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16. Abstract

This report summarizes the results of a field test of attempting to achieve driving while intoxicated (DWI) general deterrence by combining enforcement efforts with public information and education (PI&E) activities designed to heighten public awareness of the specific enforcement techniques being employed. The intent was to thereby increase the general driving public's perceived risk of arrest for DWI, deter them from that behavior and affect alcohol-related crashes. The program was implemented in Indianapolis, Indiana. Public awareness and crash statistics were monitored both there and in a comparison jurisdiction (Cincinnati, Ohio).

Surveys indicated heightened awareness of DWI enforcement activities in the test site as well as increases in the perceived risk of arrest and sanctions for DWI. Indianapolis survey results also indicated reductions in reported drinking driving behavior.

Analysis of the crash data indicated no reductions in police reported alcohol-related crashes attributable to the program. However, there were indications that the night-time crashes were reduced in Indianapolis relative to Cincinnati coincident with the active implementation of project activities.

It is hypothesized that the failure to detect any changes in police-reported alcohol related crashes may in part be due to increased sensitivity to alcohol by police accident investigators. In this test site PI&E activities concentrated on hard news coverage. It is suggested that hard news coverage supplemented by public service PI&E activities may result in more sustained program effects.

As in other test sites, the enforcement strategy most frequently referred to by survey respondents was the use of checkpoints or roadblocks.

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We wish to express our thanks to the staff of the Marion County Prosecuting Attorney's Office and all the members of the Indianapolis Police Department and specifically to Mr. Stephen Goldsmith, County Prosecutor, Ruth Purcell, Project Coordinator, Jon Bailey, Janice Hughes, Deputy Chief Paul Annee, Assistant Deputy Chief Robert Robinson and Lieutenant Donald Bee.

TABLE OF CONTENTS

1. INTRODUCTION

This report describes project activities and results obtained at the Indianapolis, Indiana test site of the NHTSA-sponsored project "Enforcement and Public Information Strategies for the General Deterrence of DWI." This was a two-phase project in which Phase I activities were focused on reviewing previous experience in efforts at achieving driving while intoxicated (DWI) general deterrence through enforcement or enforcement combined with public information activities. The second phase of the project involved planning and implementing combined DWI enforcement and public information activities at selected sites and monitoring their effectiveness in reducing alcohol-related (A/R) crashes. Three sites were recruited and selected (Clearwater/Largo, Florida; Boise City, Idaho; and Indianapolis, Indiana). Each site was given the opportunity to implement programs of their design based on a selection of candidate enforcement techniques provided to them by the project staff as well as public information and education activities in support of those enforcement techniques. This report contains a description of the project activities at the Indianapolis, Indiana test site as well as a discussion of the evaluation results there both in terms of public perceptions and effects on crashes.

Throughout this report the term DWI (driving while intoxicated or driving while impaired) is used interchangeably with DUI (driving under the influence).

1.1: Basic Philosophy

The basic premise to be tested under this project was that by raising the public's perceived risk of being detected, arrested and subsequently punished for DWI to a high enough level, a measurable portion of potentially alcohol impaired drivers could be deterred from engaging in that behavior and alcohol-related crashes in turn could be affected. The primary emphasis in this project was on raising public awareness and perceived risk of DWI detection and arrest (enforcement).

Regarding strategies to be implemented, the basic philosophy guiding this project was to use strategies which had both a high potential for increasing perceived risk of arrest and which could be implemented at relatively low cost. The hope was that the techniques used, if found to be effective, would be attractive to and feasible for other communities to adopt and implement. Thus, enforcement techniques selected for implementation were, to the extent possible, ones that could be implemented with minimal funding from the project.

In particular, project funding was not used to fund overtime hours for the purpose of enforcement because experience has indicated that enforcement efforts which rely heavily on outside funding for enforcement manpower usually cease when that outside funding is removed. Thus, under this project, manpower-intensive strategies such as roadblocks or checkpoints were conducted using local resources (usually through reallocation of manpower) rather than by buying additional person hours with project funds. Project funding for each site was limited to a maximum of $75,000 with those funds largely being spent for training, public information and education (PI&E) materials reproduction, and limited equipment purchase.

Test sites were recruited which already had DWI enforcement programs in place. This was done to reduce the likelihood that the effects of the program would be attributable to a prior lack of enforcement efforts rather than to the enforcement and public information activities being tested.

1.2: Phase I - Background

As mentioned earlier, the activities reported here represent Phase II of a two-phase project. The first phase consisted of a review of existing knowledge and practices in DWI enforcement approaches and associated PI&E efforts. Two reports which resulted from that effort were used to help recruit field test participants and plan Phase II activities. "Enforcement, Adjudication and Public Information Strategies for the General Deterrence of Driving While Intoxicated: Information for Potential Field Site Participants" listed twelve potential DWI enforcement techniques, ten sanctions and six additional PI&E themes which had potential for raising public perceptions of the risk of arrest and punishment for DWI. A brief description, specific general deterrence objectives, critical use features, critical assumptions and candidate PI&E tie-ins were provided for each enforcement technique and sanction. Additional public information themes were also briefly described. These materials were intended to indicate to potential project participants the types of enforcement and public information strategies that could be implemented but were not intended to limit the range of techniques which might be employed. A listing of these techniques, sanctions and additional PI&E themes appears below.

1.2.1: Deployment Strategies

High DWI Accident Locations (Highly Visible) - In this strategy specific locations and times are identified where there have been

concentrations of DWI accidents, and units are assigned to patrol these areas in a highly visible fashion (e.g., marked cars, DWI patrol signs, etc.).

High DWI Accident Locations (Unobtrusive) - Patrol units are assigned to locations selected as in the high visibility strategy but in an unobtrusive fashion (e.g., unmarked cars).

High DWI Incidence Locations (Highly Visible) - Patrol units are assigned to specific locations and times where it has been determined there are concentrations of DWI incidents (usually measured by DWI arrests). They are instructed to patrol in a highly visible manner (e.g., marked cars, signs, etc.).

High DWI Incidence Locations (Unobtrusive) - Units are assigned to patrol locations as selected in the high visibility strategy but in an unobtrusive manner.

Drinking Establishments (Highly Visible) - Patrol units are assigned to the areas around and at drinking establishments in a highly visible manner (e.g., marked cars, patrolling bar parking lots, walking into bars, etc.).

