrested, 3 others are contacted face to face by police, but are not arrested.

Several enforcement programs have succeeded in achieving significant DWI deterrence. Consider, for example, the three year intensive weekend DWI enforcement program in Stockton, California. Under that program:

- o arrests increased 500 percent;
- o weekend nighttime crashes decreased 34 percent;
- o the proportion of nighttime weekend drivers legally under the influence dropped from nine percent to six percent.

Improved DWI detection can be achieved in virtually every jurisdiction in the country. The keys to success are police officers who are:

- o skilled at DWI detection;
- o willing to arrest every DWI violator who is detected;
- o supported by their agencies in all aspects of this program, from policy through practical application.

THE SOLUTIONS

THE ULTIMATE GOAL: CHANGING BEHAVIOR

What must comprehensive community based DWI programs seek to accomplish? Ultimately, nothing less than fundamental behavioral change, on a widespread basis. The goal is to encourage more Americans to:

- o avoid committing DWI, either by avoiding or controlling drinking prior to driving or by selecting alternative transportation.

- o intervene actively to prevent others from committing DWI (for example, putting into practice the theme "friends don't let friends drive drunk");
- o avoid riding with drivers who are impaired.

The final test of the value of DWI countermeasures on the national, state and local levels is whether they succeed in getting significantly more people to modify their behavior. The programs also pursue other more immediate objectives that support or reinforce the ultimate goal. However, the ultimate goal is to change driving while impaired to an unacceptable form of behavior at all levels.

PURSUING THE GOAL: TWO APPROACHES

How can we bring about these changes in behavior? How can we induce more people to avoid DWI violations, prevent others from drinking and driving, and avoid becoming passive "statistics" by refusing to ride with drinking drivers? Basically, there are two general approaches that must be taken to achieve this goal. One: prevention -- gives promise of the ultimate, lasting solution to the DWI problem; but it will require a substantial amount of time to mature fully. The other -- deterrence -- only offers a partial or limited solution, but it is available right now.

PREVENTION: THE ULTIMATE SOLUTION

DWI countermeasures that strive for the ultimate achievement of drinking and driving behavioral changes have been grouped under the label "Prevention." There are many kinds of DWI preventive activities. Some are carried out by and in our schools, some through the mass media, some through concerned civic groups, and so forth. The various preventive efforts focus on different specific behaviors and address different target groups. However, they seek to change drinking and driving behavior by promoting more positive attitudes and by fostering a set of values that reflects individual responsibilities toward drinking and driving.

Preventive countermeasures seek society's acceptance of the fact that DWI is wrong. Some people believe that drinking and driving is strictly an individual's personal business; that it is up to each person to decide whether or not to accept the risk of driving after drinking. Preventive activities try to dispel that outmoded and irresponsible belief. Instead, they promote the idea that no one has the right to endanger others by drinking and driving, or to risk becoming a burden (economically and otherwise) to others as a result of injuries suffered while drinking and driving. Realistically, everyone has an obligation not only to control their own drinking and driving, but also to speak up when others are about to commit the violation. Only when all of society views DWI as a negative behavior that cannot be tolerated or condoned, will the public's behavior begin to change. That is the long-term solution.

DWI prevention will never be 100 percent successful. In reality, there will always be people who drink and drive. However, with new sets of values come new behaviors. For example, one need only look at the proliferation of "Thank You for Not Smoking" signs. Displaying such a sign a generation ago would have been viewed as impolite, if not anti-social. Today, "No Smoking" policies are strictly enforced in many work areas.

DWI prevention through basic shifts in attitudes and values can work. Given enough time, it will work. The key word is time. A full generation or more must grow to maturity before new attitudes take hold and start to change behavior. We can look at today's children and expect that their attitude toward drinking and driving will be different from their parents; however, we need an interim solution, and we need it NOW.

DWI DETERRENCE

DETERRENCE: THE INTERIM SOLUTION

DWI countermeasures that seek a short-cut to the ultimate goal of behavioral change generally are labeled "Deterrence." Deterrence can be described as negative reinforcement. Some deterrence countermeasures focus primarily on changing individual drinking and driving behavior while others seek to influence people to intervene into others' drinking and driving decisions.

The key feature of deterrence is that it strives to change DWI behavior without dealing directly with the prevailing attitudes about the rightness or wrongness of DWI. Deterrence uses a mechanism quite distinct from attitudinal change: fear of apprehension and application of sanctions.

THE FEAR OF BEING CAUGHT AND PUNISHED

Large scale DWI deterrence programs try to control the DWI behavior of the driving public by appealing to the public's presumed fear of being caught. Most actual or potential DWI violators view the prospect of being arrested with extreme distaste. For some, the arrest, with its attendant handcuffing, booking, publicity and other stigmatizing and traumatizing features, is the thing most to be feared. For others, it is the prospective punishment (jail, stiff fine, etc.) that causes most of the concern. Still others fear most the long-term costs and inconvenience of a DWI arrest: the license suspension and increased premiums for automobile insurance. For many violators the fear probably is a combination of all of these. Regardless, if enough violators are sufficiently fearful of DWI arrest, some of them will avoid committing the violation at least some of the time. Fear by itself will not change their attitudes; if they do not see anything inherently wrong with drinking and driving in the first place, the prospect of arrest and punishment will not help them see the light. However, fear sometimes can be enough to keep them from putting their anti-social attitudes into practice.

This type of DWI deterrence, based on the fear of being caught, is commonly called general deterrence. It applies to the driving public generally and presumably affects the behavior of those who have never been caught. There is an element of fear of the unknown at work here.

Another type of DWI deterrence, called specific deterrence, applies to those who have been caught and arrested. The typical specific deterrent involves some type of punishment, perhaps a fine, involuntary community service, a jail term or action against the driver's license. The punishment is imposed in the hope that it will convince the specific violator that there is indeed something to fear as a result of being caught, and to emphasize that if there is a next time, the punishment will be even more severe. It is the fear of the known that comes into play in this case.

The concept of DWI deterrence through fear of apprehension or punishment seems sound. But will it work in actual practice? The crux of the problem is this: If the motoring public is to fear arrest and punishment for DWI, they must perceive that there is an appreciable risk of being caught and convicted if they commit the crime. If actual and potential DWI violators come to believe that the chance of being arrested is minimal, they will quickly lose whatever fear of arrest they may have felt.

Enforcement is the mechanism for creating and sustaining a fear of being caught for DWI. No specific deterrence program can amount to much, unless police officers arrest large numbers of violators; no punishment or rehabilitation program can affect behavior on a large scale unless it is applied to many people. General deterrence depends on enforcement -- the fear of being caught is a direct function of the number of people who are caught.

Obviously, the police alone cannot do the job. Legislators must supply laws that the police can enforce. Prosecutors must vigorously prosecute DWI violators, and the judiciary must adjudicate fairly and deliver the punishments prescribed by law. The media must publicize the enforcement effort and communicate the fact that the risk is not worth the probable outcome. Each of these elements plays a supportive role in DWI deterrence.

HOW GREAT A RISK IS THERE?

The question now is, are violators afraid of being caught? More importantly, should they be afraid? Is there really an appreciable risk of being arrested if one commits DWI?

The answer to all of these questions unfortunately is: probably not. In most jurisdictions, the number of DWI arrests appears to fall short of what would be required to sustain a public perception that there is a significant risk of being caught.

Sometimes, it is possible to enhance the perceived risk, at least for a while, through intensive publicity. However, media "hype" without intensified enforcement has never been enough to maintain the fear of arrest for very long.

HOW MUCH SHOULD THE PUBLIC FEAR?

We can draw some reasonable estimates of DWI enforcement intensity, based on what we know and on certain assumptions we have already made. Suppose we deal with a random sample of 100 Americans of driving age. If they come from typical enforcement jurisdictions, chances are that exactly one of them will be arrested for DWI in any given year: our annual DWI arrests, in most places, equal about one percent of the number of drivers in the population. That is one arrest out of 100 drivers during one year; however, how many DWI violations do those drivers commit? Recall our previous estimates that some 25 percent of America's drivers at least occasionally drive while under the influence, and that the average violator commits DWI 80 times each year. Then, our sample of 100 drivers includes 25 DWI violators who collectively are responsible for 2,000 DWI violations yearly.

CHANGING THE ODDS

If an arrest/violation ratio of 1 in 2,000 is not enough to make deterrence work, is it then reasonable to think that we can ever make deterrence work? After all, if we doubled DWI arrests to 1 in 1,000, we would still be missing 999 violators for every one we managed to catch. If we increased arrests ten-fold, to 1 in 200, 199 would escape for every one arrested. How much deterrence would that produce?

Surprisingly, it would probably produce quite a bit. We don't have to arrest every DWI offender every time in order to convince them that they have something to fear. We only have to arrest enough of them enough of the time to convince many of them that it can happen to them. As the arrest rate increases, the odds are that it will happen to them eventually. The law of averages (or cumulative probability) will catch up with them, and sooner than we might at first expect.

The statistics below display the cumulative probability (as a percentage) of being arrested at least once during the course of one, two or three years as a function of the arrest rate on any given night. These statistics are based on the assumption that the average violator commits DWI 80 times each year.

Percent of violators arrested after...

Nightly Arrest Rate	One Year	Two Years	Three Years
1 in 2000	3.9%	7.7%	11.3%
1 in 1000	7.7%	14.8%	21.3%
1 in 500	14.8%	27.4%	38.2%
1 in 200	33.0%	55.2%	70.0%

Clearly, the chances of being caught accumulate very quickly as the arrest/violation ratio increases. If we could maintain a ratio of one arrest in every 500 violations (a level of enforcement currently maintained in some jurisdictions), then by the time one year has passed, slightly more than one of every seven people (14.8%) who have committed DWI during that year will have been arrested at least once. It probably is a high enough chance to get the attention -- and fear -- of many violators. If we could achieve an arrest ratio of 1 in 200 (a level attainable by officers skilled in DWI detection) we will arrest fully one-third of all DWI violators at least once every year, and we will arrest more than half of them by the time two years have gone by.

DWI DETECTION: THE KEY TO DETERRENCE

CAN IT BE DONE, AND WILL IT WORK?

Is there any evidence that a practical and realistic increase in DWI enforcement activity will induce a significant degree of general deterrence and a corresponding change in DWI behavior? Yes there is.

As early as 1975, in the city of Stockton, California, a study showed that the city's total number of DWI arrests (700) were considerably less than one percent of the areas licensed number of drivers (130,000). The implication here was that Stockton police were only maintaining the arrest/violation ration of 1-2,000, or less. In addition, roadside surveys on Friday and Saturday nights disclosed that nine percent of the drivers were operating with BAC's of 0.10 or higher.

Then things changed. Beginning in 1976 and continuing at planned intervals through the first half of 1979, Stockton police conducted intensive DWI enforcement on weekend nights. The officers involved were extensively trained. The enforcement effort was heavily publicized and additional equipment (PBTs and cassette recorders) was made available. The police effort was closely coordinated with the District Attorney's office, the County Probation office, and other allied criminal justice and safety organizations. All this paid off. By the time the project came to a close (in 1979) DWI arrests had increased by over 500 percent, and weekend nighttime collisions had decreased by 34 percent, and the number of operators committing DWI dropped one-third.

Since the historical Stockton study numerous states have conducted similar studies to determine the degree of effect that DWI arrests would have on alcohol related fatalities in general, and total fatalities in particular. Most of these studies were conducted between 1978 and 1986.

The results of these studies graphically illustrated in each state that when the number of arrests for DWI increased, the percent of alcohol related fatalities decreased. Further, the results of a study conducted in Florida from 1981 - 1983, showed that when DWI arrests per licensed driver increased, total fatalities decreased (12-month moving average).

DETECTION: THE KEY TO DETERRENCE

It is important to understand how increased DWI enforcement can affect deterrence. Deterrence can vastly exceed the level of enforcement officers achieve on any given night. True, weekend DWI arrests can increase by as much as 500 percent, as in the Stockton study. However, even though the study showed they started with an enforcement ratio no better than 1-in-2000, the tremendous increase in DWI arrests probably only brought the arrest ratio to about 1-in-400. Regardless of the fact that 399 DWI drivers avoided arrest, the increased enforcement effort convinced at least one-third of the violators to change their behavior substantially.

The law of averages quickly starts to catch up with DWI drivers when the enforcement ratio improves to the 1-in-400 ratio. At that level, unless violators change their behavior, many of them will be caught, or at least will have known someone who has been arrested. Coupled with the heavy publicity given to the enforcement effort, those experiences were enough to raise the perception level of apprehension among DWI operators that sooner or later they would be caught. As a result, many of them changed their behavior. This is the best example of general deterrence.

In addition, during the same time that DWI arrests went up over 500 percent in Stockton, citations for other traffic violations increased by a comparatively modest 99 percent. The implication is that Stockton's officers were stopping and contacting only twice as many possible violators as they had before, but they were coming up with more than five times as many arrests.

What have the results of these studies shown? Basically, they have shown that a community will benefit from their officers' increased skills at DWI detection. Principally because of their special training, the officers were better able to recognize "cues" of impairment when they observed vehicles in motion, and they were more familiar with the "clues" or human indicators of impairment exhibited by violators during personal contact. The officers also had more confidence in the field sobriety tests they used to investigate their suspects. The most important factor was that far fewer of the violators being stopped now avoided detection and arrest.

The difficulty in detecting DWI among operators personally contacted by officers has been well documented. Analysis of roadside survey and arrest data suggest that for every DWI violator arrested, three others actually have face-to-face contact with police officers but are allowed to go without arrest.⁴ Direct support of that inference was found in the Fort Lauderdale BAC study, where researchers demonstrated that police officers arrested only 22 percent of the DWI operators they contacted, whose BAC levels were subsequently shown to be between 0.10 and 0.20.⁵

⁴ DWI Law Enforcement Training, op. cit.

⁵ Fort Lauderdale BAC Study.

The ability to detect DWI violators is the key to general deterrence and possibly, the greatest impediment to it. If we accept the three-to-one ratio of failed detections as being reasonably accurate, the implications are rather alarming. Consider the impact on a DWI violator's subsequent behavior when, after being stopped by the police, is allowed to continue driving. Very likely, these DWI violators and their friends will become even more convinced of their ability to handle drinking and driving. Further, they will come to believe that they will never be arrested because police officers can't determine when they are "over the limit." Instead of creating general DWI deterrence, this attitude breeds specific reinforcement. This helps to develop a feeling among DWI violators that they have nothing more to fear from police than an occasional ticket for a minor traffic offense.

On the positive side, the ratio of undetected to detected violations suggests that much can be accomplished with existing resources, if we use those resources as efficiently as possible. By just being able to improve detection skills of law enforcement officers we could experience an increase in the arrest/violation ratio of 4-in-2000 without any increase in contacts.

PHYSIOLOGY OF ALCOHOL

A BRIEF OVERVIEW OF ALCOHOL



Alcohol is the most abused drug in the United States.

"Alcohol" is the name given to a family of closely related and naturally-occurring chemicals. Each of the chemicals that is called an "alcohol" contains a molecule chemists refer to as a "hydroxy radical." This radical contains one oxygen atom and one hydrogen atom bonded together. The simplest alcohol has only one carbon atom, three hydrogen atoms, and one hydroxy radical. The next alcohol has two carbon atoms, five hydrogen atoms and one hydroxy radical. The third alcohol has three carbon atoms, seven hydrogen atoms and one hydroxy radical. That is how the alcohols differ from one another.

Alcohols are molecularly very similar and produce similar effects. They produce intoxicating effects when ingested into the human body. Only one of them is meant for human consumption. However, when ingested in substantial quantities it can cause death.

The ingestible alcohol is known as ethyl alcohol, or ethanol. Its chemical abbreviation is ETOH. The "ET" stands for "ethyl" and the "OH" represents the single oxygen atom bonded to one of the hydrogen atoms, ("hydroxy radical"). Ethanol is the variety of alcohol that has two carbon atoms. Two of ethanol's best known analogs are methyl alcohol (or methanol), commonly called "wood alcohol", and isopropyl alcohol (or isopropanol), also known as "rubbing alcohol".

Ethanol is what interests us, because it is the kind of alcohol that features prominently in impaired driving. Ethanol is beverage alcohol, the active ingredient in beer, wine, whiskey, liquors, etc. Ethanol production starts with **fermentation**. That is a kind of decomposition in which the sugars in fruit, grains and other organic materials combine with yeast to produce the chemical we call ethanol. This can occur naturally, as yeast spores in the air come into contact with decomposing fruit and grains. However, most of the ethanol in the world didn't ferment naturally, but was produced under human supervision.

When an alcoholic beverage is produced by fermentation, the maximum ethanol content that can be reached is about 14%. At that concentration, the yeast dies, so the fermentation stops. Obtaining a higher ethanol content requires a process called **distillation**. This involves heating the beverage until the ethanol "boils off", then collecting the ethanol vapor. It is possible to do this because ethanol boils at a lower temperature than does water.

Distilled spirits is the name we give to high-ethanol-concentration beverages produced by distillation. These include rum, whiskey, gin, vodka, etc. The ethanol concentration of distilled spirits usually is expressed in terms of **proof**, which is a number corresponding to twice the ethanol percentage. For example, an 80-proof beverage has an ethanol concentration of 40 percent.

Over the millennia during which people have used and abused ethanol, some standard-size servings of the different beverages have evolved. Beer, for example, is normally dispensed in 12-ounce servings. Since beer has an ethanol concentration of about four percent, the typical bottle or can of beer contains a little less than one-half ounce of pure ethanol. A standard glass of wine has about four ounces of liquid. Wine is about 12 percent alcohol, so the glass of wine also has a bit less than one-half ounce of ethanol in it. Whiskey and other distilled spirits are dispensed by the "shot glass", usually containing about one and one-quarter ounce of fluid. At a typical concentration of forty percent ethanol (80-proof), the standard shot of whiskey has approximately one-half ounce of ethanol. Therefore, as far as their alcoholic contents are concerned, **a can of beer, a glass of wine and a shot of whiskey are all the same.**

PHYSIOLOGIC PROCESSES

Ethanol is a Central Nervous System Depressant. It doesn't affect a person until it gets into their central nervous system, i.e., the brain, brain stem and spinal cord. Ethanol gets to the brain by getting into the blood. In order to get into the blood, it has to get into the body.