Drinking Establishments (Unobtrusive) - Patrol units are assigned to areas around drinking establishments in an unobtrusive manner.

Roadblocks or Checkpoints - DWI sobriety checkpoints are conducted at locations selected to gain maximum visibility to the potential DWI population and to generate DWI arrests.

1.2.2: Detection and Screening Strategies

DWI Detection Guide - Use of NHTSA's training program and materials to instruct patrol officers in the use of specific visual cues for detecting drunk drivers at night.

Improved Psychomotor Tests - Use of improved standardized psychophysical tests to enable officers to make a more accurate roadside pre-arrest determination of whether a stopped driver has a blood-alcohol concentration (BAC) over the legal limit. This technique involves the use of a three test battery including a walk and turn test and a one leg stand test as well as alcohol gaze nystagmus.

Preliminary Breath Testers - Use of preliminary breath testers (PBT's) to assist in making the decision of whether to arrest a subject already stopped as a probable DWI. PBT's are small, portable breath-testing devices.

Citizen Involvement - Implementation of a citizen reporting program to assist in the detection of DWI's. Through a public information program, citizens are encouraged to watch for and report drunk drivers to the police by telephone or citizens band radio.

Breath Test For Any Traffic Violation - Implementation of a policy where a preliminary breath test would be administered to every driver stopped for a traffic violation or to some systematically determined subset of that group.

1.2.3: Strategies Designed to Improve the Processing of DWI Arrestees

Audio/Video Tapes - Providing police officers with audio and/or video taping capabilities used either at the roadside or in the police station to assist in the documentation of impairment and to substantiate that proper procedures had been followed (e.g., Miranda warning, evidential testing procedures).

Four Hour Lock-Up - Adopting a policy which mandates holding DWI arrestees for a minimum of four hours so that no suspects are released until sober.

Impound Car - Adopting a policy where vehicles of DWI arrestees are towed to an impound lot.

1.2.4: Sanctioning Strategies

These strategies focus less on specific police strategies than on the legal consequences of DWI arrest or conviction. They are to a large degree dependent on the laws in the jurisdiction and would primarily involve publicizing how those laws are being applied.

Administrative Per Se - A procedure whereby licensing sanctions are applied at the time of arrest to DWI offenders who exceed the legal limit or refuse to submit to a chemical test. This sanction is triggered by the arrest rather than conviction.

Short-term License Suspension/Revocation - A program to publicize certain license suspension for persons convicted of DWI.

Mandatory Minimum Sentences for DWI - A program to publicize mandated minimum sanctions for DWI convictees (e.g., fines, license suspension, jail, etc.).

Severe Sanctioning - A program emphasizing severe sanctions for DWI's sought by prosecutors and imposed by judges.

Victim Restitution - Implementation of a program providing restitution for victims of drunk driving crashes in addition to other sanctions.

Severe Penalties for Refusing a BAC Test - A program emphasizing that license sanctions for refusing to submit to a chemical test are as severe or more severe than for a DWI conviction.

Illegal Per Se Law - Emphasizing legislation which makes it illegal to drive above a certain BAC level without regard to demonstrated behavioral impairment.

Traffic Violation Aggravated by Alcohol - Publicizing a new class of traffic violation for hazardous violations committed by drivers whose BAC's are high enough (e.g., 0.05%) to pose an increased risk but below the presumptive limit (e.g., 0.10%). The sanctions would be more severe than for the violation itself but less severe than those imposed for DWI.

Lower Illegal Per Se - Publicizing legislation, if passed, which lowered the illegal per se level or presumptive level from earlier levels.

1.2.5: Additional Public Information Themes

Numbers - Public information efforts to highlight increases in the numbers of arrests and convictions as a result of increased DWI enforcement efforts.

Penalties - Public information efforts emphasizing the severe consequences of a DWI conviction including loss of license, monetary costs, inconvenience, embarrassment, etc.

Arrest Experience - Public information materials graphically portraying how unpleasant and degrading the DWI arrest experience can be.

Embarrassment - Materials highlighting the embarrassing aspects of the consequences of a DWI arrest and/or conviction.

Typical DWI - Materials emphasizing that persons of all ages and socioeconomic groups are arrested and convicted of DWI.

Newspaper Reports of Arrests and Convictions - A program in which the names and BAC's of persons arrested for drunk driving are published in the newspaper.

A second publication, "Existing DWI Enforcement-Oriented Public Communications Themes and Materials" (DOT HS-806-359) contained brief descriptions of sixteen PI&E themes related to DWI enforcement and references to existing materials and sources. Most of those themes were closely related to the strategies and themes listed above.

In addition to the above strategies, one salient finding of the Phase I activities was the importance of command emphasis and commitment to DWI enforcement to a successful program. For example, it was the consensus of a panel of enforcement officers as well as mail survey respondents from a sample of Northwestern University Traffic Institute (NUTI) long course graduates that few strategies would achieve the desired objectives, no matter how attractive, without true and continued support from the highest levels of command within the enforcement agency.

1.3: Site Recruitment

Because the intent of the project was to test procedures that, if proven successful, could be adopted and implemented by other jurisdictions, the monetary inducements that were offered to potential test sites for participation were kept to a minimum. The major inducements offered were in the area of technical assistance in developing enforcement procedures, conducting training, and developing public information and education plans and materials.

Letters were sent to every Governor's Highway Safety Program outlining the project goals and requesting assistance in identifying and recruiting potential test sites for Phase II activities. Each regional office of NHTSA was also contacted for input as to prospective test sites.

To be considered for inclusion in the study, potential jurisdictions had to be of sufficient size to be able to generate an adequate sample size of nighttime and alcohol-related crashes to allow the detection of program effects, if present. They had to show a willingness to participate in an evaluation-oriented activity, be already active in DWI enforcement and be willing to try a number of different combined DWI enforcement and PI&E techniques for a minimum of a one year operational period. Jurisdictions identified by Governor's Highway Safety Representatives and NHTSA regional offices as potential test sites were contacted by telephone to explore their interest in participating in the project. An information packet was sent to jurisdictions indicating an active interest in participating. After their review of these materials, an initial meeting at the test site was scheduled with project and NHTSA personnel. At this time, the project was discussed in more detail. Potential contributions of the project and test site requirements were outlined, and the list of DWI enforcement techniques was reviewed to identify techniques for possible use at the candidate test site. One important aspect of those meetings was to assess the level of commitment of command personnel in the police departments concerned. It was felt, particularly without other inducements such as overtime pay, that it would be unlikely that an appropriate level of effort from the patrol officers would be obtained without extensive command support.