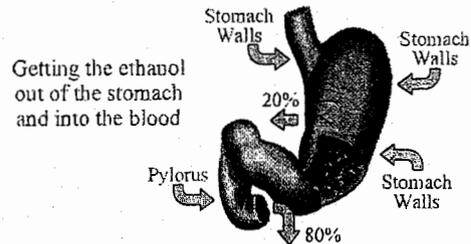
There are actually a number of different ways in which ethanol can get into the body. It can be **inhaled**. Ethanol fumes, when taken into the lungs, will pass into the bloodstream and a positive blood alcohol concentration (BAC) will develop.

However, prolonged breathing of fairly concentrated fumes would be required to produce a significantly high BAC. Ethanol could also be **injected**, directly into a vein; it would then flow with the blood back to the heart, where it would be pumped first to the lungs and then to the brain. And, it could be **inserted**, as an enema, and pass quickly from the large intestine into the blood. But none of these methods are of any practical significance, because alcohol is almost always introduced into the body orally, i.e., by drinking.

Absorption

Once the ethanol gets into the stomach, it has to move into the blood. The process by which this happens is known as **absorption**. One very important fact that pertains to alcohol

absorption is that it doesn't have to be digested in order to move from the stomach to the blood. Another very important fact is that alcohol can pass directly through the walls of the stomach. These two facts, taken together, mean that -- under the right circumstances -- absorption of alcohol can be accomplished fairly quickly. The ideal circumstance for rapid absorption is to drink on an empty stomach.



When the alcohol enters the empty stomach, about 20 percent of it will make its way directly through the stomach walls. The remaining 80 percent will pass through the base of the stomach and enter the small intestine, from which it is readily absorbed into the blood. Because the body doesn't need to digest the alcohol before admitting it into the bloodstream, the small intestine will be open to the alcohol as soon as it hits the stomach.

But what if there is food in the stomach? Suppose the person has had something to eat shortly before drinking, or eats food while drinking; will that affect the absorption of alcohol?

Yes it will. Food has to be at least partially digested in the stomach before it can pass to the small intestine. When the brain senses that food is in the stomach, it commands a muscle at the base of the stomach to constrict, and cut off the passage to the small intestine. The muscle is called the **pylorus**, or pyloric valve. As long as it remains constricted, little or nothing will move out of the stomach and into the small intestine. If alcohol is in the stomach along with the food, the alcohol will also remain trapped behind the pylorus. Some of the alcohol trapped in the stomach will begin to break down chemically before it ever gets into the blood. In time, as the digestive process continues, the pylorus will begin to relax, and some of the alcohol and food will pass through. But the overall effect will be to slow the absorption significantly. Because the alcohol only slowly gets into the blood, and because the body will continue to process and eliminate the alcohol that does manage to get in there, the drinker's BAC will not climb as high as it would have if he or she had drunk on an empty stomach.

Distribution

Once the alcohol moves from the stomach into the blood, it will be distributed throughout the body by the blood. Alcohol has an affinity for **water**. The blood will carry the alcohol to the various tissues and organs of the body, and will deposit the alcohol in them in proportion to their water contents. Brain tissue has a fairly high water content, so the brain receives a substantial share of the distributed alcohol. Muscle tissue also has a reasonably high water content, but fat tissue contains very little water. Thus, very little alcohol will be deposited in the drinker's body fat. This is one factor that differentiates alcohol from certain other drugs, notably PCP and THC, which are very soluble in fat.

The affinity of alcohol for water, and its lack of affinity for fat, helps explain an important difference in the way alcohol affects women and men. Pound for pound, the typical female's body contains a good deal less water than does the typical man's. This is because women have additional adipose (fatty) tissue, designed in part to protect a child in the womb. A Swedish pioneer in alcohol research, E.M.P. Widmark, determined that the typical male body is about 68% water, the typical female only about 55%. Thus, when a woman drinks, she has less fluid -- pound for pound -- in which to distribute the alcohol.

If a woman and a man who weighed exactly the same drank exactly the same amount of alcohol under the same circumstances, her BAC would climb higher than his. When we couple this to the fact that the average woman is smaller than the average man, it becomes apparent that a given amount of alcohol will cause a higher BAC in a woman than it usually will in a man.

Elimination

As soon as the alcohol enters the blood stream, the body starts trying to get rid of it. Some of the alcohol will be directly expelled from the body chemically unchanged. For example, some alcohol will leave the body in the breath, in the urine, in sweat, in tears, etc. However, only a small portion (about 2-10%) of the ingested alcohol will be directly eliminated.

Most of the alcohol a person drinks is eliminated by **metabolism**. Metabolism is a process of chemical change. In this case, alcohol reacts with oxygen in the body and changes, through a series of intermediate steps, into carbon dioxide and water, both of which are directly expelled from the body.

Most of the metabolism of alcohol in the body takes place in the liver. An enzyme known as **alcohol dehydrogenase** acts to speed up the reaction of alcohol with oxygen. The speed of the reaction varies somewhat from person to person, and even from time to time for any given person. On the average, however, a person's blood alcohol concentration -- after reaching peak value -- will drop by about 0.015 per hour. For example, if the person reaches a maximum BAC of 0.15, it will take about ten hours for the person to eliminate all of the alcohol.

For the average-sized male, a BAC of 0.015 is equivalent to about two-thirds of the alcohol content of a standard drink (i.e., about two-thirds of a can of beer, or glass of wine or shot of whiskey). For the average-sized female, that same BAC would be reached on just one-half of a standard drink. So the typical male will eliminate about two-thirds of a drink per hour, while the typical female will burn up about one-half of a drink in that hour.

We can control the rate at which alcohol enters our bloodstream. For example, we can gulp down our drinks, or slowly sip them. We can drink on an empty stomach, or we can take the precaution of eating before drinking. We can choose to drink a lot, or a little. But once the alcohol gets into the blood, there is nothing we can do to affect how quickly it leaves. Coffee won't accelerate the rate at which our livers burn alcohol. Neither will exercise, or deep breathing, or a cold shower. We simply have to wait for the process of metabolism to move along at its own speed.

DOSE-RESPONSE RELATIONSHIPS

People sometimes ask, "how 'high' is 'drunk'?" What is the "legal limit" for "drunk driving"? How much can a person drink before becoming "impaired"?

There is no simple answer to these or similar questions, except to say that any amount of alcohol will affect a person's ability to drive to some degree. It is true that the laws of nearly all States establish a BAC limit at which it is explicitly unlawful to operate a vehicle. In those cases, that "limit" is 0.08 BAC. But every State also makes it unlawful to drive when "under the influence" of alcohol, and the law admits the possibility that a particular person may be under the influence at much lower BACs.

How much alcohol does someone have to drink to reach these kinds of BACs? Obviously, as we've already seen, it depends on how much time the person spends drinking, on whether the person is a man or a woman, on how large the person is, on whether the drinking takes place on an empty stomach, and on certain other factors. But let's take as an example a 175-pound man. If he drinks two beers, or two shots of whiskey, in quick succession on an empty stomach, his BAC will climb to slightly above 0.04. Two more beers will boost him above 0.08. One more will push him over 0.10. In one respect, then, it doesn't take very much alcohol to impair someone: "a couple of beers" can do it.

But in another respect, when we contrast alcohol with virtually any other drug, we find that impairment by alcohol requires a vastly larger dose than does impairment by the others. Consider exactly what a BAC of 0.08 means. Blood alcohol concentration is expressed in terms of the "number of grams of ethanol in every 100 milliliters of blood". Therefore, 0.08 means that there is 0.08 grams (g) of ethanol in every 100 milliliters (mL) of blood. You will find that BAC results are reported in a variety of units. Two common variations are milligrams/milliliters and percent. There are 1000 milligrams (mg) in one gram; therefore, 0.08 grams equals 80 milligrams (mg) and a BAC of 0.08 would be reported as 80 mg of ethanol/100 mL of blood. Percent means parts per one hundred. In this example 0.08 grams/100 milliliters of blood is equivalent to 0.08% BAC.

Note: The term BAC is used in the manual. However, it should be understood to refer to either Blood Alcohol Concentration (BAC) or Breath Alcohol Concentration (BrAC) depending on the legal requirements of the jurisdiction.

TEST YOUR KNOWLEDGE

INSTRUCTIONS: Complete the following sentences.

1. The average DWI violator commits that violation ___ times a year.
2. In typical enforcement jurisdictions one DWI violation in ___ results in arrest.
3. In the Fort Lauderdale study, police officers arrested ___ percent of the drivers they contacted whose BACs were .10 to .20.
4. Name three different chemicals that are **alcohols**. Which of these is **beverage alcohol**, intended for human consumption? What is the chemical symbol for beverage alcohol?
5. What is the name of the chemical process by which beverage alcohol is produced **naturally**? What is the name of the process used to produce **high-concentration** beverage alcohol?
6. Multiple Choice: "Blood alcohol concentration is the number of _____ of alcohol in every 100 milliliters of blood."
 - A. grams
 - B. milligrams
 - C. nanograms
7. True or False: Pound-for-pound, the average woman contains more water than does the average man.
8. What do we mean by the "proof" of an alcoholic beverage?
9. Every chemical that is an "alcohol" contains what three elements?
10. True or False: Most of the alcohol that a person drinks is absorbed into the blood via the small intestine.
11. What is the name of the muscle that controls the passage from the stomach to the lower gastrointestinal tract?
12. True or False: Alcohol can pass directly through the stomach walls and enter the bloodstream.

13. Multiple Choice: Suppose a man and a woman who both weigh 160 pounds arrived at a party and started to drink at the same time. And suppose that, two hours later, they both have a BAC of 0.10. Chances are
- A. he had more to drink than she did.
 - B. they drank just about the same amount of alcohol.
 - C. he had less to drink than she did.
14. In which organ of the body does most of the metabolism of the alcohol take place?
15. What is the name of the enzyme that aids the metabolism of alcohol?
16. Multiple Choice: Once a person reaches his or her peak BAC, it will drop at a rate of about _____ per hour.
- A. 0.025
 - B. 0.015
 - C. 0.010
17. True or False: It takes about thirty minutes for the average 175-pound man to "burn off" the alcohol in one 12-ounce can of beer.

SESSION III
THE LEGAL ENVIRONMENT

SESSION III

THE LEGAL ENVIRONMENT

Upon successfully completing this session, the participant will be able to:

- o State and discuss the elements of DWI offenses.
- o Discuss the provisions of the implied consent law.
- o Discuss the relevance of chemical test evidence.
- o Discuss precedents established through case law.

CONTENT SEGMENTS

- A. Basic DWI Statute: Driving While Under The Influence
- B. Implied Consent Law and Presumptions
- C. Illegal Per Se Statute: Driving With A Proscribed Blood Alcohol Concentration
- D. Preliminary Breath Testing
- E. Case Law Review

LEARNING ACTIVITIES

- o Instructor-Led Presentation
- o Reading Assignments

INTRODUCTION

An understanding of impaired driving laws that apply in your jurisdiction is critical to DWI enforcement.

All states (and many local jurisdictions) have their own impaired driving laws. While the specific language of these laws may vary significantly, most include the following provisions:

- o a Basic DWI Law;
- o an Implied Consent Law;
- o an Illegal Per Se Law;
- o a Preliminary Breath Testing Law.

In the following pages these four types of impaired driving laws are discussed in detail. The illustrations provided are drawn from the Uniform Vehicle Code. **You are responsible for learning whether and how each law applies in your jurisdiction.**

BASIC DWI LAW

A state's basic DWI statute may be subtitled Driving While Under the Influence, or something similar. Typically the statute describes the who, what, where and how of the offense in language such as this:

“It is unlawful for any person to operate or be in actual physical control of any vehicle within this state while under the influence of alcohol and/or any drug.”

ARREST

In order to arrest someone for a basic DWI violation, a law enforcement officer must have probable cause to believe that all elements of the offense are present. That is, the officer must believe that:

- o the person in question
- o was operating or in actual physical control of
- o a vehicle (truck, van, automobile, motorcycle, even bicycle, according to specific provisions in various states)
- o while under the influence of alcohol, another drug, or both.

Note: In some states it is unlawful to operate a vehicle while impaired anywhere in the State: on or off roadways, on private property, and so on. In other states, the law applies only on publicly accessible roadways.

CONVICTION

In order to convict a person of DWI, it is necessary to establish that all four elements were present. With regard to under the influence, courts have generally held that phrase to mean that the ability to operate a vehicle has been affected or impaired. To convict a person of a basic DWI violation, it is usually necessary to show that the person's capability of safely operating the vehicle has been impaired. If DWI is a criminal offense, the facts must be established "beyond a reasonable doubt." If DWI is an infraction, the standard of proof may be less. In either case, it is the officer's responsibility to collect and to thoroughly document all evidence.

IMPLIED CONSENT LAW

DESCRIPTION

The question of how much impairment in the ability to operate a vehicle will equate with driving while under the influence is not completely clear. Some courts have held that the slightest degree of impairment to the ability to drive means the driver is "under the influence." Other courts have held that there must be evidence of substantial impairment to the ability to drive before DWI conviction is warranted. Therefore, proving that a driver was "under the influence" has been (and continues to be) difficult.

To help resolve this difficulty, states have enacted Implied Consent Laws. The principal purpose of the Implied Consent Law is to encourage people arrested for DWI to submit to a chemical test to provide scientific evidence of alcohol influence. The Implied Consent Law usually includes language similar to the following:

Any person who operates or is in actual physical control of a motor vehicle upon the public highways of this state shall be deemed to have given consent to a chemical test for the purpose of determining the alcohol and/or drug content of blood when arrested for any acts alleged to have been committed while the person was operating or in actual physical control of a vehicle while under the influence of alcohol and/or any drug.

The Implied Consent Law states drivers must submit to a chemical test(s). The law provides penalties for refusal to submit to the test. The law also provides that the individual's driver's license may be suspended or revoked if the refusal is found to be unreasonable. Including a provision for license suspension or revocation as a means of encouraging those arrested for DWI to submit to the test so that valuable chemical evidence may be obtained.

LEGAL PRESUMPTIONS

Legal presumptions define the significance of the scientific chemical test evidence. Generally the Implied Consent Law provides an interpretation or presumption for the chemical test evidence like the following:

For Example: If the chemical test shows that the person's blood alcohol concentration (BAC) is ___ or more it shall be presumed that the person is under the influence. If the test shows that the BAC is ___ or less, it shall be presumed that the person is not under the influence. If the test shows that the BAC is more than ___ but less than ___, there is no presumption as to whether the person is or is not under the influence.

NOTE: These laws vary from state to state. Be aware of your state's law.

The weight of the chemical test evidence is presumptive of alcohol influence, not conclusive.

If there is no evidence to the contrary, the court may accept the legal presumption and conclude that the driver was or was not impaired on the basis of the chemical test alone. However, other evidence, such as testimony about the driver's appearance, behavior or speech, for example, may be sufficient to overcome the presumptive weight of the chemical test.

It is possible for a person whose BAC at the time of arrest is above the per se or presumptive level legal limit to be acquitted of DWI. It is also possible for a person whose BAC at the time is below the per se or presumptive level to be convicted of DWI. Consider the following examples:

Example 1

A driver is arrested for DWI. A chemical test administered to the driver shows a BAC of 0.13 . At the subsequent trial, the chemical test-evidence is introduced. In addition, the arresting officer testifies about the driver's appearance, behavior and driving. The testimony is sketchy, confused and unclear.

Another witness testifies that the driver drove, behaved and spoke normally. The court finds the driver not guilty of DWI.

Example 2

A driver is arrested for DWI. A chemical test administered to the driver shows a BAC of 0.05 . At the subsequent trial, the chemical test evidence is introduced. In addition, the arresting officer testifies about the driver's appearance, slurred speech, impaired driving and inability to perform divided attention field sobriety tests. The testimony is clear and descriptive. The court finds the driver guilty of DWI.

The difference in outcomes in the two examples cited is directly attributable to the evidence other than the chemical test evidence presented in court. Remember that the chemical test provides presumptive evidence of alcohol influence; it does not provide conclusive evidence. While the "legal limit" in a given jurisdiction may be 0.08/0.10 BAC, many people will demonstrate impaired driving ability long before that "limit" is reached.

ILLEGAL PER SE LAW

DESCRIPTION

Most states include in their DWI Law or Implied Consent Law a provision making it illegal to drive with a prescribed blood alcohol concentration (BAC). This provision, often called an Illegal Per Se Law, creates another alcohol-related driving offense which is related to, but different from the basic DWI offense. Following is a typical Illegal Per Se Provision:

“It is unlawful for any person to operate or be in actual physical control of any vehicle within this state while having a blood alcohol concentration at or above state’s level.”

The Illegal Per Se Law makes it an offense in and of itself to drive while having a BAC at or above state’s level. To convict a driver of an Illegal Per Se Violation, it is sufficient to establish that the driver's BAC was at or above state’s level while operating a vehicle in the state. It is not necessary to establish that the driver was impaired.

NOTE: These laws vary from state to state. Know your state's law.

The Illegal Per Se Law does not replace the basic DWI law. Rather, the two work together. Each defines a separate offense:

- o The basic DWI Law makes it an offense to drive while under the influence of alcohol and/or any drug.
- o The Illegal Per Se Law makes it an offense to drive while having more than a certain percentage of alcohol in the blood.

For the basic DWI offense, the chemical test result is presumptive evidence. For the Illegal Per Se offense, the chemical test result is conclusive evidence.

PURPOSE

The principal purpose of the Illegal Per Se Law is to aid in prosecution of drinking and driving offenders. The law reduces the state's burden of proof. It is not necessary for the prosecutor to show that the driver was "under the influence." The state is not required to demonstrate that the driver's ability to drive was affected. It is sufficient for the state to show that the driver's BAC was at or above state's level.

While the statute aids in prosecution, it does not really make drinking and driving enforcement easier. An officer must still have probable cause to believe that the driver is impaired before an arrest can be made. The Implied Consent Law usually requires that the driver already be arrested before consenting to the chemical test. The law also requires that the arrest be made for "acts alleged to have been committed while operating a vehicle while under the influence." Therefore, the officer generally must establish probable cause that the offense has been committed and make a valid arrest before the chemical test can be administered.

SUMMARY

Police officers dealing with impaired driving suspects must continue to rely primarily on their own powers of detection to determine whether an arrest should be made. Usually it is impossible to obtain a legally admissible chemical test result until after the driver has been arrested. Sometimes drivers will refuse the chemical test after they have been arrested. Then the case will depend strictly upon the officer's observations and testimony. When making a DWI arrest, always assume that the chemical test evidence will not be available. It is critical that you organize and present your observations and testimony in a clear and convincing manner. In this way, more drivers who violate drinking and driving laws will be convicted, regardless of whether they take the chemical tests, and regardless of the test results.

PRELIMINARY BREATH TEST LAW

DESCRIPTION

Many states have enacted preliminary breath testing (PBT) laws. These laws permit a police officer to request a driver suspected of DWI to submit to an on-the-spot breath test prior to arresting the driver for DWI. PBT laws vary significantly from one state to another. A typical statute reads as follows:

“When an officer has reason to believe from the manner in which a person is operating or has operated a motor vehicle that the person has or may have committed the offense of operating while under the influence, the officer may request that person to provide a sample of breath for a preliminary test of the alcohol content of the blood using a device approved for this purpose.”

APPLICATION

PBT results are used to help determine whether an arrest should be made. The results usually are not used as evidence against the driver in court. However, PBT laws may provide statutory or administrative penalties if the driver refuses to submit to the test. These penalties may include license suspension, fines or other sanctions.

HISTORY OF CASE LAW

The following cases are landmark court decisions relevant to the admissibility of Standardized Field Sobriety Tests (SFSTs) including Horizontal Gaze Nystagmus (HGN). Challenges to the admissibility have been based on (1) scientific validity and reliability; (2) relationship of HGN to specific BAC level; (3) officer training, experience, and application.

- o The State of Arizona (Petitioner)

v.

The Superior Court of the State of Arizona,
in and for the county of Cochise, and the

Hon. James L. Riles, Division III (Respondent)

and

Frederick Andrew Blake (Real Party in Interest)

No. 18343-PR

Court of Appeals

No. 2 CA-SA 0254

Cochise Co.

No. 11684

April 7, 1986

The Blake case established a very important precedent in Arizona. The trial court ruled that the HGN test was not reliable under Frye v. United States, 293 F.2d 1013 (DC Cir. 1923) and thus could not be used as part of probable cause. The case was dismissed by the trial court. This ruling was appealed by the state and the order of dismissal was reversed by the court of appeals and the case was remanded for further proceedings (7/25/85).

The appellate court decision was reviewed by the State Supreme Court. The State Supreme Court approved the court of appeal's opinion, as modified, and vacated the trial court's dismissal of the Blake prosecution for DWI and remanded the case for proceedings not inconsistent with its opinion.

Following is a summary of the facts of the case and a brief overview of the appellate court and Supreme court opinions.

FACTS: After the defendant was stopped for DUI, he was given field sobriety tests on which he did fair. The officer also administered a Horizontal Gaze Nystagmus (HGN) test and estimated that defendant's blood alcohol content was .17. The intoxilizer showed a .163 reading. At the motion to suppress, the state presented testimony from the SCRI project director which originally researched the HGN test.

The researchers found that they could determine whether a person was above or below a .10 blood alcohol level 80% of the time. Finnish researchers had reached the same results. The project director testified that HGN has been accepted by various researchers, various police agencies and the National Highway Traffic Safety Administration. The police officer who helped develop and standardize HGN testified about his field experience with HGN and his work in the research on HGN. The officer testified that HGN was particularly useful in detecting drivers who had over .10 alcohol in their blood who would otherwise pass the field sobriety tests. The Arizona officer who administers HGN training testified that experienced drinkers with .13 or .14 reading could pass the other field sobriety tests and evade arrest. He testified that to be certified for HGN the officer had to perform 35 practice tests and then had to pass an exam where they must determine the blood alcohol level of suspects within .02 four out of five times. The training officer also testified that the officer must continue to use the test regularly in the field and should be evaluated to make sure the officer maintains his proficiency. The arresting officer testified that he was certified as an HGN specialist. The arresting officer testified without HGN results, he did not think he had probable cause to arrest the defendant. The trial court ruled that the HGN test was not reliable under Frye v. United States and thus could not be used as part of probable cause. Accordingly, the court dismissed the prosecution. The STATE appealed this decision.

ISSUE: Did the trial court err in excluding the HGN evidence?

RULING: Yes, "We conclude that the record shows not only that the HGN is sufficiently reliable to provide probable cause for arrest, but that with the proper foundation as to the expertise of the officer administering it, testimony concerning the administration of the test and its results is admissible at trial. The record shows that the HGN test has gained general acceptance in the field in which it belongs." The court went on to say that they were unable to rule on whether the results of this particular HGN test would be admissible because the only evidence about the officer's proficiency was his testimony that he was certified. The court of appeals noted that the officer kept a log of when he administered the test and said, "This log would be useful if it demonstrated that (the arresting officer) was as proficient in the field as he was on the examination." The order of dismissal is reversed and the case is remanded for further proceedings.

Mr. Blake sought review of the court of appeals opinion and it was granted by the Arizona Supreme Court.

ISSUES:

- (1) Whether the HGN test is sufficiently reliable to establish probable cause to arrest for DWI, and
- (2) Whether HGN test results are sufficiently reliable to be introduced in evidence at trial.

CONCLUSION: "We find that the Horizontal Gaze Nystagmus test properly administered by a trained police officer is sufficiently reliable to be a factor in establishing probable cause to arrest a driver for violating A.R.S.28-692(B). We further find that the Horizontal Gaze Nystagmus test satisfies the Frye test for reliability and may be admitted in evidence to corroborate or attack, but not to quantify, the chemical analysis of the accused's blood alcohol content. It may not be used to establish the accused's level of blood alcohol in the absence of a chemical analysis showing the proscribed level in the accused's blood, breath or urine. In subsection (A) prosecutions it is admissible, as is other evidence of defendant's behavior, to prove that he was "under the influence."

We approve the court of appeals' opinion, as modified, vacate the trial court's dismissal of the Blake prosecution for violation of A.R.S.28-792(B), and remand for proceedings not inconsistent with this opinion.

A detailed analysis of the facts reviewed by the Supreme Court is contained in the opinion. PEOPLE vs. LOOMIS (California, 1984) 156 Cal. App. 3d 1, 203 Cal. Rptr. 767 (Cal. Super. 1984)

The arresting officer attempted to testify to his opinion concerning the suspect's BAC, in quantitative terms, based solely on the angle of onset of HGN. The suspect had refused to submit to a chemical test. The court held that the officer was not entitled to testify as either a lay or expert witness about HGN, or to give his opinion about the defendant's BAC. The court held that HGN is a new form of scientific evidence, that will be allowed only when there is a preliminary showing of its general acceptance in the scientific community. Moreover, it was clear from the officer's testimony that he had not been formally or properly trained in HGN, and didn't really understand how the test is to be given.

STATE vs. BLAKE (Arizona, 1986) 718 P.2d 171 (Arizona, 1986); see also State vs. Superior Court of County of Cochise, 149 Ariz 269, 718 P.2d 171, 60 ALR 4th, 1103.

This is the landmark ruling on HGN because it was the first case decided at a State Supreme Court. The Arizona Supreme Court found that HGN satisfies the Frye standards for evidence to corroborate, or attack, the issue of a suspect's impairment.

The Frye standards are those set by the U.S. Supreme Court to govern the admissibility of "new" scientific evidence. In effect, the Arizona Supreme Court took judicial notice of HGN, so that it is no longer necessary, in Arizona, to introduce expert scientific testimony to secure the admissibility of HGN. However, the court did set standards governing the training of officers who would be qualified to testify about HGN; and the court explicitly ruled that HGN cannot be used to establish BAC quantitatively in the absence of a chemical test.

STATE vs. MURPHY (Iowa, 1990)

The court held that the results of a HGN test could be admitted into evidence at a DWI trial to prove the intoxication of the driver. (Not to be used to determine specific BAC level.) The court considered HGN to be one of the SFST's officers administer and in this case the officer was properly trained to administer the test. The court felt that the officer did not have to qualify as an expert witness because the observations were objective in nature and the officer needed no special qualifications to be able to interpret the results.

STATE v. HOMAN (732 N.E.2d 952, OHIO 2000)

This significant State Supreme Court case held that Standardized Field Sobriety Tests (SFSTs) conducted in a manner that departs from the methods established by the National Highway Traffic Safety Administration (NHTSA) "are inherently unreliable". The court determined that the administration of the SFSTs, including the one-leg stand and walk-and-turn tests, must be performed in strict compliance with the directives issued by NHTSA.

The court concluded that because the arresting officer admitted to not having strictly complied with established police procedure during the administration of the HGN and walk-and-turn tests, the results of the SFSTs must be excluded. In contrast with other court rulings, the *HOMAN* court found "*it is well established that in field sobriety testing even minor deviations from the standardized procedures can severely bias the results.*" This decision was based upon an older edition of this manual where an ambiguous phrase was strictly interpreted by the court. The phrase in question only applied to the use of SFSTs for training purposes.

SMITH vs. WYOMING (Wyoming, 2000)

The State Supreme Court held a law enforcement officer may testify to the results of field sobriety tests (including HGN) if it is shown that the officer has been adequately trained in the administration and assessment of those field sobriety tests, and conducted them in substantial accordance with that training. The court further stated "*deficiencies in the administration of the sobriety tests go to the weight accorded the evidence and not to its admissibility.*"

TO SUMMARIZE:

The prevailing trend in court is to accept HGN as evidence of impairment, provided the proper scientific foundation is laid. However, courts consistently reject any attempt to derive a quantitative estimate of BAC from nystagmus. Additionally, officers should recognize the relevance of administering the Standardized Field Sobriety Tests in accordance with the NHTSA guidelines.

The National Traffic Law Center (NTLC) has a list of every state's Appellate Court/ Supreme Court case addressing HGN and SFST issues. The materials are available to law enforcement at www.ndaa.org/apri/NTLC or by phone (703) 549-4253.

TEST YOUR KNOWLEDGE

INSTRUCTIONS: Complete the following sentences.

1. The elements of the Basic DWI Law are:
 - a.
 - b.
 - c.
 - d.
2. If DWI is a criminal offense, the standard of proof is _____

3. The purpose of the Implied Consent Law is _____

4. Under the Implied Consent Law, chemical test evidence is _____
_____ evidence.
5. The Illegal Per Se Law makes it unlawful to _____

6. The PBT law permits a police officer to request a driver suspected of DWI to _____

7. PBT results are used to help determine _____

SESSION IV

OVERVIEW OF DETECTION
NOTE TAKING AND TESTIMONY

SESSION IV

OVERVIEW OF DETECTION, NOTE TAKING AND TESTIMONY

Upon successfully completing this session, the participant will be able to:

- o Describe the three phases of detection.
- o Describe the tasks and key decision of each phase.
- o Discuss the uses of a standard note taking guide.
- o Discuss guidelines for effective testimony.

CONTENT SEGMENTS

- A. Three Phases of Detection
- B. DWI Investigation Field Notes
- C. Courtroom Testimony

LEARNING ACTIVITIES

- o Instructor-Led Presentations
- o Reading Assignments

DWI DETECTION

Detection is both the most difficult task in the DWI enforcement effort, and the most important. If officers fail to detect DWI violators, the DWI countermeasures program ultimately will fail. If officers do not detect and arrest DWI violators, the prosecutors can not prosecute them, the courts and driver licensing officials can not impose sanctions on them, and treatment and rehabilitation programs will go unused.

The term DWI detection has been used in many different ways. Consequently it does not mean the same thing to all police officers. For the purposes of this training, DWI detection is defined as:

THE ENTIRE PROCESS OF IDENTIFYING AND GATHERING EVIDENCE
TO DETERMINE WHETHER OR NOT A SUSPECT SHOULD BE ARRESTED
FOR A DWI VIOLATION.

The detection process begins when the police officer first suspects that a DWI violation may be occurring and ends when the officer decides that there is or there is not sufficient probable cause to arrest the suspect for DWI.

Your attention may be called to a particular vehicle or individual for a variety of reasons. The precipitating event may be a loud noise; an obvious equipment or moving violation; behavior that is unusual, but not necessarily illegal; or almost anything else. Initial detection may carry with it an immediate, suspicion that the driver is impaired; or only a slight suspicion; or even no suspicion at all at that time. In any case, it sets in motion a process wherein you focus on a particular individual and have the opportunity to observe that individual and to accumulate additional evidence.

The detection process ends when you decide either to arrest or not to arrest the individual for DWI. That decision, ideally, is based on all of the evidence that has come to light since your attention first was drawn to the suspect. Effective DWI enforcers do not leap to the arrest/no arrest decision. Rather, they proceed carefully through a series of intermediate steps, each of which helps to identify the collective evidence.

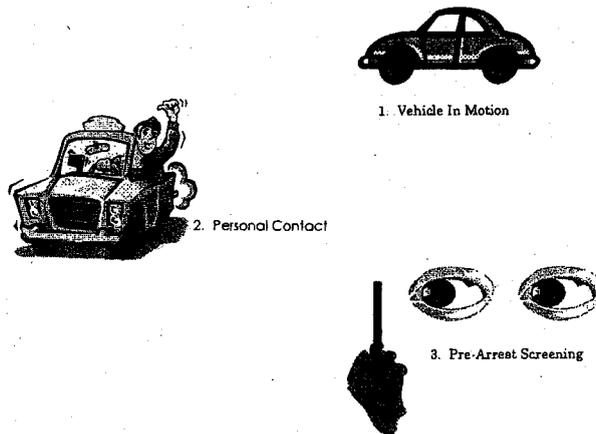
DETECTION PHASES

The typical DWI contact involves three separate and distinct phases:

- Phase One: Vehicle in motion
- Phase Two: Personal contact
- Phase Three: Pre-arrest screening

(See Exhibit 4-1.)

EXHIBIT 4-1 DWI DETECTION PHASES



In Phase One, you usually observe the driver operating the vehicle. In Phase Two, after you have stopped the vehicle, there usually is an opportunity to observe and speak with the driver face-to-face. In Phase Three, you usually have an opportunity to administer some formal structured field sobriety tests to the driver to evaluate the degree of impairment. You may administer a preliminary breath test in addition to field sobriety tests to verify that alcohol is the cause of the impairment.

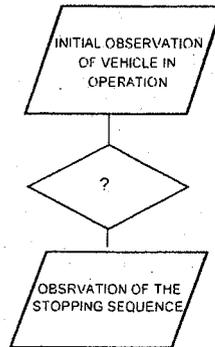
The DWI detection process does not always include all three phases. Sometimes there are DWI detection contacts in which Phase One is absent; that is, cases in which you have no opportunity to observe the vehicle in motion. This may occur at the scene of a crash to which you have been called, at a roadblock, or when you have responded to a request for motorist assistance. Sometimes there are DWI contacts in which Phase Three never occurs. There are cases in which you would not administer formal tests to the driver. These may occur when the driver is impaired or badly injured, or refuses to submit to tests.

MAJOR TASKS AND DECISIONS

Each detection phase usually involves two major tasks and one major decision (See Exhibit 4-2.)

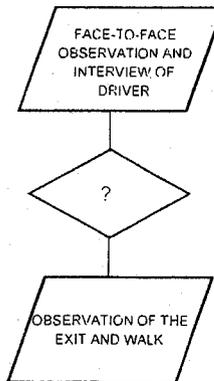
EXHIBIT 4-2 DWI DETECTION PHASES

PHASE ONE:
Vehicle In Motion



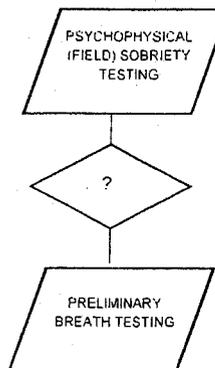
SHOULD I
STOP THE VEHICLE?

PHASE TWO:
Personal Contact



SHOULD THE
DRIVER EXIT?

PHASE THREE:
Prearrest Screening



IS THERE PROBABLE
CAUSE TO ARREST
THE SUSPECT FOR DWI?

In Phase One: Your first task is to observe the vehicle in operation. Based on this observation, you must decide whether there is sufficient cause to command the driver to stop. Your second task is to observe the stopping sequence.

In Phase Two: Your first task is to observe and interview the driver face-to-face. Based on this observation, you must decide whether there is sufficient cause to instruct the driver to step from the vehicle for further investigation. Your second task is to observe the driver's exit and walk from the vehicle.

In Phase Three: Your first task is to administer structured, formal psychophysical tests. Based on these tests, you must decide whether there is sufficient probable cause to arrest the driver for DWI. Your second task is then to arrange for (or administer) a Preliminary Breath Test.

Each of the major decisions can have any one of three different outcomes:

1. Yes - Do it Now
2. Wait - Look for Additional Evidence
3. No - Don't Do It

Consider the following examples.

1. Yes - Do It Now

Phase One: Yes, there are reasonable grounds to stop the vehicle.

Phase Two: Yes, there is enough reason to suspect impairment to justify getting the driver out of the vehicle for further investigation.

Phase Three: Yes, there is probable cause to arrest the driver for DWI right now.

2. Wait - Look for Additional Evidence

Phase One: Don't stop the vehicle yet; keep following and observing it a bit longer.

Phase Two: Don't get the driver out of the car yet; keep talking to and observing the driver a bit longer. (This option may be limited if the officer's personal safety is at risk.)

Phase Three: Don't arrest the driver yet; administer another field sobriety test before deciding.

3. Don't Do It:

Phase One: No, there are no grounds for stopping that vehicle.

Phase Two: No, there isn't enough evidence of DWI to justify administering field sobriety tests.