As a result of the initial meeting with officials from Indianapolis, it was agreed that they would be a test site for the project. Subsequent meetings were held to determine the specific enforcement and public information

strategies to be implemented there. A subcontract document was then negotiated which outlined enforcement strategies, the period of performance, and the level of financial support to be afforded the jurisdiction by the project.

At this time, a comparison site was identified for the purposes of monitoring public awareness and alcohol-related and nighttime crash patterns. To enable evaluation of the effectiveness of the activities in Indianapolis, an effort was made to identify a comparison jurisdiction in the same region, which had comparable demographic characteristics and, to the extent possible, was of comparable size. Ideally, the comparison jurisdiction would be one that did not plan to undertake extensive changes in their DWI enforcement and PI&E activities during the anticipated test period. Cincinnati, Ohio was selected as the comparison jurisdiction for Indianapolis, Indiana. Though Cincinnati did not institute any major DWI enforcement initiatives during the project period they had been long term recipients of highway safety grants from the Ohio Department of Highway Safety.

1.4: Project Implementation Methodology

After the initial negotiations were complete, a kickoff date for the enforcement and public information program was set (May, 1984). This date was selected so that a reasonable amount of planning time would be available to schedule the implementation of the selected enforcement techniques and to coordinate the development and distribution of their attendant PI&E materials. Special data collection activities on the part of the enforcement agency were also agreed upon during this period.

Two main types of measures were used in the evaluation of the effectiveness of the overall approach. One was to measure public awareness of DWI enforcement activities and issues, and perceptions about the likelihood of arrest and punishment in both the test and comparison jurisdictions before, during, and after the conclusion of the planned implementation. This was accomplished through telephone interviews. A sample of 400 licensed drivers who were also drinkers was obtained through random digit dialing in both the test and comparison jurisdictions on each administration of the telephone questionnaire. The questionnaires were administered under a separate NHTSA contract with Market Facts, Inc. The results of these interviews are discussed in Chapter 6. The second measure of program effectiveness was achieved by monitoring both nighttime and alcohol-related crash trends over time in both

the experimental and comparison jurisdictions. Time series analytic methods were used to determine whether there were differential changes in those measures coincident with implementation of the enforcement and PI&E activities in the test jurisdictions.

Other measures of program activity included a monitoring of public information activities both in terms of media coverage (particularly newspaper articles), program participant PI&E activities (e.g., speaking engagements, etc.) and process measures of enforcement technique implementation. The active phase of the project was twelve months, from May 1984 through April 1985.

2. DESCRIPTION OF TEST JURISDICTION

Indianapolis, Indiana, the capital city of Indiana with a 1980 population of over 700,000, served as the test jurisdiction for the activities described in this report. It is also the county seat and by far the most populous community of Marion County (population 765,233). Many city and county functions have been combined under a plan called Unigov; however, city and county law enforcement agencies have not been combined. Two major interstate highways, I-65 (north-south) and I-70 (east-west) pass through Indianapolis, and a beltway, I-465, carries traffic around the city. Several U.S. and major state highways are also routed through Indianapolis. Cincinnati, Ohio was selected as the comparison community. Though somewhat smaller than Indianapolis (1980 population approximately 385,000), it was selected as a reasonably comparable jurisdiction in the same region of the country. Ohio also has quite stringent DWI laws and Cincinnati was known to have active DWI enforcement but no specific plans for intensifying that activity or increasing publicity about it during the project period. It was later learned that though Cincinnati did not begin any new DWI initiatives during the project period, they had been long term recipients of highway safety grant funds to enhance DWI enforcement.

2.1 DWI ENFORCEMENT IN INDIANAPOLIS, INDIANA

DWI enforcement has been emphasized by the Indianapolis Police Department (IPD) for many years. This emphasis can be traced to the implementation of a federally funded Alcohol Safety Action Project (ASAP) program in 1971 which increased DWI enforcement by use of special DWI enforcement teams made up of regular IPD officers hired on their off-duty time. Overtime was paid by the ASAP grant and the special activity ceased when the grant ended. However, from October 1981 through March 1983 DWI enforcement teams were fielded during high incidence hours by reassigning other personnel.

The police department has a current strength of approximately 960 sworn officers and 300 civilian employees. The department contains three major divisions: operations, criminal investigations, and administration. DWI enforcement comes under the purview of the Operations Division, which

is subdivided into four patrol quadrants. The Operations Division also has a traffic branch with four major sections: enforcement (solo motorcycles working between 6am and 10pm), parking enforcement, radar operations and accident investigations (AI). All operations personnel have traffic enforcement responsibilities, but in practice the late shift accident investigators make the largest number of DWI arrests.

The department has a low turnover rate and those assigned to the traffic section usually remain there. New officers are trained at the Indianapolis Police Department Academy. Initial training includes a four to eight hour block on DWI enforcement including ride alongs with experienced officers.

Though IPD had no formal written DWI enforcement policies informal policies generally resulted in concentrating enforcement in high DWI incidence areas (based on officer's experience) and the periodic use of checkpoints. Impaired drivers were generally detected on the basis of observed driving behavior though frequently they were stopped for other offenses and were not suspected of being impaired until the officer had direct contact with the driver. IPD officers had no specific training in DWI detection cues.

Upon identifying a suspected impaired driver some form of field sobriety test was usually given though uniform procedures were not used by all officers. Indiana implied consent law allows for administering the breath test before a formal arrest for DWI and usually DWI suspects are offered the test and for those who consent the arrest decision is made after the test is administered. Those who refuse are generally arrested for DWI at the time of refusal.

2.2 DWI ADJUDICATION IN INDIANAPOLIS, INDIANA

Indiana's drinking driving laws were rewritten during the 1983 legislative session and took effect September 1, 1983. Among the revisions was the creation of a new offense of driving with a blood alcohol content of .10% or more (a *per se* statute) in addition to the more serious operating a vehicle while under the influence (OMVUI).

An additional revision established a pretrial license suspension procedure under which refusing a chemical test or failing it is grounds for immediate license seizure by the arresting officer and summary

suspension by the Indiana Bureau of Motor Vehicles. This pretrial suspension reportedly removes incentive on the defendant's part to delay proceedings since such delays only extend the period of suspension.

Sanctions called for by the new law include a 30-day minimum license suspension period for first offenders, and a five day minimum jail term (or 10-day community-service requirement) for multiple offenders.

A more detailed description of DWI enforcement and adjudication in both Indianapolis, Indiana and Cincinnati, Ohio is contained in Appendix A.

3. ENFORCEMENT STRATEGIES

The Indianapolis Police Department selected several specific enforcement procedures for implementation and monitoring during the project period. These strategies were selected from a list developed by the project team and the NHTSA. The strategies implemented by the Indianapolis Police Department were:

1. Enforcement at High DWI Accident Locations.
2. Enforcement at High DWI Incident (Arrest) Locations.
3. Officer Training on DWI Detection Guide and Improved Sobriety Tests Battery.
4. Use of Preliminary Breath Test Instruments.
5. Faster DWI Processing.
6. DWI Roadblocks.
7. Command Emphasis on DWI Enforcement.

Each of these strategies is discussed in more detail later in this section. The goal of the project was to develop and implement a public information and education (PI&E) theme to increase awareness for selected strategies and to increase public perception of the risk of being arrested for DWI, thus contributing to the general deterrence of DWI. Methods for monitoring the implementation of the strategies were developed and special local data collection activities were initiated to supplement information that was already available in existing records and management information systems in Indianapolis.

The remainder of this section of the report contains a description of 1) each strategy as initially proposed, 2) changes in the strategy during implementation, 3) strategy implementation, and 4) a discussion of the level of implementation of the strategy. These process evaluations focus on what occurred during the implementation since that is the only period for which such data are available. During the implementation phase of the project, a member of the IPD developed a microcomputer-based DWI tracking program that provided most of the data reported here. Such data are not available for IPD activities prior to project implementation.

The process evaluations discussed below focus only on the specific enforcement strategies implemented in Indianapolis. The overall evaluation of the effectiveness and impact of the project can be found in Sections 6 and 7 of this report. Though the project was announced and presented to the public as beginning May 1, 1984, because of the extensive IPD involvement in activities surrounding the conduct of the Indianapolis 500 automobile race on Memorial Day weekend, the actual implementation of enforcement strategies did not occur until June of 1984. The overall schedule of enforcement strategy implementation appears as Figure 3.1. Thus, the time period during which the strategies were implemented was June 1984 through May 1985, which is referred to in this section of the report as the project "year" for the purposes of monitoring enforcement activities. PI&E activities were concentrated in the period May 1984 through April 1985.

3.1 High Priority Locations

At the Indianapolis test site, logistical difficulties prevented the collection of data that would permit separate data collections for the two strategies - High DWI Accident Locations and High DWI Incident (Arrest) Locations. Therefore, they will be discussed together. Twelve high DWI accident locations (HALs) in Indianapolis were identified by IPD Traffic Branch supervisors based on prior years' accident experience. For the high DWI incident locations (HILs), enforcement was focused on those areas where IPD records indicated a significant number of non accident-related DWI arrests had been made. Eighteen such high DWI incident locations were identified.

The most concentrated enforcement efforts, and greatest emphasis on HAL and HIL patrol, were conducted by DWI Task Force officers. The task force was made up of IPD officers working on an overtime basis and funded by state supplied highway safety monies. This task force was in operation before, during, and after the project implementation period. The task force operated regularly Thursday through Saturday from about 10:30 p.m. until 4:00 a.m. The specific locations selected for increased enforcement were not announced to the public but press releases were issued during the course of the project indicating that the police were concentrating DWI enforcement activities on locations and times where DWI-involved accidents and incidents were occurring.

There was no overlap between the HILs and HALs although they were frequently adjoining. The HALs and HILs were both defined in terms of geocoded