Phase Three: No, there is not sufficient probable cause to believe this driver has committed DWI.

OFFICER RESPONSIBILITY

In each phase of detection, you must determine whether there is sufficient evidence to establish "reasonable suspicion" necessary to proceed to the next step in the detection process. It is always your duty to carry out whatever tasks are appropriate, to make sure that all relevant evidence of DWI is brought to light. (See Exhibit 4-3).

EXHIBIT 4-3 DWI DETECTION

Answers to questions like these can aid you in DWI detection.

Phase One:

- o What is the vehicle doing?
- o Do I have grounds to stop the vehicle?
- o How does the driver respond to my signal to stop?
- o How does the driver handle the vehicle during the stopping sequence?

Phase Two:

- o When I approach the vehicle, what do I see?
- o When I talk with the driver, what do I hear, see and smell?
- o How does the driver respond to my questions?
- o Should I instruct the driver to exit the vehicle?
- o How does the driver exit?
- o When the driver walks toward the side of the road, what do I see?

Phase Three:

- o Should I administer field sobriety tests to the driver?
- o How does the driver perform those tests?
- o What exactly did the driver do wrong when performing the tests?
- o Do I have probable cause to arrest for DWI?
- o Should I administer a preliminary breath test?
- o What are the results of the preliminary breath test?

The most successful DWI detectors are those officers who:

- o know what to look and listen for;
- o have the skills to ask the right kinds of questions;
- o choose and use the right kinds of tests;
- o make the correct observations; and
- o are motivated and apply their knowledge and skill whenever they contact someone who may be under the influence.

Officers like these are likely to make more arrests and to document the clear, convincing evidence needed to secure convictions.

NOTE TAKING AND TESTIMONY

INTRODUCTION

A basic skill needed for DWI enforcement is the ability to graphically describe your observations. Just as detection is the process of collecting evidence, description largely is the process of conveying evidence. Successful description demands the ability to convey evidence clearly and convincingly. Your challenge is to communicate evidence to people who weren't there to see, hear and smell the evidence themselves. Your tools are the words that make up your written report and verbal testimony. You must communicate with the supervisor, the prosecutor, the judge, the jury and even with the defense attorney. You are trying to "paint a word picture" for those people, to develop a sharp mental image that allows them to "see" what you saw; "hear" what you heard; and "smell" what you smelled.

Officers with the knowledge, skills and motivation to select the most appropriate words for both written reports and courtroom testimony will communicate clearly and convincingly, making them more successful in DWI prosecution. (See Exhibit 4-4.)

EXHIBIT 4-4
USING CLEAR AND CONVINCING LANGUAGE

Field notes are only as good as the information they contain. Reports must be clearly written and events accurately described if the reports are to have evidentiary value. One persistent problem with DWI incident reports is the use of vague language to describe conditions, events and statements. When vague language is used, reports provide a confused picture of what happened. When clear language is used, reports provide an accurate picture of what happened. Clear and convincing field notes provide strong evidence in court.

Consider the following examples.

Vague Language

- o Made an illegal left turn on Jefferson
- o Drove erratically
- o Driver appeared drunk
- o Vehicle stopped in unusual fashion
- o Vehicle crossed the center line

Clear Language

- o From Main, turned left (north-bound) on Jefferson, which is one way southbound.
- o Weaving from side to side. Crossed center line twice and drove on shoulder three times.
- o Driver's eyes bloodshot; gaze fixed; hands shaking. Strong odor of alcoholic beverage on driver's breath.
- o Vehicle struck, climbed curb; stopped on sidewalk.
- o Vehicle drifted completely into the opposing traffic lane.

DWI INVESTIGATION FIELD NOTES

One of the most critical tasks in the DWI enforcement process is the recognition and retention of facts and clues that establish reasonable suspicion to stop, investigate and subsequently arrest persons suspected of driving or operating a vehicle while impaired. The evidence gathered during the detection process must establish the elements of the violation, and must be documented to support successful prosecution of the violator. This evidence is largely sensory (sight, smell, hearing) in nature, and therefore is extremely short-lived.

You must be able to recognize and act on the facts and circumstances with which you are confronted. But you also must be able to recall those observations, and describe them clearly and convincingly to secure a conviction. You may be inundated with evidence of DWI, i.e., sights, sounds, smells. You recognize this evidence, sometimes subconsciously, and on this evidence based your decisions to stop, to investigate and ultimately to arrest.

Since evidence of a DWI violation is short-lived, you need a system and tools for recording field notes at scenes of DWI investigations.

One way to improve the effectiveness of your handwritten field notes is to use a structured note taking guide. The guide makes it easy to record brief "notes" on each step on the detection process and ensures that vital evidence is documented.

The field notes provide the information necessary for completion of required DWI report forms and assist you in preparing a written account of the incident. The field notes will also be useful if you are required to provide oral testimony, since they can be used to refresh your memory.

A model note taking guide is provided for your use. A brief description follows. Details are provided in subsequent units.

NOTE TAKING GUIDE

Remember that you must document those actions which gave you reasonable suspicion or probable cause to justify further investigation of a suspected DWI incident.

Section I provides space to record basic information describing the suspect, the vehicle, the location, and the date and time the incident occurred.

Section II provides space to record brief descriptions of the vehicle in motion (Detection Phase One), including initial observation of the vehicle in operation, and observation of the stopping sequence.

Section III provides space to record brief descriptions of the personal contact with the suspect (Detection Phase Two), including observations of the driver. General Observations provides space to record the suspect's manner of speech, attitude, clothing, etc. Any physical evidence collected should also be noted in this section.

Section IV provides space to record the results of all field sobriety tests that were administered, and the results of the preliminary breath test (PBT) if such a test was given.

HS 178 R8/06

Since this is a note taking guide and space is limited, you will have to develop your own "shorthand" system. Your notes should be as descriptive as possible and should create "mental pictures" of the facts, circumstances or events being described. You will use these notes to refresh your memory, to write the arrest report and to testify in court.

NOTE: Field Notes may be subpoenaed as evidence in court. It is important that any "shorthand" system you use be describable, usable, complete and consistent.

COURTROOM TESTIMONY

Testimonial evidence in DWI cases establishes that the accused was in fact the driver and was impaired. It is only as good as it is clear and concise.

Requirements: Preparation at the scene and prior to trial.

DWI INVESTIGATION FIELD NOTES

I. NAME _____ SEX _____ RACE _____
 ADDRESS _____ CITY/STATE _____ OP. LIC. NO. _____
 D.O.B. ____/____/____ SOC. SEC. # _____
 VEHICLE MAKE _____ YEAR _____ LIC. _____ STATE _____
 DISPOSITION _____ NO. PASSENGERS _____
 INCIDENT LOCATION _____
 DATE ____/____/____ TIME _____ CRASH YES NO

II. VEHICLE IN MOTION

INITIAL OBSERVATIONS _____

OBSERVATION OF STOP _____

III. PERSONAL CONTACT

OBSERVATION OF DRIVER _____

STATEMENTS _____

PRE-EXIT SOBRIETY TESTS _____

OBSERVATION OF THE EXIT _____

ODORS _____

GENERAL OBSERVATIONS

SPEECH _____

ATTITUDE _____

CLOTHING _____

PHYSICAL DEFECTS/DRUGS OR MEDICATIONS USED _____

IV. PRE-ARREST SCREENING

HORIZONTAL GAZE NYSTAGMUS

Equal Pupils Yes No ✱ LACK OF SMOOTH PURSUIT
 Equal Tracking Yes No ✱ DISTINCT AND SUSTAINED NYSTAGMUS AT MAXIMUM DEVIATION
 Vertical Nystagmus Yes No ✱ ONSET OF NYSTAGMUS PRIOR TO 45 DEGREES
 Other (i.e., Resting Nystagmus) _____

LEFT	RIGHT

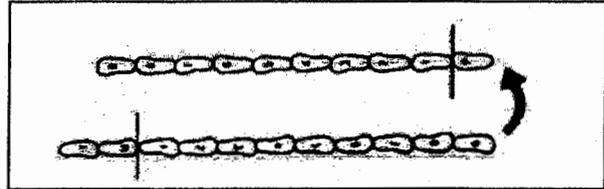
WALK AND TURN

INSTRUCTIONS STAGE

CANNOT KEEP BALANCE

STARTS TOO SOON

WALKING STAGE



FIRST NINE STEPS

SECOND NINE STEPS

STOPS WALKING

MISSES HEEL -TO- TOE

STEPS OFF LINE

RAISES ARMS

ACTUAL STEPS TAKEN

IMPROPER TURN (Describe) _____

CANNOT DO TEST (EXPLAIN) _____

OTHER: _____

ONE LEG STAND

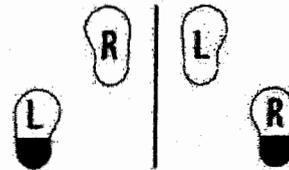
L	R

Sways while balancing.

Uses arms to balance.

Hopping.

Puts foot down.



Type of Footwear _____

OTHER: _____

OTHER FIELD SOBRIETY TESTS

NAME OF TEST _____

DESCRIBE PERFORMANCE _____

NAME OF TEST _____

DESCRIBE PERFORMANCE _____

NAME OF TEST _____

DESCRIBE PERFORMANCE _____

PBT (1) (optional) Time: _____ Results: _____

PBT (2) (optional) Time: _____ Results: _____

COURTROOM TESTIMONY

Although only a minority of DWI cases actually come to trial, the arresting officer must be fully prepared to testify in court on any case. Testimonial evidence in DWI cases usually is the only way to establish that the accused was in fact the driver of the vehicle alleged to have been involved in the DWI incident.

Testimonial evidence also may be the primary and sometimes the only means of establishing that the accused was impaired. Even when scientific evidence is available, supportive testimonial evidence will be required to permit introduction of that scientific evidence in court.

PREPARATION

Testimonial evidence must be clear and convincing to be effective. The first requirement for effective testimony is preparation. Testimony preparation begins at the time of the DWI incident. From the very beginning of the DWI contact, it is your responsibility to:

- o recognize significant evidence;
- o compile complete, accurate Field Notes;
- o prepare a complete and accurate incident report.

Testimony preparation continues prior to trial. Just before the trial, you should:

- o review Field Notes;
- o review case jacket/file;
- o mentally organize elements of offense, and the evidence available to prove each element;
- o mentally organize testimony to convey observations clearly and convincingly; and
- o discuss the case with the prosecutor.

IN COURT

In court, your testimony should be organized chronologically and should cover each phase of the DWI incident:

- o initial observation of vehicle, the driver or both;

- o reinforcing cues, maneuvers or actions, observed after signaling driver to stop, but before driver's vehicle came to a complete stop;
- o statements and other evidence obtained during your initial face-to-face contact with driver;
- o pre-arrest screening sobriety tests administered to the driver;
- o the arrest itself; including procedures used to inform suspect of arrest, admonish suspect of rights, and so on;
- o suspect's actions and statements subsequent to the arrest;
- o observation and interview of suspect subsequent to the arrest;
- o the request for the chemical test; including the procedures used, admonition of rights and requirements, and so on;
- o the conduct and results of the chemical test, if you were also the testing officer.
- o the interview of the suspect

TEST YOUR KNOWLEDGE

INSTRUCTIONS: Complete the following sentences.

1. DWI detection is defined as _____

2. The three phases in a typical DWI contact are:

Phase One _____

Phase Two _____

Phase Three _____

3. In Phase One, the officer usually has an opportunity to _____

4. Phase Three may not occur if _____

5. In Phase Two, the officer must decide _____

6. Each major decision can have any one of _____ different outcomes.
These are _____

7. At each phase of detection, the officer must determine _____

8. Evidence of DWI is largely _____ in nature.

9. Police officers need a system and tools for recording field notes at scenes of DWI investigations because DWI evidence is _____.

10. Testimony preparations begins _____

11. List two things the officer should do to prepare testimony just before the trial.

a. _____

b. _____

12. In court, the officer's testimony should be organized _____

13. The conditions and results of the Chemical test are included in the arresting officer's testimony if _____

SESSION V

PHASE ONE: VEHICLE IN MOTION

SESSION V

PHASE ONE: VEHICLE IN MOTION

Upon successfully completing this session, the participant will be able to:

- o Identify typical cues of Detection Phase One.
- o Describe the observed cues clearly and convincingly.

CONTENT SEGMENTS

LEARNING ACTIVITIES

- | | |
|---|---------------------------------|
| A. Overview: Tasks and Decision | o Instructor-Led Presentations |
| B. Initial Observations: Visual Cues Impaired Operation | o Video Presentation |
| C. Initial Observations: Visual Cues Impaired Operation (Motorcycles) | o Video Presentation |
| D. Recognition and Description of Initial Cues | o Instructor-Led Demonstrations |
| E. Typical Reinforcing Cues of the Stopping Sequence | o Participant's Presentations |
| F. Recognition and Description of Initial and Reinforcing Cues | |

DWI DETECTION PHASE ONE: VEHICLE IN MOTION

Your first task in Phase One: Vehicle in Motion is to observe the vehicle in operation to note any initial cues of a possible DWI violation. At this point you must decide whether there is sufficient cause to stop the vehicle, either to conduct further investigation to determine if the suspect may be impaired, or for another traffic violation. You are not committed to arresting the suspect for DWI based on this initial observation, but rather should concentrate on gathering all relevant evidence that may suggest impairment. Your second task during phase one is to observe the manner in which the suspect responds to your signal to stop, and to note any additional evidence of a DWI violation.

The first task, observing the vehicle in motion, begins when you first notice the vehicle, driver or both. Your attention may be drawn to the vehicle by such things as:

- o a moving traffic violation;
- o an equipment violation;
- o an expired registration or inspection sticker;
- o unusual driving actions, such as weaving within a lane or moving at slower than normal speed; or
- o "Evidence of drinking" or drugs in vehicle.

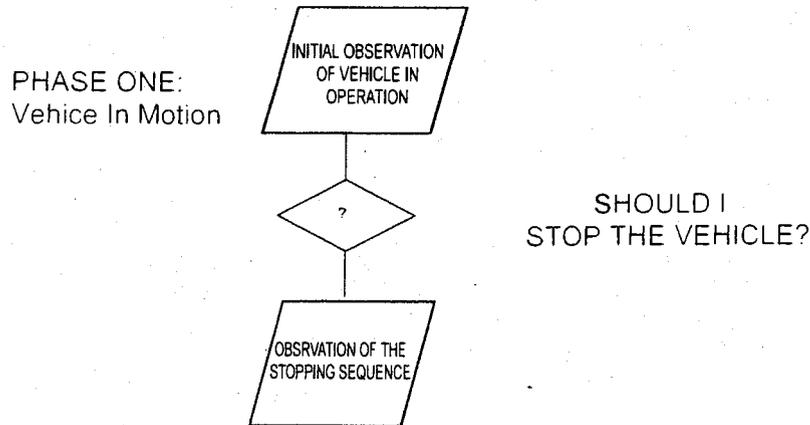
If this initial observation discloses vehicle maneuvers or human behaviors that may be associated with impairment, you may develop an initial suspicion of DWI.

Based upon this initial observation of the vehicle in motion, you must decide whether there is reasonable suspicion to stop the vehicle. At this point you have three choices:

- o stop the vehicle;
- o continue to observe the vehicle; or
- o disregard the vehicle.

DWI DETECTION PHASE ONE: VEHICLE IN MOTION

Phase One Tasks and Decisions



2. INITIAL OBSERVATIONS: VISUAL CUES TO DWI

Drivers who are impaired frequently exhibit certain effects or symptoms of impairment. These include:

- o slowed reactions;
- o impaired judgment as evidenced by a willingness to take risks;
- o impaired vision; and
- o poor coordination

The next page presents common symptoms of alcohol influence. This unit focuses on alcohol impairment because research currently provides more information about the effects of alcohol on driving than it does about the effects of other drugs on driving. Remember that whether the driver is impaired, the law enforcement detection process is the same, and the offense is still DWI.

The common effects of alcohol on the driver's mental and physical faculties lead to predictable driving violations and vehicle operating characteristics. The National Highway Traffic Safety Administration (NHTSA) sponsored research to identify the most common and reliable initial indicators of DWI. This research identified 24 cues, each with an associated high probability that the driver exhibiting the cue is impaired. These cues and their associated probabilities are described in the following Special Section, Initial Visual DWI Detection Cues.

VISUAL CUE DESCRIPTIONS

1. PROBLEMS MAINTAINING PROPER LANE POSITION [p=.50-.75]
 - A. **Weaving** - Weaving occurs when the vehicle alternately moves toward one side of the roadway and then the other, creating a zig-zag course. The pattern of lateral movement is relatively regular as one steering correction is closely followed by another.
 - B. **Weaving Across Lane Lines** - Extreme cases of weaving when the vehicle wheels cross the lane lines before correction is made.
 - C. **Straddling A Lane Line** - The vehicle is moving straight ahead with the center or lane marker between the left-hand and right-hand wheels.
 - D. **Swerving** - A swerve is an abrupt turn away from a generally straight course. Swerving might occur directly after a period of drifting when the driver discovers the approach of traffic in an oncoming lane or discovers that the vehicle is going off the road; swerving might also occur as an abrupt turn is executed to return the vehicle to the traffic lane. In the illustration below, a swerve was executed to return to a lane after a period of drifting toward opposing traffic.
 - E. **Turning With Wide Radius** - During a turn, the radius defined by the distance between the turning vehicle and the center of the turn is greater than normal. The vehicle may drive wide in a curve.
 - F. **Drifting** - Drifting is a straight-line movement of the vehicle at a slight angle to the roadway. As the driver approaches a marker or boundary (lane marker, center line, edge of the roadway), the direction of drift might change. As shown in the illustration, the vehicle drifts across the lane marker into another lane, then the driver makes a correction and the vehicle drifts back across the lane marker. Drifting might be observed within a single lane, across lanes, across the center line, onto the shoulder, and from lane to lane.
 - G. **Almost Striking Object or Vehicle** - The observed vehicle almost strikes a stationary object or another moving vehicle. Examples include: passing abnormally close to a sign, wall, building, or other object; passing abnormally close to another moving vehicle; and causing another vehicle to maneuver to avoid collision.