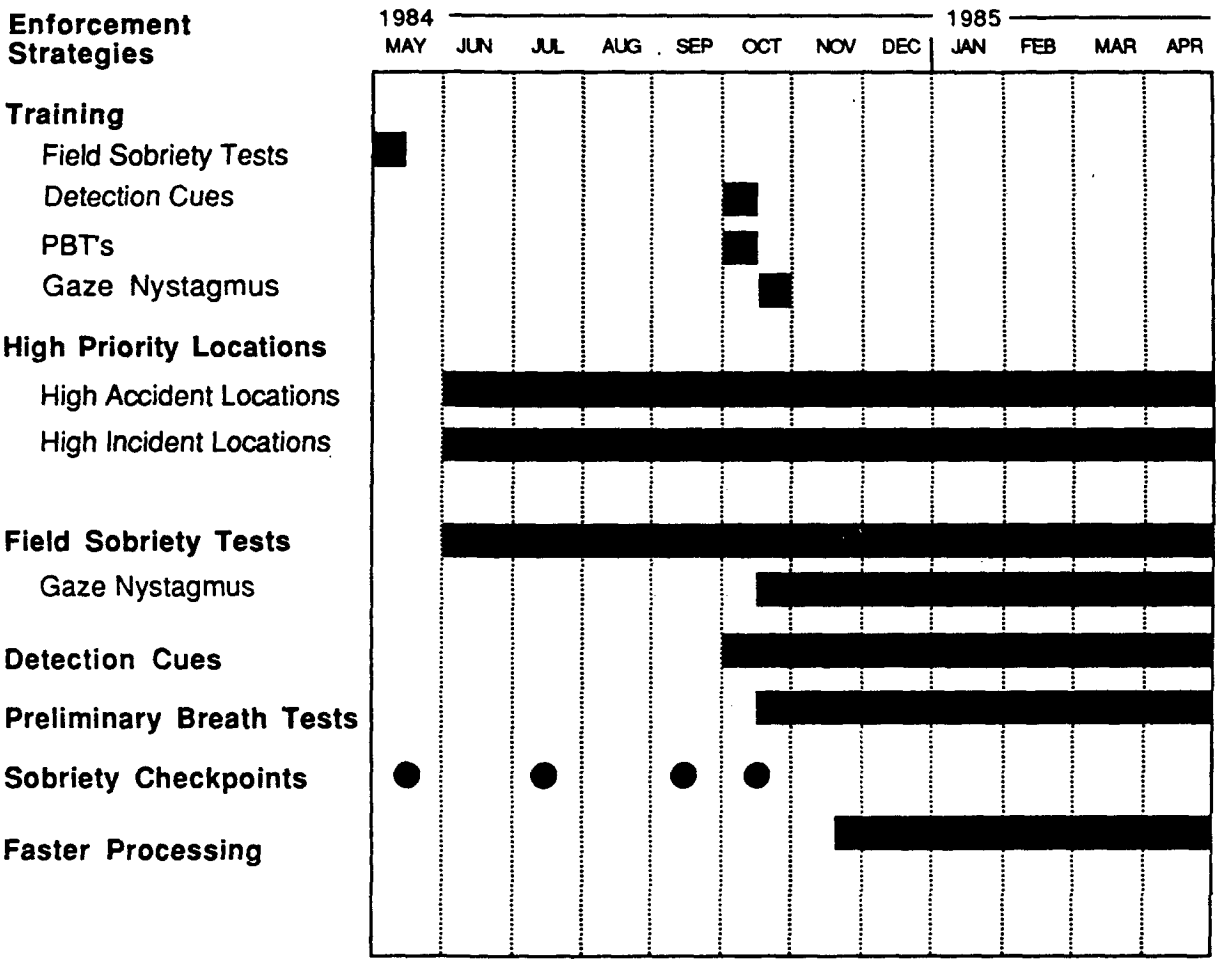


FIGURE 3.1. ENFORCEMENT TECHNIQUE IMPLEMENTATION SCHEDULE.

grid block areas and each location consisted of one to four geo-grid blocks. A geo-grid block is approximately five city blocks on each side.

The HAL and HIL sites were communicated to general patrol, DWI Task Force, and accident investigation (AI) officers during shift briefings and at DWI-related training programs. The task force officers were directed to concentrate patrol at those locations. The general patrol officers, and more specifically, the AI officers, were directed to patrol the HALs as much as possible without compromising their overall responsibilities.

The task force officers completed special reports each day which indicated the numbers of hours they spent patrolling the HALs and HILs. It was not logistically possible to have the general patrol or AI officers complete similar forms. Figure 3.2 shows the number of hours, by month, that task force officers spent at the HALs and HILs. No comparable data for the amount of time spent at those locations in previous years were available.

Figure 3.2 shows a steady increase in the number of hours worked by the task force through December 1984, followed by a sharp drop in January 1985. It was decided by the leadership of the IPD that the funding for the task force would be best used by increasing their activities through what was believed to be the peak DWI incidence season, the Christmas holidays. After those holidays, the task force continued at a lower level of operation using local funds. At the end of the project year, additional state funds were received so that operations could again be increased.

Figure 3.3, which shows the number of arrests made each month at the HALs, has a pattern similar to that of Figure 3.2. Although the increase in arrests during the later months of 1984 is not as steady as for hours worked, it is apparent that the number of arrests is related to the number of hours spent on patrol by the DWI Task Force.

The number of arrests at the HILs, as seen in Figure 3.4, does not show the smooth rise during the end of 1984 but does drop off at the beginning of 1985. When the number of arrests at the HILs and HALs are combined, the same general pattern as seen in Figure 3.2 is repeated.

In a survey conducted after the end of the strategy implementation period, Indianapolis police officers were asked to estimate the number of hours per month that they spent patrolling high DWI accident and high DWI incident locations. The responses ranged from 0 to 120 hours per month for HALs and up to 70 hours per month for HILs. The average number of patrol hours at both

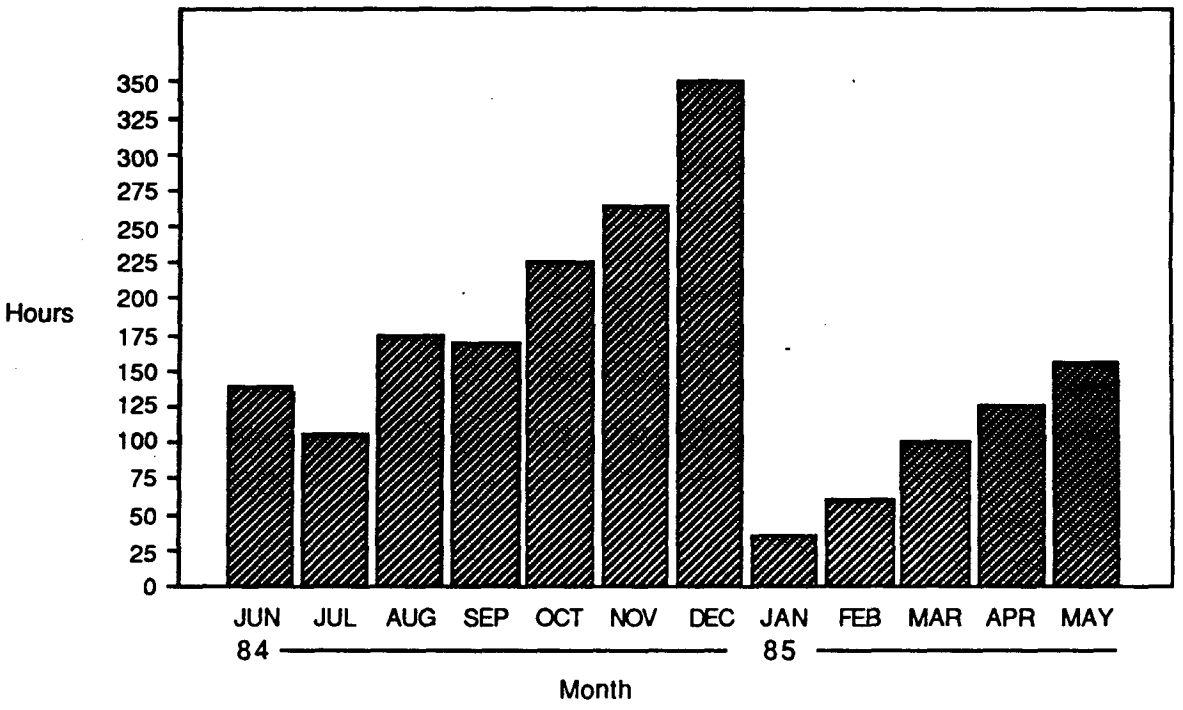


FIGURE 3.2. TOTAL HOURS OF PATROL BY DWI TASK FORCE OFFICERS AT HALs AND HILs DURING PROJECT YEAR.

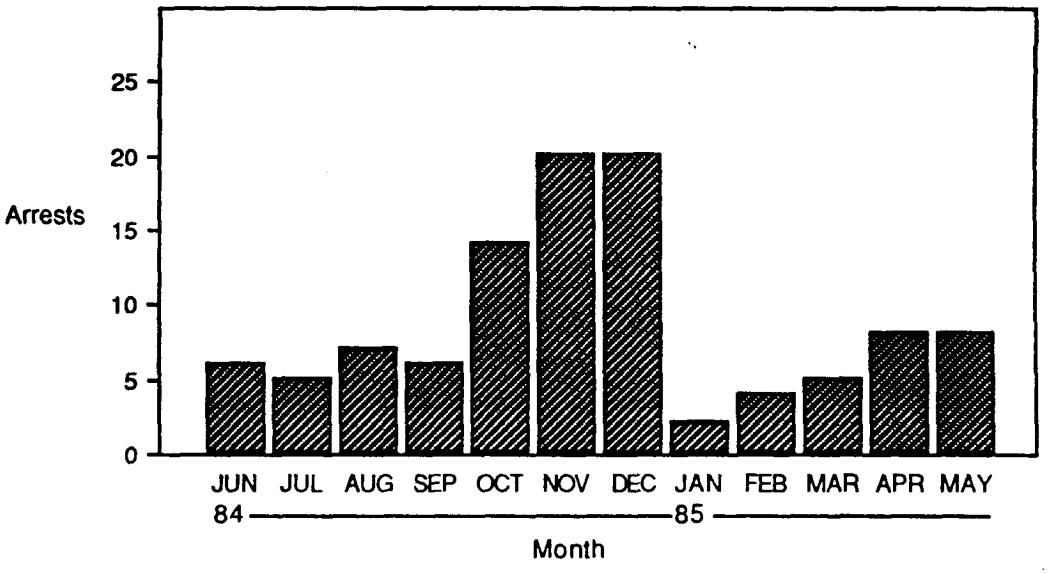


FIGURE 3.3. TOTAL NUMBER OF DWI ARRESTS MADE BY TASK FORCE OFFICERS AT HALs DURING PROJECT YEAR.

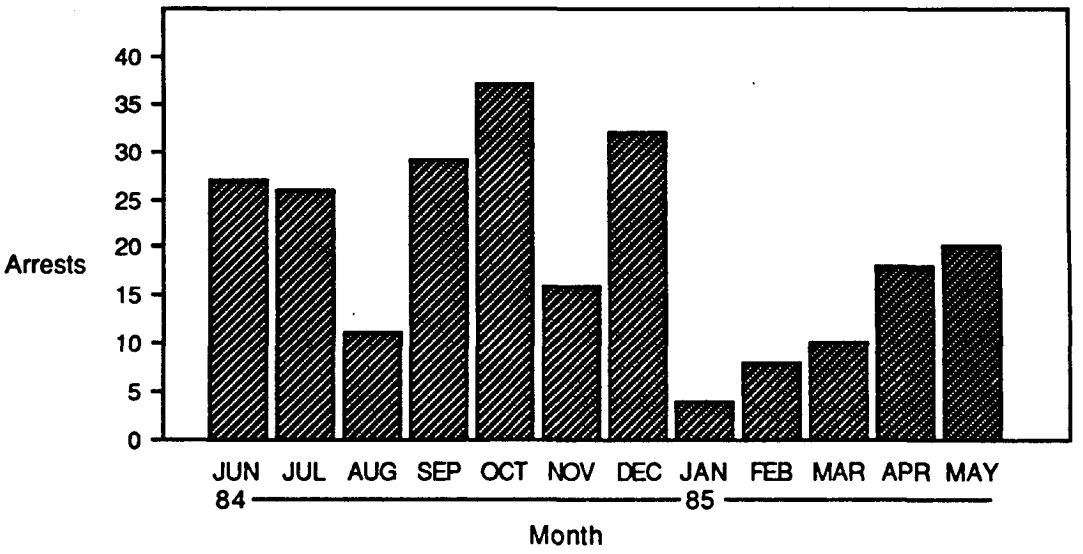


FIGURE 3.4. TOTAL NUMBER OF DWI ARRESTS MADE BY TASK FORCE OFFICERS AT HILs DURING PROJECT YEAR.

types of locations was 21. It should be noted, however, that only about 40% of all officers surveyed were even aware of the existence of department-designated HALs or HILs.

3.2 DWI Detection Guide and Improved Sobriety Tests Battery Training

In order to improve the skills of Indianapolis police officers in the DWI enforcement process, three different DWI enforcement-related training programs, each about eight hours in length, were presented during the course of the project. The first class offered was conducted by the International Association of Chiefs of Police in which, over a two-week period in late April 1984, almost 200 IPD officers were trained in the use of the NHTSA-validated DWI sobriety testing battery (excluding horizontal gaze nystagmus).

The next two classes were taught by specially trained IPD officers. The second class, again offered to almost 200 officers, was conducted in early October 1984 and focused on the NHTSA-developed DWI Detection Guide, the use of preliminary breath testers (PBTs), and an update on DWI-related laws. The final class was conducted two weeks after the second and only involved about 50 officers. That class focused on the horizontal gaze nystagmus test and a review of the rest of the improved sobriety testing battery.

The full "Improved Sobriety Tests" battery developed by the NHTSA (DOT HS-806-512) provides training for officers in the use of three field sobriety tests: gaze nystagmus, walk-and-turn, and one-leg stand. Performance on these tests, if they are administered in the specified manner, can be objectively scored to assess whether or not a suspect's BAC is above or below a .10% level. Based on NHTSA validation studies, when properly administered, these tests result in accuracies exceeding 80% in predicting whether a suspect's BAC is over or under 0.10%. Only officers with the greatest potential for making DWI arrests, night shift AI officers, and frequent task force volunteers received training in the full battery. Many more patrol officers were trained only in the walk-and-turn and one-leg stand tests.