2. **SPEED AND BRAKING PROBLEMS** [p=.45-.70]

- A. **Stopping Problems (too far, too short, too jerky)** - Stopping too far from a curb or at an inappropriate angle. Stopping too short or beyond limit line at an intersection. Stopping with a jerking motion or abruptly.
- B. **Accelerating or Decelerating Rapidly** - This cue encompasses any acceleration or deceleration that is significantly more rapid than that required by the traffic conditions. Rapid acceleration might be accompanied by breaking traction; rapid deceleration might be accompanied by an abrupt stop. Also a vehicle might alternately accelerate and decelerate rapidly.
- C. **Varying Speed** - Alternating between speeding up and slowing down.
- D. **Slow Speed (10 m.p.h. + Under Limit)** - The observed vehicle is being driving at a speed that is more than 10 MPH below the speed limit.

3. **VIGILANCE PROBLEMS** [p=.55-.65]

- A. **Driving In Opposing Lanes or Wrong Way On One-Way Street** - The vehicle is observed heading into opposing or crossing traffic under one or more of the following circumstances: driving in the opposing lane; backing into traffic; failing to yield the right-of-way; driving the wrong way on a one-way street. The last circumstance is illustrated below.
- B. **Slow Response to Traffic Signals** - The observed vehicle exhibits a longer than normal response to a change in traffic signal. For example, the driver remains stopped at the intersection for an abnormally long period of time after the traffic signal has turned green.
- C. **Slow Or Failure To Respond To Officer's Signals** - Driver is unusually slow to respond to an officer's lights, siren or hand signals.
- D. **Stopping in Lane for No Apparent Reason** - The critical element in this cue is that there is no observable justification for the vehicle to stop in the traffic lane; the stop is not caused by traffic conditions, traffic signals, an emergency situation, or related circumstances. Impaired drivers might stop in the lane when their capability to interpret information and make decisions becomes impaired. As a consequence, stopping in lane for no apparent reason is likely to occur at intersections or other decision points.

- E. **Driving Without Headlights At Night** - The observed vehicle is being driven with both headlights off during a period of the day when the use of headlights is required.
 - F. **Failure to Signal or Signal Inconsistent with Action** - A number of possibilities exist for the driver's signaling to be inconsistent with the associated driving actions. This cue occurs when inconsistencies such as the following are observed: failing to signal a turn or lane change; signaling opposite to the turn or lane change executed; signaling constantly with no accompanying driving action; and driving with four-way hazard flashers on.
4. **JUDGMENT PROBLEMS [p=.35-.90]**
- A. **Following Too Closely** - The vehicle is observed following another vehicle while not maintaining the legal minimum separation.
 - B. **Improper Or Unsafe Lane Change** - Driver taking risks or endangering others. Driver is frequently or abruptly changing lanes without regard to other motorists.
 - C. **Illegal or Improper Turn (too fast, jerky, sharp, etc.)** - The driver executes any turn that is abnormally abrupt or illegal. Specific examples include: turning with excessive speed; turning sharply from the wrong lane; making a U illegally; turning from outside a designated turn lane.
 - D. **Driving on Other Than Designated Roadway** - The vehicle is observed being driven on other than the roadway designated for traffic movement. Examples include driving: at the edge of the roadway, on the shoulder, off the roadway entirely, and straight through turn-only lanes or areas.
 - E. **Stopping Inappropriately In Response To Officer** - The observed vehicle stops at an inappropriate location or under inappropriate conditions, other than in the traffic lane. Examples include stopping: in a prohibited zone; at a crosswalk; far short of an intersection; on a walkway; across lanes; for a green traffic signal; for a flashing yellow traffic signal; abruptly as if startled; or in an illegal, dangerous manner.
 - F. **Inappropriate Or Unusual Behavior (throwing objects, arguing, etc.)** - Throwing objects from the vehicle, drinking in the vehicle, urinating at roadside, arguing without cause, other disorderly actions.

G. **Appearing to be Impaired** - This cue is actually one or more of a set of indicators related to the personal behavior or appearance of the driver. Examples of specific indicators might include:

- o Eye fixation
- o Tightly gripping the steering wheel
- o Slouching in the seat
- o Gesturing erratically or obscenely
- o Face close to the windshield
- o Driver's head protruding from vehicle

POST STOP CUES $p \geq .85$

1. Difficulty with motor vehicle controls
2. Difficulty exiting the vehicle
3. Fumbling with driver's license or registration
4. Repeating questions or comments
5. Swaying, unsteady, or balance problems
6. Leaning on the vehicle or other object
7. Slurred speech
8. Slow to respond to officer/officer must repeat
9. Provides incorrect information, changes answers
10. Odor of alcoholic beverage from the driver

Ask for Visual Detection of DWI Motorists. (DOT HS 808 677).

VISUAL DETECTION OF DWI MOTORCYCLISTS

NHTSA has also developed research identifying driving impairment cues for motorcyclists (ANACAPA Sciences, DOT HS 807 839, 1993).

Excellent Cues (50% or greater probability)

- o Drifting during turn or curve
- o Trouble with dismount
- o Trouble with balance at a stop
- o Turning problems (e.g., unsteady, sudden corrections, late braking, improper lean angle)
- o Inattentive to surroundings
- o Inappropriate or unusual behavior (e.g., carrying or dropping object, urinating at roadside, disorderly conduct, etc.)
- o Weaving

Good Cues (30 to 50% probability)

- o Erratic movements while going straight
- o Operating without lights at night
- o Recklessness
- o Following too closely
- o Running stop light or sign
- o Evasion
- o Wrong way

3. DIVIDED ATTENTION

It is important to understand the effects of alcohol are exhibited in driving so that the significance of visual cues will be recognized. Driving is a complex task involving a number of subtasks, many of which occur simultaneously. These include:

- o steering;
- o controlling the accelerator;
- o signaling;
- o controlling the brake pedal
- o operating the clutch;
- o operating to gearshift;
- o observing other traffic;
- o observing signal lights, stop signs & other traffic control devices; and
- o making decisions (whether to stop, turn, speed up, slow down).

Safe driving demands the ability to divide attention among these various tasks. "Divided attention" simply means the ability to concentrate on two or more things at the same time. Under the influence of alcohol and/or other drugs, a driver's ability to divide attention is impaired. As a result, the impaired driver tends to concentrate on only the most important or critical parts of driving and to disregard the less important parts, often creating unexpected or dangerous situations for other drivers. Two examples were particularly evident in the video segment Visual Detection of Driving While Intoxicated. In one instance the driver signaled for left turn, but actually turned right. In the other, the driver remained stopped at a green light. In each case the driver was unable to divide attention.

- o The first driver was concentrating on steering, looking for the street where he wished to turn and slowing for the turn. The driver realized that a signal was required and actually operated the signal lever. But the driver didn't have enough attention left to move the lever in the right direction. Therefore he signaled left, but turned right.
- o The second driver was stopped at a traffic light, but he did not have enough attention left to react to the specific color of the light. Therefore he did not respond to the green light.

Some of the most significant evidence from all three phases of DWI detection can be related directly to the effects of alcohol and/or other drugs on divided attention ability. We will return to the concept of divided attention in Session VI. Personal Contact and Session VII. Pre-arrest Screening.

4. RECOGNIZING AND DESCRIBING INITIAL CUES

Observing the vehicle in operation is the first task in DWI detection. Proper performance of that task requires two distinct but related abilities:

- o the ability to recognize evidence of impairment; and
- o the ability to describe that evidence clearly and convincingly.

It is not enough that you observe and recognize symptoms of impaired driving. You also must be able to describe what happened so that others will have a clear mental picture of what took place. Improving your ability to recognize and clearly describe observational evidence requires practice.

5. THE STOPPING SEQUENCE

Your second task during Phase One of the detection process is to observe the manner in which the driver responds to your signal to stop, and to note any additional evidence of a DWI violation.

Cues reinforcing the suspicion of DWI may be found in the stopping sequence. After the command to stop is given, the impaired driver may exhibit additional important evidence of DWI. These cues may include:

- o an attempt to flee;
- o no response;
- o slow response;
- o an abrupt swerve;
- o sudden stop; and
- o striking the curb or another object.

Some of these cues are exhibited because the stop command places additional demands on the driver's ability to divide attention. The signal to stop creates a new situation with which the driver must cope. Flashing emergency lights or a siren demand and divert the driver's attention, requiring that the driver now divide attention between driving and responding to the stop command. Stopping itself requires the driver simultaneously to turn the steering wheel, put on the brakes, use a turn signal, and so on. Thus the driver's task becomes more complex when the stop command is given. An impaired driver may not be able to handle this more complex task and additional evidence of impairment may appear.

It is your responsibility to recognize, record and convey the additional evidence of driving impairment that may come to light during the stopping sequence. This task, like Task One, observing the vehicle in operation, requires:

- o the ability to recognize evidence of impairment; and
- o the ability to describe that evidence clearly and convincingly.

Recognizing and describing the reinforcing cues of DWI that appear during the stopping sequence requires practice.

TEST YOUR KNOWLEDGE

INSTRUCTIONS: Complete the following sentences.

1. The Phase One tasks are _____

2. Two common symptoms of impairment are:
 - a. _____
 - b. _____
3. Alcohol impairs the ability to _____ among tasks.
4. Three cues reinforcing the suspicion of DWI which may be observed during the stopping sequence are:
 - a. _____
 - b. _____
 - c. _____

SESSION VI
PHASE TWO: PERSONAL CONTACT

SESSION VI

PHASE TWO: PERSONAL CONTACT

Upon successfully completing this session, the participant will be able to:

- o Identify typical clues of Detection Phase Two.
- o Describe the observed clues clearly and convincingly.

CONTENT SEGMENTS

LEARNING ACTIVITIES

- | | |
|---|---------------------------------|
| A. Overview: Tasks and Decision | o Instructor-Led Presentations |
| B. Typical Investigation Clues of the Driver Interview | o Video Presentation |
| C. Recognition and Description of Investigation Clues | o Instructor-Led Demonstrations |
| D. Interview/Questions Techniques | o Participant's Presentations |
| E. Recognition and Description of Clues Associated With the Exit Sequence | |

PERSONAL CONTACT

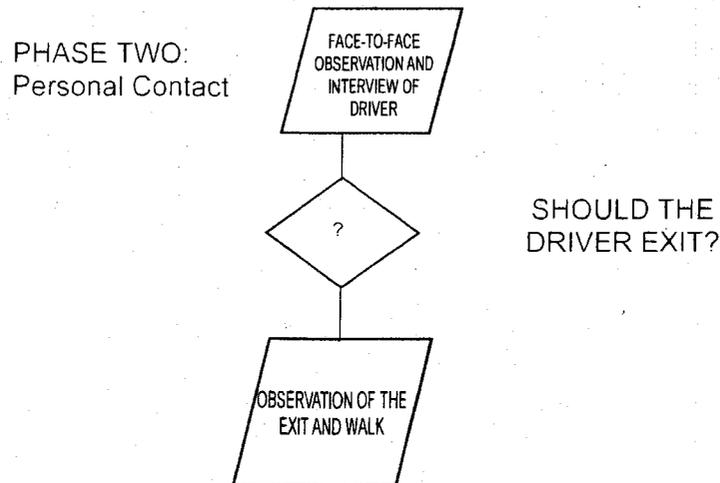
OVERVIEW

DWI Detection Phase Two: Personal Contact, like Phases One and Three, comprises two major evidence gathering tasks and one major decision. Your first task is to approach, observe and interview the driver while they are still in the vehicle to note any face-to-face evidence of impairment. During this face-to-face contact you may administer some simple pre-exit sobriety tests to gain additional information to evaluate whether or not the driver is impaired. After this evaluation, you must decide whether to request the driver to exit the vehicle for further field sobriety testing. In some jurisdictions departmental policy may dictate that all drivers stopped on suspicion of DWI be instructed to exit. It is important to note that by instructing the driver to exit the vehicle, you still are not committed to an arrest; this is simply another step in the DWI detection process. Once you have requested the driver to exit the vehicle, your second task is to observe the manner in which the driver exits to note any additional evidence of impairment.

NOTE: You may initiate Phase Two without Phase One. This may occur, for example, at a roadblock, or when you have responded to the scene of a crash.

TASK ONE

The first task of Phase Two, observation and interview of the driver, begins as soon as the suspect vehicle and the patrol vehicle have come to complete stops. It continues through your approach to the suspect vehicle and involves all conversation between you and the driver prior to the driver's exit from the vehicle.



You may have developed a strong suspicion that the driver is impaired prior to the face-to-face observation and interview. You may have developed this suspicion by observing something unusual while the vehicle was in motion, or during the stopping sequence, or you may have developed no suspicion of DWI prior to the face-to-face contact. The vehicle operation and the stop may have been normal, you may have seen no actions suggesting DWI. For example, you may have stopped the vehicle for a equipment/registration violation, or where no unusual driving was evident. In some cases, Phase One will have been absent. For example, you may first encounter the driver and vehicle after a crash or when responding to a request for motorist assistance.

Regardless of the evidence that may have come to light during Detection Phase One, your initial face-to-face contact with the driver usually provides the first definite indications that the driver is impaired.

DECISION

Based upon your face-to-face interview and observation of the driver, and upon your previous observations of the vehicle in motion and the stopping sequence, you must decide whether there is sufficient reason to instruct the driver to step from the vehicle.

For some law enforcement officers, this decision is automatic since their agency policy dictates that the driver always be told to exit the vehicle, regardless of the cause for the stop. Other agencies, however, treat this as a discretionary decision, to be based on what the officer sees, hears and smells during observation and interview with the driver while the driver is seated in the vehicle.

If you decide to instruct the driver to exit, you must closely observe the driver's actions during the exit from the vehicle and note any evidence of impairment.

TYPICAL INVESTIGATION CLUES: THE DRIVER INTERVIEW

Face-to-face observation and interview of the driver allows you to use three senses to gather evidence of alcohol and/or other drug influence:

- o the sense of sight;
- o the sense of hearing; and
- o the sense of smell.

SIGHT

There are a number of things you might see during the interview that would be describable clues or evidence of alcohol and/or other drug influence. Among them are:

- o bloodshot eyes;
- o soiled clothing;
- o fumbling fingers;
- o alcohol containers;
- o drugs or drug paraphernalia;
- o bruises, bumps or scratches;
- o unusual actions.



HEARING

Among the things you might hear during the interview that would be describable clues or evidence of alcohol and/or other drug influence are these:

- o slurred speech;
- o admission of drinking;
- o inconsistent responses;
- o abusive language;
- o unusual statements.



SMELL

There are things you might smell during the interview that would be describable clues or evidence of alcohol and/or other drug influence. Typically these include:

- o alcoholic beverages;
- o marijuana;
- o "cover up" odors like breath sprays;
- o unusual odors.



REQUIRED ABILITIES

Proper face-to-face observation and interview of the driver demands two distinct but related abilities:

- o the ability to recognize the sensory evidence of alcohol and/or other drug influence; and
- o the ability to describe that evidence clearly and convincingly.

Developing these abilities requires practice.

PRE-EXIT INTERVIEW TECHNIQUES

A basic purpose of the face-to-face observation and interview of the driver is to identify and gather evidence of alcohol and/or other drug influence. This is the purpose of each task in each phase of DWI detection.

During the face-to-face observation and interview stage, it is not necessary to gather sufficient evidence to arrest the driver immediately for DWI.

There are a number of techniques you can use while the driver is still behind the wheel. Most of these techniques apply the concept of divided attention. They require the driver to concentrate on two or more things at the same time. They include both questioning techniques and psychophysical (mind/body) tasks.

These techniques are not as reliable as the standardized field sobriety tests but they can still be useful for obtaining evidence of impairment. **THESE TECHNIQUES DO NOT REPLACE THE SFST.**

Questioning Techniques

The questions you ask and the way in which you ask them can constitute simple divided attention tasks. Three techniques are particularly pertinent:

- o asking for two things simultaneously;
- o asking interrupting or distracting questions; and,
- o asking unusual questions.

An example of the first technique, asking for two things simultaneously, is requesting that the driver produce both the driver's license and the vehicle registration. Possible evidence of impairment may come to light as the driver responds to this dual request. Be alert for the driver who:

- o forgets to produce both documents;
- o produces documents other than the ones requested;
- o fails to see the license, registration or both while searching through wallet or purse;
- o fumbles or drops wallet, purse, license or registration;
- o is unable to retrieve documents using fingertips.

The second technique, asking interrupting or distracting questions, forces the driver to divide attention between searching for the license or registration and answering a new question. While the driver is responding to the request for license, registration or both, you ask an unrelated question like, "Without looking at your watch, what time is it right now?" Possible evidence of impairment may be disclosed by the interrupting or distracting question. Be alert for the driver who:

- o ignores the question and concentrates only on the license or registration search;
- o forgets to resume the search after answering the question;
- o supplies a grossly incorrect answer to the question.

The third technique, asking unusual questions, is employed after you have obtained the driver's license and registration. Using this technique, you seek verifying information through unusual questions. For example, while holding the driver's license, you might ask the driver, "What is your middle name?"

There are many such questions which the driver normally would be able to answer easily, but which might prove difficult if the driver is impaired, simply because they are unusual questions. Unusual questions require the driver to process information; this can be especially difficult when the driver does not expect to have to process information. For example, a driver may respond to the question about the middle name by giving a first name. In this case the driver ignored the unusual question and responded instead to a usual -- but unasked -- question.

ADDITIONAL TECHNIQUES

Know if there are any judicial restraints in reference to these tests.

ALPHABET

This technique requires the subject to recite a part of the alphabet. You instruct the subject to recite the alphabet beginning with a letter other than A and stopping at a letter other than Z. For example, you might say to a driver, "Recite the alphabet, beginning with the letter E as in Edward and stopping with the letter P as in Paul." This divides the driver's attention because the driver must concentrate to begin at an unusual starting point and recall where to stop.