One of NHTSA's goals in the development of the improved sobriety test battery was to increase police officer ability to detect DWI drivers with BACs in the 0.10% to 0.15% range. If successful, use of the field sobriety tests could be expected to lead to a decrease in the average BAC of all arrests for DWI. To determine if this occurred in Indianapolis, the BACs of all arrested drivers were examined during each project month. The results shown in Figure 3.5 indicate a slight drop in average BAC for DWI arrests made during the

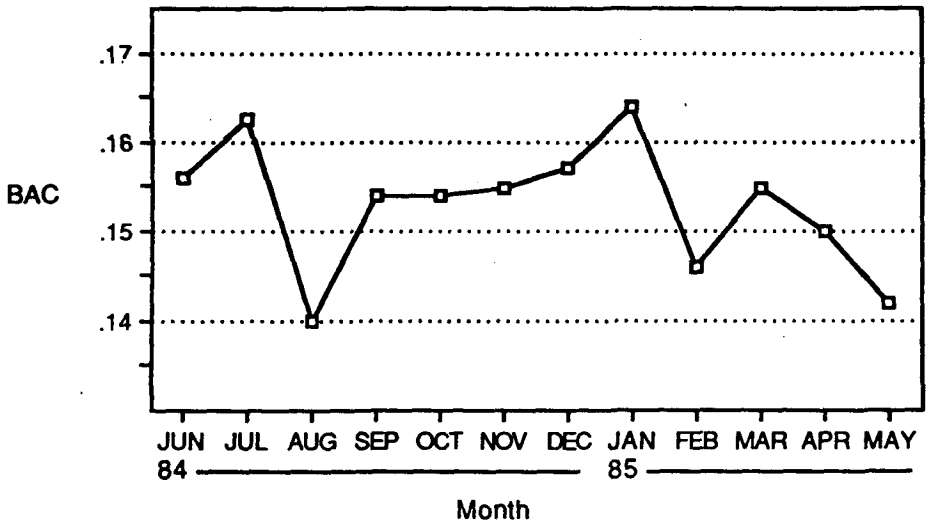


FIGURE 3.5. AVERAGE BAC, BY MONTH, FOR ALL DWI ARRESTS MADE DURING PROJECT YEAR.

course of the project. With the exception of January 1985 when few DWI arrests were made (as discussed above), there appears to be a decrease in average BAC during the course of the project.

Another goal of the training in improved DWI pre-screening tests was to reduce the number of persons who are "un-arrested" (i.e. stopped, arrested, given an evidential test, found to have a low BAC and released). It was anticipated that the psychophysical tests, in conjunction with the use of PBTs (see Strategy 3.4, below), would reduce the number of suspects brought in for an evidential breath test who "pass" the test and then must be returned to their vehicles and released. Figure 3.6 shows the total number of persons who were given a field sobriety test (the specific test types were not available on a case-by-case basis) and the number who failed that test and subsequently passed an evidential test.

During the first three months of the project year, 25% to 38% of the subjects given evidential tests were un-arrested. As the officers became more proficient with the tests and the PBTs the un-arrested percent dropped below 20% for the next two months and was never again above 7% for the duration of the project.

The detection guide cues are based on empirical study results which identify DWI probabilities with specific driving behaviors. Twenty driving behaviors (e.g. straddling the center line, weaving, etc.) have been identified as most likely indicators of DWI offenders. For example, during nighttime hours, a driver who makes a right turn with a wide radius has a 65% probability of having a BAC that exceeds 0.10%, a driver who uses signals inconsistent with driving actions has a 40% probability of exceeding a 0.10% BAC. Each officer was provided with a copy of the "Guide for Detecting Drunk Drivers at Night" (DOT HS-805-711).

Figure 3.7 shows the driving behaviors exhibited by individuals who were subsequently arrested for DWI by task force officers. The behaviors are shown in rank order of their likelihood of revealing a DWI based on the NHTSA study. That is, a person turning with a wide radius has the greatest likelihood of being DWI whereas a person driving with headlights off has the least.

The last two entries on the figure, "Speeding" and "Other," are not on the NHTSA detection cues list. The reason for the exclusion of speeding from the NHTSA list is that only a small percentage of individuals stopped for speeding are subsequently found to be DWI. However, due to the large number of

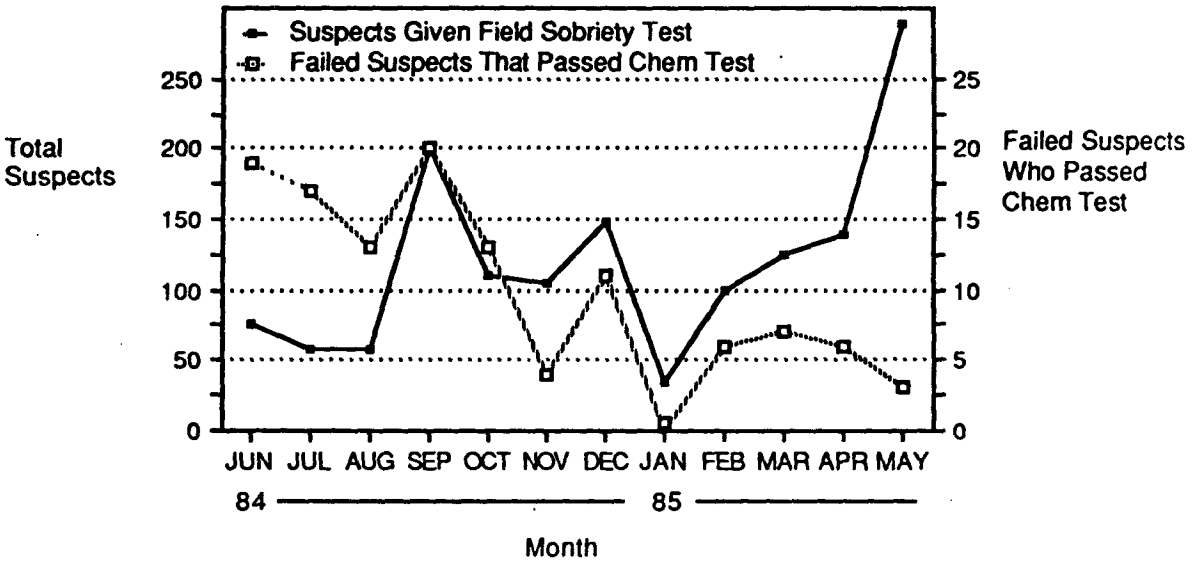
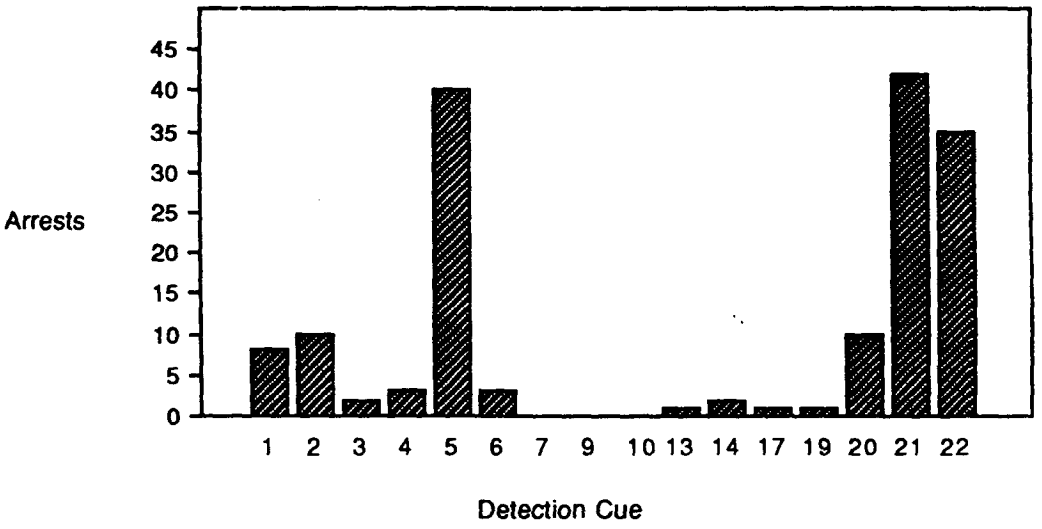