COUNT DOWN

This technique requires the subject to count out loud 15 or more numbers in reverse sequence. For example, you might request a driver to, "Count out loud backwards, starting with the number 68 and ending with the number 53." This, too, divides attention because the driver must continuously concentrate to count backwards while trying to recall where to stop.

NOTE: This technique should never be given using starting and stopping points that end in 0 or 5 because these numbers are too easy to recall. For example, do not request that the driver count backwards from 65 to 50. Instead, ask the driver to count backwards from 64 to 49.

FINGER COUNT

In this technique, the subject is asked to touch the tip of the thumb in turn to the tip of each finger on the same hand while simultaneously counting up one, two, three, four; then to reverse direction on the fingers while simultaneously counting down four, three, two, one.



In each instance, note whether and how well the subject is able to perform the divided attention task.

THE EXIT SEQUENCE

Your decision to instruct the driver to step from the vehicle usually is made after you have developed a suspicion that the driver is impaired.* Even though that suspicion may be very strong, usually the suspect is not yet under arrest when you give the instruction.

How the driver steps and walks from the vehicle and actions or behavior during the exit sequence may provide important evidence of impairment. Be alert to the driver who:

- o shows angry or unusual reactions;
- o cannot follow instructions;
- o cannot open the door;
- o leaves the vehicle in gear;
- o "climbs" out of vehicle;
- o leans against vehicle;
- o keeps hands on vehicle for balance.

Proper face-to-face observation and interview of a driver requires the ability to recognize the sensory evidence of alcohol and/or other drug influence and the ability to describe that evidence clearly and convincingly. Developing these abilities takes practice.

*Except, however, that you may instruct a suspect to exit the vehicle as a means of ensuring your own safety. Safety considerations take precedence over all other considerations.

TEST YOUR KNOWLEDGE

INSTRUCTIONS: Complete the following sentences.

1. The two major evidence gathering tasks of Phase Two are _____

2. The major decision of Phase Two is _____

3. Among the describable clues an officer might see during the Phase Two interview are these three:
 - a.
 - b.
 - c.
4. Among the describable clues an officer might hear during the Phase II interview are these three:
 - a.
 - b.
 - c.
5. Among the describable clues an officer might smell during the Phase II interview are these two:
 - a.
 - b.

6. Three techniques an officer might use in asking questions constitute simple divided attention tasks. These techniques are:

a.

b.

c.

7. The Count Down Technique requires the subject to _____

8. Leaning against the vehicle is a clue to DWI which may be observed during

SESSION VII

PHASE THREE: PRE-ARREST SCREENING

SESSION VII

PHASE THREE: PRE-ARREST SCREENING

Upon successfully completing this session, the participants will be able to:

- o Describe the role of psychophysical and preliminary breath tests.
- o Define and describe the concepts of divided attention and nystagmus.
- o Discuss the advantages and limitations of preliminary breath testing.
- o Discuss the arrest decision process.

CONTENT SEGMENTS

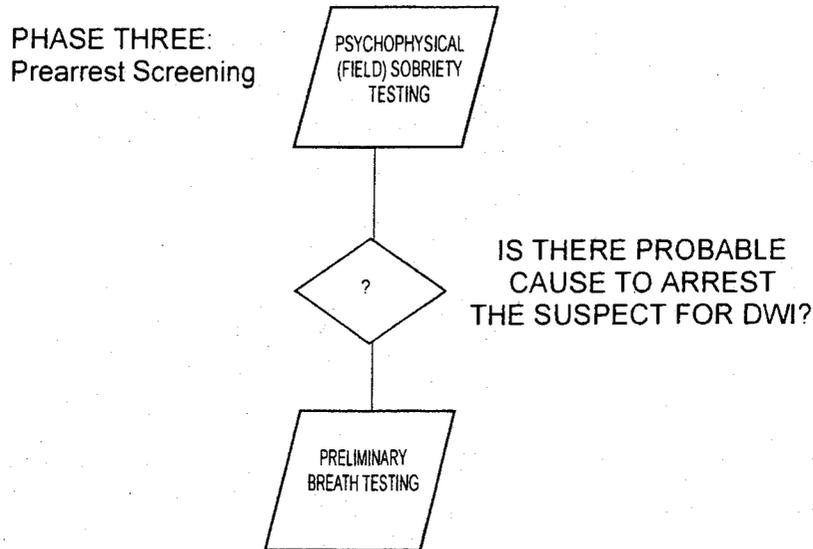
LEARNING ACTIVITIES

- | | |
|---|---------------------------------|
| A. Overview: Tasks and Decision | o Instructor-Led Presentations |
| B. Gaze Nystagmus - Definition | o Instructor-Led Demonstrations |
| C. Horizontal Gaze Nystagmus - Definition, Concepts, Demonstrations | o Video Presentation |
| D. Vertical Gaze Nystagmus - Definition, Concepts, Demonstrations | |
| E. Divided Attention Tests: Concepts, Examples, Demonstrations | |
| F. Advantages and Limitations of Preliminary Breath Testing | |
| G. The Arrest Decision | |

PRE-ARREST SCREENING

PHASE THREE TASKS AND DECISION

Like Phases One and Two, DWI Detection Phase Three, Pre-arrest Screening has two major evidence gathering tasks and one major decision.



Your first task in Phase Three is to administer three scientifically validated psychophysical (field) sobriety tests. Based on these tests and on all other evidence from Phase One and Two, you must decide whether there is sufficient probable cause to arrest the driver for DWI. Your second task may then be to administer (or arrange for) a preliminary breath test (PBT) to confirm the chemical basis of the driver's impairment, if your agency uses PBTs. The entire detection process culminates in the arrest/no arrest decision.

PSYCHOPHYSICAL TESTS

Psychophysical tests are methods of assessing a suspect's mental and physical impairment. These tests focus on the abilities needed for safe driving: balance, coordination, information processing and so on.

Psychophysical testing actually begins as soon as you come into face-to-face contact with the suspect and begin the interview. Psychophysical testing continues as the suspect steps from the vehicle and you observe the manner of the exit and walk from the vehicle. The most significant psychophysical tests are the three scientifically validated structured tests that you administer at roadside.

PRELIMINARY BREATH-TEST

The preliminary breath test (PBT) can help to corroborate all other evidence and to confirm your judgment as to whether the suspect is impaired. Usually PBT results cannot be introduced as evidence against the driver in court. However, state laws vary in this regard.

THE ARREST DECISION

The DWI detection process concludes with the arrest decision. This decision is based on all of the evidence you have obtained during all three detection phases: on observation of the vehicle in motion and during the stopping sequence; on face to face observation and interview of the driver.

NYSTAGMUS

"Nystagmus" means an involuntary jerking of the eyes.

HORIZONTAL GAZE NYSTAGMUS

Horizontal Gaze Nystagmus (HGN) refers to an involuntary jerking occurring as the eyes gaze toward the side. In addition to being involuntary the person experiencing the nystagmus is unaware that the jerking is happening.

Involuntary jerking of the eyes becomes readily noticeable when a person is impaired. As a person's blood alcohol concentration increases, the eyes will begin to jerk sooner as they move to the side.

Horizontal Gaze Nystagmus is the most reliable field sobriety test. Especially when used in combination with the divided attention tests, it will help police officers correctly identify suspects who are impaired.

In administering the HGN test, the officer has the suspect follow the motion of a small stimulus with the eyes only. The stimulus may be the tip of a pen or penlight, an eraser on a pencil or your finger tip, whichever contrasts with the background.

When the HGN test is administered always begin with subject's left eye. Each eye is examined for three specific clues.

- o as the eye moves from side to side, does it move smoothly or does it jerk noticeably? (As people become impaired by alcohol, their eyes exhibit a lack of smooth pursuit as they move from side to side.)
- o when the eye moves as far to the side as possible and is kept at that position for several seconds, does it jerk distinctly? (Distinct and sustained nystagmus at maximum deviation is another clue of impairment.)
- o as the eye moves toward the side, does it start to jerk prior to a 45-degree angle? (Onset of nystagmus prior to 45-degrees is another clue of impairment.)

As a person's blood alcohol concentration increases it is more likely these clues will appear.

The maximum number of clues that may appear in one eye is three. The maximum total number for any suspect is six. The original research shows that if four or more clues are evident, it is likely that the suspect's blood alcohol concentration is above 0.10. With four-or-more clues present, this test is 77% accurate.

VERTICAL GAZE NYSTAGMUS

Vertical Gaze Nystagmus is an involuntary jerking of the eyes (up and down) which occurs when the eyes gaze upward at maximum elevation. Although this type of nystagmus was not addressed in the original research, field experience has indicated that the presence of Vertical Gaze Nystagmus has proven to be a reliable indicator of high doses of alcohol for that individual or certain other drugs.

DIVIDED ATTENTION TESTS

INTRODUCTION

Many of the most reliable and useful psychophysical tests employ the concept of divided attention: they require the subject to concentrate on two things at once. Driving is a complex divided attention task. In order to operate a vehicle safely, drivers must simultaneously control steering, acceleration and braking; react appropriately to a constantly changing environment; and perform many other tasks. Alcohol and many other drugs reduce a person's ability to divide attention. Impaired drivers often ignore the less critical tasks of driving in order to focus their impaired attention on the more critical tasks. For example, a driver may ignore a traffic signal and focus instead on speed control.

Even when they are impaired, many people can handle a single, focused attention task fairly well. For example, a driver may be able to keep the vehicle well within the proper traffic lane, as long as the road remains fairly straight. However, most people when impaired cannot satisfactorily divide their attention to handle multiple tasks at once.

The concept of divided attention has been applied to psychophysical testing. Field sobriety tests that simulate the divided attention characteristics of driving have been developed and are being used by police departments nationwide. The best of these tests exercise the same mental and physical capabilities that a person needs to drive safely:

- o information processing;
- o short-term memory;
- o judgment and decision making;
- o balance;
- o steady, sure reactions;
- o clear vision;
- o small muscle control;
- o coordination of limbs.

Any test that requires a person to demonstrate two or more of these capabilities simultaneously is potentially a good psychophysical test.

Simplicity is the key to divided attention field sobriety testing. It is not enough to select a test that just divides the subject's attention. The test also must be one that is reasonably simple for the average person to perform when sober. Tests that are difficult for a sober subject to perform have little or no evidentiary value.

Two divided attention field sobriety tests that have proven accurate and effective in DWI detection are the Walk-and-Turn and the One-Leg Stand. These tests are described briefly below.

Walk-and-Turn

Walk-and-Turn is a test that has been validated through extensive research sponsored by the National Highway Traffic Safety Administration (NHTSA). It is a divided attention test consisting of two stages:

- o Instructions Stage; and,
- o Walking Stage.

In the Instructions Stage, the subject must stand with their feet in heel-to-toe position, keep their arms at their sides, and listen to the instructions. The Instructions Stage divides the subject's attention between a balancing task (standing while maintaining the heel-to-toe position) and an information processing task (listening to and remembering instructions).

In the Walking Stage the subject takes nine heel-to-toe steps, turn in a prescribed manner, and take nine heel-to-toe steps back, while counting the steps out loud, while watching their feet. During the turn, the subject keeps their front foot on the line, turn in a prescribed manner, and use the other foot to take several small steps to complete the turn. The Walking Stage divides the subject's attention among a balancing task (walking heel-to-toe and turning); a small muscle control task (counting out loud); and a short-term memory task (recalling the number of steps and the turning instructions).

The Walk-and-Turn test is administered and interpreted in a standardized manner, i.e., the same way every time. Officers administering the Walk-and-Turn test observe the suspect's performance for eight clues:

- o can't balance during instructions;
- o starts too soon;
- o stops while walking;
- o doesn't touch heel-to-toe;
- o steps off line;
- o uses arms to balance;
- o loses balance on turn or turns incorrectly; and,
- o takes the wrong number of steps.

Inability to complete the Walk-and-Turn test occurs when the suspect:

- o steps off the line three or more times;
- o is in danger of falling;
- o cannot do the test.

Original research shows that if a suspect exhibits two or more of the clues, or cannot complete the test, the suspect's BAC is likely to be above 0.10. This criterion has been shown to be accurate 68 percent of the time.

ONE-LEG STAND

The One-Leg Stand test also has been validated through NHTSA's research program. It is a divided attention test consisting of two stages:

- o Instructions Stage; and,
- o Balance and Counting Stage.

In the Instruction Stage, the subject must stand with feet together, keep arms at sides, and listen to instructions. This divides the subject's attention between a balancing task (maintaining a stance) and an information processing task (listening to and remembering instructions.)

In the Balance and Counting Stage, the subject must raise one leg, either leg, with the foot approximately six inches off the ground, keeping raised foot parallel to the ground. While looking at the elevated foot, count out loud in the following manner: "one thousand and one", "one thousand and two", "one thousand and three" until told to stop. This divides the subject's attention between balancing (standing on one foot) and small muscle control (counting out loud).

The timing for a thirty-second period by the officer is an important part of the One-Leg Stand test. The original research has shown that many impaired subjects are able to stand on one leg for up to 25 seconds, but that few can do so for 30 seconds.

One-Leg Stand is also administered and interpreted in a standardized manner. Officers carefully observe the suspect's performance and look for four specific clues:

- o sways while balancing;
- o uses arms to balance;
- o hops;
- o puts foot down.

Inability to complete the One-Leg Stand test occurs when the suspect:

- o puts the foot down three or more times, during the 30-second period;
- o cannot do the test.

The original research shows that, when the suspect produces two or more clues or is unable to complete the test, it is likely that the BAC is above 0.10. This criterion has been shown to be accurate 65 percent of the time.

PRELIMINARY BREATH TESTING

The basic purpose of preliminary breath testing (PBT) is to demonstrate the association of alcohol with the observable evidence of the suspect's impairment. The suspect's impairment is established through sensory evidence: what the officer sees, hears and smells. The PBT provides the evidence that alcohol is the chemical basis of that impairment by yielding an on-the-spot indication of the suspect's blood alcohol concentration (BAC). The PBT provides direct indication of the BAC level. It does not indicate the level of the suspect's impairment. Impairment varies widely among individuals with the same BAC level.

Preliminary breath testing, like psychophysical testing, is a stage in the pre-arrest screening of a DWI suspect. Usually the suspect is not yet under arrest when requested to submit to the preliminary breath test. The DWI incident remains at the investigative stage; the accusatory stage has not yet begun. The PBT result is only one of many factors the officer considers in determining whether the suspect should be arrested for DWI. It should never be the sole basis for a DWI arrest. The PBT result is an important factor because it provides direct indication of alcohol impairment. All other evidence, from initial observation of the vehicle in operation through formal psychophysical testing, indicates alcohol impairment.

ADVANTAGES OF PBT

A PBT offers several important advantages for DWI detection. It may:

- o corroborate other evidence by demonstrating that the suspicion of alcohol impairment is consistent with the officer's observations of the suspect's mental and physical impairment.
- o confirm the officer's own judgment and help gain confidence in evaluating alcohol impairment accurately, based on observations and psychophysical tests. (Many officers experienced in DWI enforcement find that they rely less and less on the PBT as their confidence in their own powers of detection increases.)

- o disclose the possibility of medical complications or impairment due to drugs other than alcohol. (The PBT can confirm or deny that alcohol is the cause of the observed impairment. For example, observed psychophysical impairment coupled with a PBT result showing a very low BAC indicates an immediate need to investigate the possibility that the suspect has ingested a drug other than alcohol or suffers from a medical problem.)
- o help to establish probable cause for a DWI arrest. (The role of the PBT in establishing probable cause may be affected by the evidentiary value of PBT results in your state. Consult your specific PBT law, your supervisor, or the local prosecutor for clarification, if necessary.)

LIMITATIONS OF PBT

Preliminary breath testing may have both evidentiary limitations and accuracy limitations. Evidentiary limitations vary with specific laws. In some states PBT results are admissible as evidence; in other states they are not admissible. Where the results are admissible, there may be differences in the weight or value they are given. Consult your state PBT law, your supervisor or your local prosecutor, as necessary, for clarification.

PBT instruments have accuracy limitations. Although all PBT instruments currently used by law enforcement are reasonably accurate, they are subject to the possibility of error, especially if they are not used properly. There are factors that can affect the accuracy of preliminary breath testing devices. Some of these factors tend to produce "high" test results; others tend to produce "low" results.

There are two common factors that tend to produce high results on a PBT.

- o Residual mouth alcohol. After a person takes a drink, some of the alcohol will remain in the mouth tissues. If the person exhales soon after drinking, the breath sample will pick up some of this left-over mouth alcohol. In this case, the breath sample will contain an additional amount of alcohol and the test result will be higher than the true BAC.

It takes approximately 15 minutes for the residual alcohol to evaporate from the mouth.

The only sure way to eliminate this factor is to make sure the suspect does not take any alcohol for at least 15 to 20 minutes before conducting a breath test. Remember, too, that most mouthwashes, breath sprays, cough syrups, etc., contain alcohol and will produce residual mouth alcohol. Therefore, it is always best not to permit the suspect to put anything in their mouth for at least 15 to 20 minutes prior to testing.

- o Breath Contaminants. Some types of preliminary breath tests might react to certain substances other than alcohol. For example, substances such as ether, chloroform, acetone, acetaldehyde and cigarette smoke conceivably could produce a positive reaction on certain devices. If so, the test would be contaminated and its result would be higher than the true BAC. Normal characteristics of breath samples, such as halitosis, food odors, etc., do not affect accuracy.

There are two common factors that tend to produce low PBT results.

- o Cooling of the breath sample. If the captured breath sample is allowed to cool before it is analyzed, some of the alcohol vapor in the breath may turn to liquid and precipitate out of the sample. If that happens, the subsequent analysis of the breath sample will produce a low BAC result.
- o The composition of the breath sample. Breath composition means the mixture of the tidal breath and alveolar breath. Tidal breath is breath from the upper part of the lungs and the mouth. Alveolar breath is deep lung breath. Breath testing should be conducted on a sample of alveolar breath, obtained by having the subject blow into the PBT instrument until all air is expelled from the lungs.

Radio frequency interference (RFI) can produce either high or low test results, or can prevent a breath test device from producing any result. Care should be exercised when utilizing a PBT around radio equipment

THE ARREST DECISION

Your arrest/no arrest decision is the culmination of the DWI detection process. Your decision is based on all the evidence you have accumulated during each detection phase.

PHASE ONE:

- o initial observation of vehicle in motion;
- o observation of the stop.

PHASE TWO:

- o face-to-face observation and interview;
- o observation of the exit.

PHASE THREE:

- o SFSTs;
- o preliminary breath tests.

Your decision involves a careful review of each of the observations you have made.

Conduct a "mental summary" of the evidence collected during vehicle in motion, personal contact and pre-arrest screening. If all of the evidence, taken together, establishes probable cause to believe that DWI has been committed, you should arrest the suspect for DWI. Under no circumstances should you charge the suspect with a lesser offense instead of DWI if there is probable cause to believe that DWI has been committed. Any reduction of DWI to a lesser charge is the responsibility of the prosecutor or judge.

TEST YOUR KNOWLEDGE

INSTRUCTIONS: Complete the following sentences.

1. The two major evidence gathering tasks of Phase Three are _____

2. The major decision in Phase Three is _____

3. The entire DWI detection process culminates in _____

4. Divided attention tests require the subject to _____

5. Among the mental and physical capabilities a person needs to drive safely are these four:

a.

b.

c.

d.

6. The two stages of the Walk-and-Turn are:

a.

b.

7. The two stages of the One-Leg Stand are:

a.

b.

8. The purpose of PBT is _____

9. Two factors that produce high results on a PBT are:

a.

b.

10. Two factors that produce low results on a PBT are:

a.

b.

SESSION VIII

CONCEPTS AND PRINCIPLES OF THE
STANDARDIZED FIELD SOBRIETY TESTS

SESSION VIII

CONCEPTS AND PRINCIPLES OF THE STANDARDIZED FIELD SOBRIETY TESTS

Upon successfully completing this session, the participant will be able to:

- o Discuss the development and validity of the research and the standardized elements, clues and interpretation of the three standardized field sobriety tests.
- o Discuss the different types of nystagmus and their effects on the Horizontal Gaze Nystagmus test.
- o Discuss and properly administer the three Standardized Field Sobriety Tests.
- o Discuss and recognize the clues of the three Standardized Field Sobriety Tests.
- o Describe in a clear and convincing fashion and properly record the results of the three Standardized Field Sobriety Tests on a standard note taking guide.
- o Discuss the limiting factors of the three Standardized Field Sobriety Tests.

CONTENTS SEGMENTS

LEARNING ACTIVITIES

- | | |
|---|--|
| A. Overview: Development and Validation | o Instructor-Led Presentation |
| B. SFST Field Validation Studies | o Instructor-Led Demonstration |
| C. Horizontal Gaze Nystagmus | o Participant Practice Session & Demonstration |
| D. Vertical Gaze Nystagmus | |
| E. Walk-and-Turn | |
| F. Combining the Clues of the Horizontal Gaze Nystagmus and Walk-and-Turn | |
| G. One-Leg Stand | |
| H. Limitations of the Three Tests | |
| I. Taking Field Notes on the Standardized Field Sobriety Tests | |

HS 178 R8/06

OVERVIEW OF SFST RESEARCH AND DEVELOPMENT

1. For many years law enforcement officers have utilized field sobriety tests to determine the impairment of a person's driving due to alcohol influence. The performance of the person on those field sobriety tests was used by the officer to develop probable cause for arrest and as evidence in court. A wide variety of field sobriety tests existed and there was a need to develop a battery of standardized valid tests.
2. Beginning in late 1975, extensive scientific research studies were sponsored by NHTSA through a contract with the Southern California Research Institute (SCRI) to determine roadside field sobriety tests were the most accurate. SCRI published the following three reports:
 - o California: 1977 (Lab)
 - o California: 1981 (Lab and Field)
 - o Maryland, D.C., V.A., N.C., 1983 (Field)
3. SCRI traveled to law enforcement agencies throughout the United States to select the most commonly used field sobriety tests. Six tests were used in the initial stages of this study.
4. Laboratory research indicated that three of these tests, when administered in a standardized manner, were a highly accurate and reliable battery of tests for distinguishing BACs above 0.10:
 - o Horizontal Gaze Nystagmus (HGN)
 - o Walk-and-Turn (WAT)
 - o One-Leg Stand (OLS)
5. NHTSA analyzed the laboratory test data and found:
 - o HGN, by itself, was 77% accurate
 - o WAT, by itself, was 68% accurate
 - o OLS, by itself, was 65% accurate
 - o By combining HGN and WAT an 80% accuracy can be achieved.
6. The final phase of this study was conducted as a field validation.
 - o Standardized, practical and effective procedures were developed
 - o The tests were determined to discriminate in the field, as well as in the laboratory.

7. The three standardized test were found to be highly reliable in identifying subjects whose BACs were above 0.10. The results of the study unmistakably validated the SFSTs.

SFST VALIDATION STUDIES

1. Three SFST validation studies were undertaken between 1995 and 1998:
 - o Colorado - 1995
 - o Florida - 1997
 - o San Diego - 1998
2. The Colorado SFST validation study was the first full field study that utilized law enforcement personnel experienced in the use of SFSTs.
 - o The initial study utilized only a few experienced officers in DWI enforcement in both a laboratory setting and field setting.
 - o Correct arrests decisions were made 93% of the time based on the 3-test battery (HGN, WAT, OLS). Substantially higher than the initial study results.
3. The Florida SFST field validation study was undertaken in order to answer the question of whether SFSTs are valid and reliable indices of the presence of alcohol when used under present day traffic and law enforcement conditions.
 - o Correct decisions to arrest were made 95% of the time based on the 3-test battery (HGN, WAT, OLS).
 - o This is the third SFST field validation study that has been undertaken. Each has shown that the SFST 3-test battery is the only scientifically validated and reliable method for discriminating between impaired and unimpaired drivers.
4. The San Diego SFST validation field study was undertaken because of the nationwide trend towards lower the BAC limits to 0.08. The question to be answered was "does SFST discriminate at BAC's below 0.10".
 - o Correct arrest decisions were made 91% of the time based on the 3-test battery (HGN, WAT, OLS) at the 0.08 level and above.

- o The results of this study provide a clear evidence of the validity of the 3-test battery. To support arrest decisions at above or below 0.08, it strongly suggests that the SFSTs also accurately discriminate BACs at 0.04 and above.

OVERVIEW OF NYSTAGMUS

Nystagmus

Nystagmus is defined as an involuntary jerking of the eyes. Alcohol and certain other drugs cause Horizontal Gaze Nystagmus.

Categories of Nystagmus

There are three general categories of nystagmus:

1. Vestibular Nystagmus is caused by movement or action to the vestibular system.
 - A. Types of vestibular nystagmus:
 - o Rotational Nystagmus occurs when the person is spun around or rotated rapidly, causing the fluid in the inner ear to be disturbed. If it were possible to observe the eyes of a rotating person, they would be seen to jerk noticeably.
 - o Post Rotational Nystagmus is closely related to rotational nystagmus: when the person stops spinning, the fluid in the inner ear remains disturbed for a period of time, and the eyes continue to jerk.
 - o Caloric Nystagmus occurs when fluid motion in the canals of the vestibular system is stimulated by temperature as by putting warm water in one ear and cold in the other.
 - o Positional Alcohol Nystagmus (PAN) occurs when a foreign fluid, such as alcohol, that alters the specific gravity of the blood is in unequal concentrations in the blood and the vestibular system.
2. Nystagmus can also result directly from neural activity:
 - o Optokinetic Nystagmus occurs when the eyes fixate on an object that suddenly moves out of sight, or when the eyes watch sharply contrasting moving images.

Examples of optokinetic nystagmus include watching strobe lights, rotating lights, or rapidly moving traffic in close proximity. The Horizontal Gaze Nystagmus test will not be influenced by optokinetic nystagmus when administered properly.

- o Physiological Nystagmus is a natural nystagmus that keeps the sensory cells of the eye from tiring. It is the most common type of nystagmus. It happens to all of us, all the time. This type of nystagmus produces extremely minor tremors or jerks of the eyes. These tremors are generally too small to be seen with the naked eye. Physiological nystagmus will have no impact on our Standardized Field Sobriety Tests, because its tremors are generally invisible.
- o Gaze Nystagmus occurs as the eyes move from the center position. Gaze nystagmus is separated into three types:
 - (1) Horizontal Gaze Nystagmus occurs as the eyes move to the side. It is the observation of the eyes for Horizontal Gaze Nystagmus that provides the first and most accurate test in the Standardized Field Sobriety Test battery. Although this type of nystagmus is most accurate for determining alcohol impairment, its presence may also indicate use of certain other drugs.
 - (2) Vertical Gaze Nystagmus is an involuntary jerking of the eyes (up and down) which occurs when the eyes gaze upward at maximum elevation. The presence of this type of nystagmus is associated with high doses of alcohol for that individual and certain other drugs. The drugs that cause Vertical Gaze Nystagmus are the same ones that cause Horizontal Gaze Nystagmus.

Note: There is no drug that will cause Vertical Gaze Nystagmus that does not cause Horizontal Gaze Nystagmus. If Vertical Gaze Nystagmus is present and Horizontal Gaze Nystagmus is not, it could be a medical condition.
 - (3) Resting Nystagmus is referred to as a jerking of the eyes as they look straight ahead. Its presence usually indicates a pathology or high doses of a Dissociative Anesthetic drug such as PCP. If detected, take precautions. **(OFFICER SAFETY.)**
- 3. Nystagmus may also be caused by certain pathological disorders. They include brain tumors and other brain damage or some diseases of the inner ear. These pathological disorders occur in very few people and in even fewer drivers.

Medical Impairment

The examinations that you can conduct to assess possible medical impairment include:

- o Pupil size
- o Resting Nystagmus
- o Tracking ability

PROCEDURES

Procedures to Assess Possible Medical Impairment

Prior to administration of HGN, the eyes are checked for equal pupil size, resting nystagmus, and equal tracking (can they follow an object together). If the eyes do not track together, or if the pupils are noticeably unequal in size, the chance of medical disorders or injuries causing the nystagmus is present.

Procedures of Horizontal Gaze Nystagmus Testing: The Three Clues

The test you will use at roadside is "Horizontal Gaze Nystagmus" -- an involuntary jerking of the eyes occurring as the eyes gaze toward the side. Some jerking will be seen if the eyes are moved far enough to the side.

1. The Lack of Smooth Pursuit (Clue Number One) - The eyes can be observed to jerk or "bounce" as they follow a smoothly moving stimulus, such as a pencil or penlight. The eyes of an unimpaired person will follow smoothly, i.e., a marble rolling across a smooth pane of glass, or windshield wipers moving across a wet windshield.
2. Distinct and Sustained Nystagmus At Maximum Deviation (Clue Number Two) - Distinct and sustained nystagmus will be evident when the eye is held at maximum deviation for a minimum of four seconds. People exhibit slight jerking of the eye at maximum deviation, even when unimpaired, but this will not be evident or sustained for more than a few seconds. When impaired by alcohol, the jerking will be larger, more pronounced, sustained for more than four seconds, and easily observable.
3. Onset of Nystagmus Prior To 45 Degrees (Clue Number Three) - The point at which the eye is first seen jerking. If the jerking begins prior to 45 degrees it is evident that the person has a BAC above 0.08, as shown by recent research.

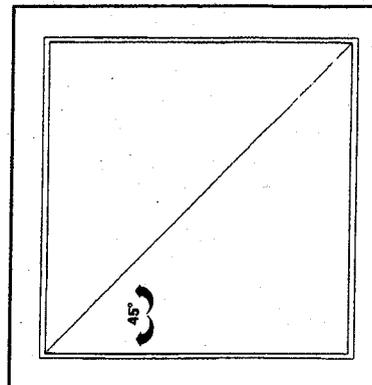
The higher the degree of impairment, the sooner the nystagmus will be observable.

Estimating a 45-Degree Angle

It is important to know how to estimate a 45-degree angle. How far you position the stimulus from the suspect's nose is a critical factor in estimating a 45-degree angle. (i.e., If the stimulus is held 12" in front of the suspect's nose, it should be moved 12" to the side to reach 45 degrees. Likewise, if the stimulus is held 15" in front of the suspect's nose, it should be moved 15" to the side to reach 45 degrees.)

For practice, a 45-degree template can be prepared by making a 15"-square cardboard and connecting its opposite corners with a diagonal line.

To use this device, hold it up so that the person's nose is above the diagonal line. Be certain that one edge of the template is centered on the nose and perpendicular to (or, at right angles to) the face. Have the person you are examining follow a penlight or some other object until suspect is looking down the 45-degree diagonal. Note the position of the eye. With practice, you should be able to recognize this angle without using the template.



Specific Procedures

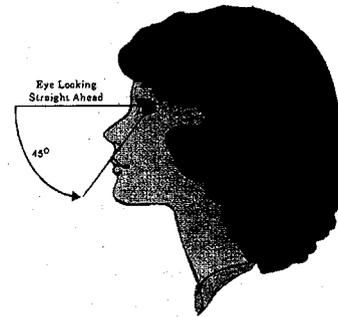
If the suspect is wearing eyeglasses, have them removed.

Give the suspect the following instructions from a safe position. **(FOR OFFICER SAFETY KEEP YOUR WEAPON AWAY FROM THE SUSPECT):**

- o "I am going to check your eyes."
- o "Keep your head still and follow this stimulus with your eyes only."
- o "Keep following the stimulus with your eyes until I tell you to stop."

Position the stimulus approximately 12-15 inches from the suspect's nose and slightly above eye level. Check to see that both pupils are equal in size. If they are not, this may indicate a head injury. You may observe Resting Nystagmus at this time, then check the suspect's eyes for the ability to track together. Move the stimulus smoothly across the suspect's entire field of vision. Check to see if the eyes track the stimulus together or one lags behind the other. If the eyes don't track together it could indicate a possible medical disorder, injury, or blindness.

Check the suspect's left eye by moving the stimulus to your right. Move the stimulus smoothly, at a speed that requires approximately two seconds to bring the suspect's eye as far to the side as it can go. While moving the stimulus, look at the suspect's eye and determine whether it is able to pursue smoothly. Now, move the stimulus all the way to the left, back across suspect's face checking if the right eye pursues smoothly. Movement of the stimulus should take approximately two seconds out and two seconds back for each eye. Repeat the procedure.



After you have checked both eyes for lack of smooth pursuit, check the eyes for distinct and sustained nystagmus at maximum deviation beginning with the suspect's left eye. Simply move the object to the suspect's left side until the eye has gone as far to the side as possible. Usually, no white will be showing in the corner of the eye at maximum deviation. Hold the eye at that position for a minimum of four seconds, and observe the eye for distinct and sustained nystagmus. Move the stimulus all the way across the suspect's face to check the right eye holding that position for a minimum of four seconds. Repeat the procedure.

Note: Fatigue Nystagmus. This type of nystagmus may begin if a subject's eyes are held at maximum deviation for more than 30 seconds.

Next, check for onset of nystagmus prior to 45 degrees. Start moving the stimulus towards the right (suspect's left eye) at a speed that would take approximately four seconds for the stimulus to reach the edge of the suspect's shoulder. Watch the eye carefully for any sign of jerking. When you see it, stop and verify that the jerking continues. Now, move the stimulus to the left (suspect's right eye) at a speed that would take approximately four seconds for the stimulus to reach the edge of the suspect's shoulder. Watch the eye carefully for any sign of jerking. When you see it, stop and verify that the jerking continues. Repeat the procedure. NOTE: It is important to use the full four seconds when checking for onset of nystagmus. If you move the stimulus too fast, you may go past the point of onset or miss it altogether.

If the suspect's eyes start jerking before they reach 45 degrees, check to see that some white of the eye is still showing on the side closest to the ear. If no white of the eye is showing, you either have taken the eye too far to the side (that is more than 45 degrees) or the person has unusual eyes that will not deviate very far to the side.

ADMINISTRATIVE PROCEDURES

1. CHECK FOR EYEGLASSES
2. VERBAL INSTRUCTIONS
3. POSITION STIMULUS (12-15 INCHES)
4. EQUAL PUPIL SIZE AND RESTING NYSTAGMUS
5. TRACKING
6. LACK OF SMOOTH PURSUIT
7. DIST. & SUSTAINED NYSTAGMUS @ MAX. DEV.
8. ONSET OF NYSTAGMUS PRIOR TO 45°
9. TOTAL THE CLUES
10. CHECK FOR VERTICAL GAZE NYSTAGMUS

NOTE: Nystagmus may be due to causes other than alcohol. These other causes include seizure medications and some other drugs. A large disparity between the performance of the right and left eye may indicate a medical condition.

Test Interpretation

You should look for three clues of nystagmus in each eye.

1. The eye cannot follow a moving object smoothly.
2. Nystagmus is distinct and sustained when the eye is held at maximum deviation for a minimum of four seconds.
3. The angle of onset of nystagmus is prior to 45 degrees.

Based on the original research, if you observe four or more clues it is likely that the suspect's BAC is above 0.10. Using this criterion you will be able to classify about 77% of your suspects accurately. This was determined during laboratory and field testing and helps you weigh the various field sobriety tests in this battery as you make your arrest decision.

Vertical Gaze Nystagmus

The Vertical Gaze Nystagmus test is simple to administer. During the Vertical Gaze Nystagmus test, look for jerking as the eyes move up and are held for approximately four seconds at maximum elevation.

1. Position the stimulus horizontally, about 12-15 inches in front of the suspect's nose.
2. Instruct the suspect to hold the head still, and follow the object with the eyes only.
3. Raise the object until the suspect's eyes are elevated as far as possible.
4. Hold for approximately four seconds.
5. Watch closely for evidence of jerking.

Horizontal and Vertical Gaze Nystagmus can be observed directly and does not require special equipment. You will need a contrasting stimulus for the suspect to follow with their eyes. This can be the tip of your index finger, penlight, or pen. The stimulus used should be held slightly above eye level, so that the eyes are wide open when they look directly at it. It should be held approximately 12-15 inches in front of the nose. Remain aware of your position in relation to the suspect at all times.

OFFICER SAFETY IS THE NUMBER ONE PRIORITY ON ANY TRAFFIC STOP.

Procedures for Walk-and-Turn Testing

1. Instructions Stage: Initial Positioning and Verbal Instructions

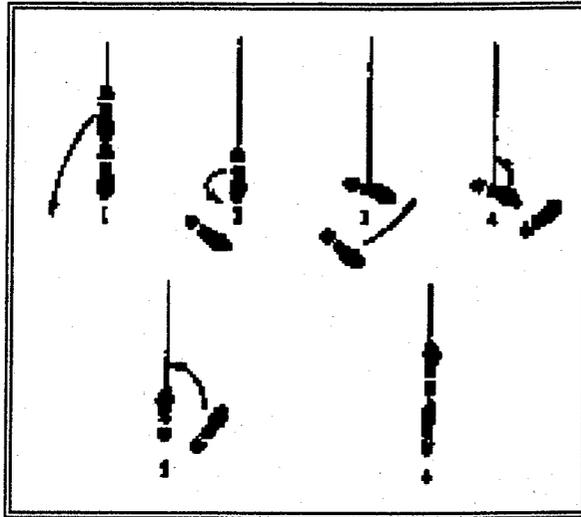
For standardization in the performance of this test, have the suspect assume the heel-to-toe stance by giving the following verbal instructions, accompanied by demonstrations:

- o "Place your left foot on the line" (real or imaginary). Demonstrate.
- o "Place your right foot on the line ahead of the left foot, with heel of right foot against toe of left foot." Demonstrate.
- o "Place your arms down at your sides." Demonstrate.
- o "Maintain this position until I have completed the instructions. Do not start to walk until told to do so."
- o "Do you understand the instructions so far?" (Make sure suspect indicates understanding.)

2. Demonstrations and Instructions for the Walking Stage

Explain the test requirements, using the following verbal instructions, accompanied by demonstrations:

- o "When I tell you to start, take nine heel-to-toe steps, turn, and take nine heel-to-toe steps back." (Demonstrate 3 heel-to-toe steps.)
- o "When you turn, keep the front foot on the line, and turn by taking a series of small steps with the other foot, like this." (Demonstrate).
- o "While you are walking, keep your arms at your sides, watch your feet at all times, and count your steps out loud."
- o "Once you start walking, don't stop until you have completed the test."
- o "Do you understand the instructions?" (Make sure suspect understands.)
- o "Begin, and count your first step from the heel-to-toe position as 'One.'"



3. Test Interpretation

You may observe a number of different behaviors when a suspect performs this test. Original research demonstrated that the behaviors listed below are likely to be observed in someone with a BAC above 0.10. Look for the following clues each time this test is given:

- A. Cannot keep balance while listening to the instructions. Two tasks are required at the beginning of this test. The suspect must balance heel-to-toe on the line, and at the same time, listen carefully to the instructions. Typically, the person who is impaired can do only one of these things. The suspect may listen to the instructions, but not keep balance. Record this clue if the suspect does not maintain the heel-to-toe position throughout the instructions. (Feet must actually break apart.) Do not record this clue if the suspect sways or uses the arms to balance but maintains the heel-to-toe position.
- B. Starts before the instructions are finished. The impaired person may also keep balance, but not listen to the instructions. Since you specifically instructed the suspect not to start walking "until I tell you to begin," record this clue if the suspect does not wait.
- C. Stops while walking. The suspect pauses for several seconds. Do not record this clue if the suspect is merely walking slowly.
- D. Does not touch heel-to-toe. The suspect leaves a space of more than one-half inch between the heel and toe on any step.
- E. Steps off the line. The suspect steps so that one foot is entirely off the line.

- F. Uses arms to balance. The suspect raises one or both arms more than 6 inches from the sides in order to maintain balance.
- G. Improper turn. The suspect removes the front foot from the line while turning. Also record this clue if the suspect has not followed directions as demonstrated, i.e., spins or pivots around.
- H. Incorrect number of steps. Record this clue if the suspect takes more or fewer than nine steps in either direction.

Note: If suspect can't do the test, record observed clues and document the reason for not completing the test, e.g. suspect's safety.

If the suspect has difficulty with the test (for example, steps off the line), continue from that point, not from the beginning. This test may lose its sensitivity if it is repeated several times.

Observe the suspect from a safe distance and limit your movement which may distract the suspect during the test. **Always consider officer safety.**

Based on original research, if the suspect exhibits two or more clues on this test or fails to complete it, classify the suspect's BAC as above 0.10. Using this criterion, you will be able to accurately classify 68% of your suspects.

4. Test Conditions

Walk-and-Turn test requires a designated straight line, and should be conducted on a reasonably dry, hard, level, nonslippery surface. There should be sufficient room for suspects to complete nine heel-to-toe steps. Note: Recent field validation studies have indicated that varying environmental conditions have not affected a suspect's ability to perform this test.

The original research indicated that individuals over 65 years of age, back, leg or inner ear problems had difficulty performing this test. Individuals wearing heels more than 2 inches high should be given the opportunity to remove their shoes.

5. Combined Interpretation of Horizontal Gaze Nystagmus and Walk-and-Turn Tests

Based on the original research, combining four or more clues of HGN and two or more clues of the Walk-and-Turn, suspects can be classified as above 0.10 BAC 80% of the time.

Procedures for One-Leg Stand Testing

1. Instructions Stage: Initial Positioning and Verbal Instructions

Initiate the test by giving the following verbal instructions, accompanied by demonstrations.

- o "Please stand with your feet together and your arms down at the sides, like this." (Demonstrate)
- o "Do not start to perform the test until I tell you to do so."
- o "Do you understand the instructions so far?" (Make sure suspect indicates understanding.)

2. Demonstrations and Instructions for the Balance and Counting Stage

Explain the test requirements, using the following verbal instructions, accompanied by demonstrations:

- o "When I tell you to start, raise one leg, either leg, with the foot approximately six inches off the ground, keeping your raised foot parallel to the ground." (Demonstrate one leg stance.)
- o "You must keep both legs straight, arms at your side."
- o "While holding that position, count out loud in the following manner: "one thousand and one, one thousand and two, one thousand and three, until told to stop." (Demonstrate a count, as follows: "one thousand and one, one thousand and two, one thousand and three, etc." Officer should not look at his foot when conducting the demonstration - OFFICER SAFETY.)
- o "Keep your arms at your sides at all times and keep watching the raised foot."
- o "Do you understand?" (Make sure suspect indicates understanding.)
- o "Go ahead and perform the test." (Officer should always time the 30 seconds. Test should be discontinued after 30 seconds.)

Observe the suspect from a safe distance. If the suspect puts the foot down, give instructions to pick the foot up again and continue counting from the point at which the foot touched the ground. If the suspect counts very slowly, terminate the test after 30 seconds.

3. Test Interpretation

You may observe a number of different behaviors when a suspect performs this test. The original research found the behaviors listed below are the most likely to be observed in someone with a BAC above 0.10. Look for the following clues each time the One-Leg Stand test is administered.

- A. The suspect sways while balancing. This refers to side-to-side or back-and-forth motion while the suspect maintains the one-leg stand position.
- B. Uses arms for balance. Suspect moves arms 6 or more inches from the side of the body in order to keep balance.
- C. Hopping. Suspect is able to keep one foot off the ground, but resorts to hopping in order to maintain balance.
- D. Puts foot down. The suspect is not able to maintain the one-leg stand position, putting the foot down one or more times during the 30-second count.

Note: If suspect can't do the test, record observed clues and document the reason for not completing the test, e.g. suspect's safety.

Remember that time is critical in this test. The original research has shown a person with a BAC above 0.10 can maintain balance for up to 25 seconds, but seldom as long as 30.

Based on original research, if an individual shows two or more clues or fails to complete the One-Leg Stand, there is a good chance the BAC is above 0.10. Using that criterion, you will accurately classify 65% of the people you test as to whether their BAC's are above 0.10.

Observe the suspect from a safe distance and remain as motionless as possible during the test so as not to interfere. If the suspect puts the foot down, give instructions to pick the foot up again and continue counting from the point at which the foot touched the ground. If the suspect counts very slowly, terminate the test after 30 seconds.

4. Test Conditions

One-Leg Stand requires a reasonably dry, hard, level, and non-slippery surface. Suspect's safety should be considered at all times.

The original research indicated that certain individuals over 65 years of age, back, leg or inner ear problems, or people who are overweight by 50 or more pounds had difficulty performing this test. Individuals wearing heels more than 2 inches high should be given the opportunity to remove their shoes.

5. Taking Field Notes on Suspects' Performance of Field Sobriety Tests

For purposes of the arrest report and courtroom testimony, it is not enough to record the total number of clues on the three tests. The number of clues is important to the police officer in the field because it helps determine whether there is probable cause to arrest. But to secure a conviction, more descriptive evidence is needed.

The officer must be able to describe how the suspect performed on the tests, and exactly what the suspect did.

The standard note taking guide provided in this Manual is designed to help you develop a clear description of the suspect's performance on the tests.

6. Taking Field Notes on The Eye Procedures

First, have subject remove glasses.

The section for Medical Assessment appears at the bottom of the guide's front page.

Equal Pupils	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Equal Tracking	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Vertical Nystagmus	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Other (i.e., Resting Nystagmus)	_____	

- o Check "Yes" or "No" box for equal pupil size.
- o Check "Yes" or "No" box for equal tracking.

In the section labeled "other", record any facts, circumstances, conditions, or observations that may be relevant to this procedures (i.e., Resting Nystagmus).

The section on the Horizontal Gaze Nystagmus test appears on the bottom of the guide's front side.

Complete the entire test for both eyes, writing "yes" or "no" for each nystagmus clue.

<u>HORIZONTAL GAZE NYSTAGMUS</u>		
	LEFT	RIGHT
★ LACK OF SMOOTH PURSUIT		
★ DISTINCT AND SUSTAINED NYSTAGMUS AT MAXIMUM DEVIATION		
★ ONSET OF NYSTAGMUS PRIOR TO 45 DEGREES		

- o Write "yes" if the clue is present;
- o Write "no" if the clue is not present.

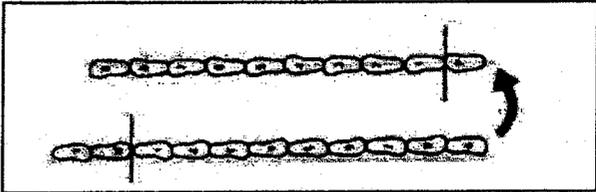
In the section labeled "other," record any facts, circumstances, conditions or observations that may be relevant to this test.

- o Examples of additional evidence of impairment emerging during nystagmus test:
 - suspect unable to keep head still;
 - suspect swaying noticeably;
 - suspect utters incriminating statements.

- o Examples of conditions that may interfere with suspect's performance of the Horizontal Gaze Nystagmus test:
 - wind, dust, etc. irritating suspect's eyes;
 - visual or other distractions impeding the test (always face suspect away from rotating lights, strobe lights and traffic passing in close proximity).

7. Taking Field Notes on Walk-and-Turn Testing

The section on the Walk-and-Turn test appears at the top of the guide's back side.

<u>WALK AND TURN</u>		
CANNOT KEEP BALANCE	□	
STARTS TOO SOON	□	
	FIRST NINE STEPS	SECOND NINE STEPS
STOPS WALKING	□	□
MISSES HEEL -TO- TOE	□	□
STEPS OFF LINE	□	□
RAISES ARMS	□	□
ACTUAL STEPS TAKEN	□	□
IMPROPER TURN (Describe)		
CANNOT DO TEST (EXPLAIN)		
OTHER:		

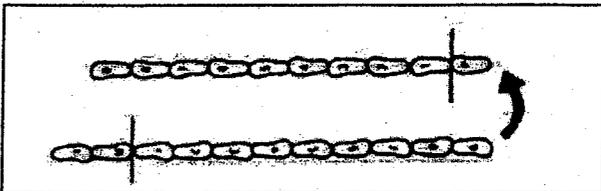
The first two clues, "cannot keep balance" and "starts too soon" apply only during the instructions stage of the test. Record the number of times each of those clues appear.

For example, if the suspect's feet "break apart" from the heel-to-toe stance twice during the instructions stage, write "2" in the box alongside the "cannot keep balance" clue. Similarly, if the suspect never "starts too soon," write "0" in that box. Note: Actual steps taken is for scoring purposes only. Wrong number of steps is the validated clue.

Don't leave boxes blank. If a particular clue never shows up, write "0" in the corresponding box.

Record the next five clues separately for the walk down the line, and then up the line.

- A. If a suspect stops walking, record it by drawing a vertical line across the toe of the step at which the stop occurred. Do this for the first as well as the second nine steps. Place the letter "S" at bottom of the vertical line to indicate stops walking.

<u>WALK AND TURN</u>		
CANNOT KEEP BALANCE <input style="width: 50px;" type="text"/>		
STARTS TOO SOON <input style="width: 50px;" type="text"/>		
STOPS WALKING	FIRST NINE STEPS	SECOND NINE STEPS
MISSES HEEL -TO- TOE	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>
STEPS OFF LINE	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>
RAISES ARMS	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>
ACTUAL STEPS TAKEN	<input style="width: 100%; height: 20px;" type="text"/>	<input style="width: 100%; height: 20px;" type="text"/>
IMPROPER TURN (Describe)		
CANNOT DO TEST (EXPLAIN)		
OTHER:		

- B. If suspect fails to touch heel-to-toe, record how many times this happens. Draw a vertical line across the toe of the step at which the miss occurred. Place the letter "M" at the top of the vertical line to indicate missed heel to toe.
- C. If suspect steps off the line while walking, record it by drawing a line from the appropriate foot print at an angle in the direction in which the foot stepped. Do it for each nine steps.
- D. If suspect uses arms to balance, give some indication of how often or how long this happens.
- o Example: suspect raised arms from sides three times; place a check for each occurrence in appropriate box.
 - o Example: suspect held arms away from sides during 3 through 7; place a check for each occurrence in appropriate box.
 - o Example: suspect "flapped" arms continuously; make a note.
- E. Record the actual number of steps taken by suspect in each direction.

For the next point, "improper turn," record a description of the turn.

If you note that the suspect "cannot perform test," indicate explicitly why you did so.

- o Example: "off line three times;"
- o Example: "staggered six steps to right, nearly fell;"
- o Example: "fear of injury."

At end of the test, examine each factor and determine how many clues have been recorded. Remember, each clue may appear several times, but still only constitutes one clue.

In the section labeled "other," record any facts, circumstances, conditions or observations that may be relevant to this test.

- o Examples of additional evidence of impairment during Walk-and-Turn test:
 - suspect verbally miscounts steps;
 - suspect utters incriminating statements.

- o Examples of conditions that may interfere with suspect's performance of the Walk-and-Turn test:
 - wind/weather conditions;
 - suspect's age, weight;
 - suspect's footwear.

8. Taking Field Notes on the Combined Interpretation of Nystagmus and Walk-and-Turn

By combining four or more clues of HGN with two or more clues of the WAT test, suspects can be correctly classified as above 0.10 BAC 80% of the time.

9. Taking Field Notes on One-Leg Stand Testing

The section on the One-Leg Stand test appears midway down the page.

By recording when things happen as well as what happens, you will be able to prepare a more descriptive arrest report.

You will place check marks in or near the small boxes to indicate how many times you observed each of the clues. You will do this separately for the test on the left leg (L) or on the right leg (R).

In addition, if the suspect puts the foot down during the test, you will record when it happened (write the count on new note guide). For example, when standing on the left leg the suspect lowered the right foot at a count of "one thousand and thirteen", and again at "one thousand and twenty". Your diagram should look like the sketch to the left. You must also pay attention to the suspect's general appearance and behavior while the test is being performed.

At end of the test, examine each factor and determine how many distinct clues have appeared.

IT IS NECESSARY TO EMPHASIZE THIS VALIDATION APPLIES ONLY WHEN:

- o **THE TESTS ARE ADMINISTERED IN THE PRESCRIBED, STANDARDIZED MANNER**
- o **THE STANDARDIZED CLUES ARE USED TO ASSESS THE SUSPECT'S PERFORMANCE**
- o **THE STANDARDIZED CRITERIA ARE EMPLOYED TO INTERPRET THAT PERFORMANCE.**

IF ANY ONE OF THE STANDARDIZED FIELD SOBRIETY TEST ELEMENTS IS CHANGED, THE VALIDITY IS COMPROMISED.

At end of the test, examine each factor and determine how many clues have been recorded. Remember, each clue may appear several times, but still only constitutes one clue.

TEST YOUR KNOWLEDGE

INSTRUCTIONS: Complete the following sentences.

1. Walk-and-Turn is an example of _____ field sobriety test.
2. The Walk-and-Turn requires a real or imaginary line and _____

3. During the _____ stage of the Walk-and-Turn, the suspect is required to count out loud.
4. Per the original research, the Walk-and-Turn can determine whether a suspect's BAC is above or below 0.10, _____ percent of the time.
5. In the Walk-and-Turn test, a suspect who steps off the line during the first 9 steps and once again during the second 9 steps and who raises arms for balance twice during the second nine steps has produced _____ distinct clue(s).
6. The Walk-and-Turn may not be valid when administered to persons who are over _____ years of age.
7. During the _____ stage of the One-Leg Stand the suspect must maintain balance for 30 seconds.
8. The One-Leg Stand requires that the suspect keep the foot elevated for _____ seconds.
9. Per original research, the One-Leg Stand can determine whether a suspect's BAC is above or below 0.10, _____ percent of the time.
10. In the One-Leg Stand test, a suspect who sways has exhibited _____ clue(s).
11. In the One-Leg Stand test, a suspect who raises arms, hops, and puts foot down has exhibited _____ clue(s).
12. The maximum number of clues for Horizontal Gaze Nystagmus that can appear in one eye is _____.
13. Per original research, the HGN test can determine whether a suspect's BAC is above 0.10, _____ percent of the time.
14. The third clue of HGN is an onset of nystagmus prior to _____ degrees.