FIGURE 3.6. TOTAL NUMBER OF DWI SUSPECTS, BY MONTH, GIVEN DWI FIELD SOBRIETY TESTS (FST), AND NUMBER OF SUSPECTS WHO FAILED FST AND SUBSEQUENTLY PASSED CHEMICAL TEST.



1 Turning with wide radius (5%)
2 Straddling center of lane marker (6%)
3 Appearing to be drunk (1%)
4 Almost striking object or vehicle (2%)
5 Weaving (25%)
6 Driving on other than designated roadway (2%)
7 Swerving (0)
8 Speed more than 10 mph below limit (Not Available)
9 Stopping without cause in traffic lane (0)
10 Following too closely (0)
11 Drifting (Not Available)
12 Tires on center of lane marker (Not Available)
13 Braking erratically (1%)
14 Driving into opposing or crossing traffic (1%)
15 Signaling inconsistent with driving actions (Not Available)
16 Slow response to traffic signals (Not Available)
17 Stopping inappropriately (other than in lane) (1%)
18 Turning abruptly or illegally (Not Available)
19 Accelerating or decelerating rapidly (1%)
20 Headlights off (6%)
21 Speeding (27%)
22 Other (22%)

FIGURE 3.7. NUMBER OF DWI ARRESTS BY DWI TASK FORCE OFFICERS BY DETECTION CUE DURING PROJECT YEAR.

individuals stopped for speeding by most law enforcement agencies including the IPD (generally more than for all other violations combined), that violation does produce a large number of DWI arrests. While cues such as "Turning with a wide radius" or "Weaving" are seen much less frequently than speeding, they are still much more likely to reveal a DWI offender when they do occur.

The data for Figure 3.7 were obtained from a coded standard form used by IPD officers to show initial driver behaviors or violations whenever they make a non-accident DWI arrest. The behaviors on the form do not exactly match those on the Detection Guide, so there are no data to indicate the presence of some behaviors (e.g. "Drifting").

The survey of IPD officers also asked for opinions relating to the usefulness of the DWI Detection Guide training. Eighty percent of the officers who completed the survey indicated that they had attended the Detection Guide training. All of the AI officers had attended the training.

The training was prioritized so that those who had the greatest likelihood of using the training (i.e. those who worked shifts where DWIs are more common) were trained first. Most patrol officers eventually received the Detection Guide training.

Most of the officers who received the training said that they used it at least occasionally in the field. Over one-quarter of those who received the training used the highest rating possible ("9" on a 1 to 9 scale) for frequency of use. A large majority considered the skills taught in the course to be useful in helping them to detect DWIs. Eighty-nine percent of the officers considered the quality of the instruction to be above average. In general, the AI officers gave the training higher ratings in frequency of use and actual field usefulness than did the general patrol officers.

The police officer survey also asked for opinions relating to the improved sobriety test training. Sixty-nine percent of the officers who completed the survey indicated that they had completed the training. All AI officers had completed the training.

This training was also prioritized so that those who had the greatest likelihood of using the training were trained first. It was anticipated that most officers would eventually receive the training. Almost all of the officers who received the training said that they used what they learned in the field and almost one-half said that they use the tests in the field frequently. Almost all survey respondents considered the skills taught in the course to be

useful in helping them to detect DWI offenders and a large majority considered the quality of the instruction to be above average. The AI officers gave the training higher ratings than did patrol officers.

3.3 Preliminary Breath Test Instruments

At the time of project implementation, preliminary breath test (PBT) instruments were first coming into widespread use in police departments. The IPD expressed an interest in using this new technology to assist them in the detection of DWI drivers. It was agreed that at least 15 preliminary breath test instruments would be provided by the project to the IPD. The PBTs allow officers to quickly determine at the roadside the approximate BAC of individuals suspected of being DWI offenders and aid officers in making arrest decisions.

The PBTs were to be used by all DWI Task Force officers. When the task force was not operating, most of the units would be assigned to AI officers, with the rest going to general patrol officers. The PBTs were also to be used for driver checks at DWI roadblocks.

Training in the use of the PBTs was conducted in conjunction with other training offered to the IPD during the course of the project. Almost 200 officers were trained in the use of preliminary breath testers. The first PBT-equipped officers were deployed in June 1984 but widespread use of the devices did not occur until more units were received in September and formal training was conducted in October 1984.

The goal of PBT use is the same as that of any pre-arrest screening technique, to increase the number of arrests made for DWI, especially at BACs just above 0.10%, and to decrease the number of persons who are brought in for evidentiary breath tests and found to have BACs less than 0.10%. Figure 3.8 shows the total number of DWI arrests, the number of times a PBT was used during the project year, and the number of arrests made for DWI following PBT use.

As can be seen, when the PBTs were first utilized, the officers appeared to be using them for only obvious DWI suspects. Virtually every use resulted in an arrest. As their use continued, officers appeared more willing to request PBT tests from any drivers with whom they had contact. At the end of the project year approximately one DWI arrest was being made for every three times that the PBTs were being used.

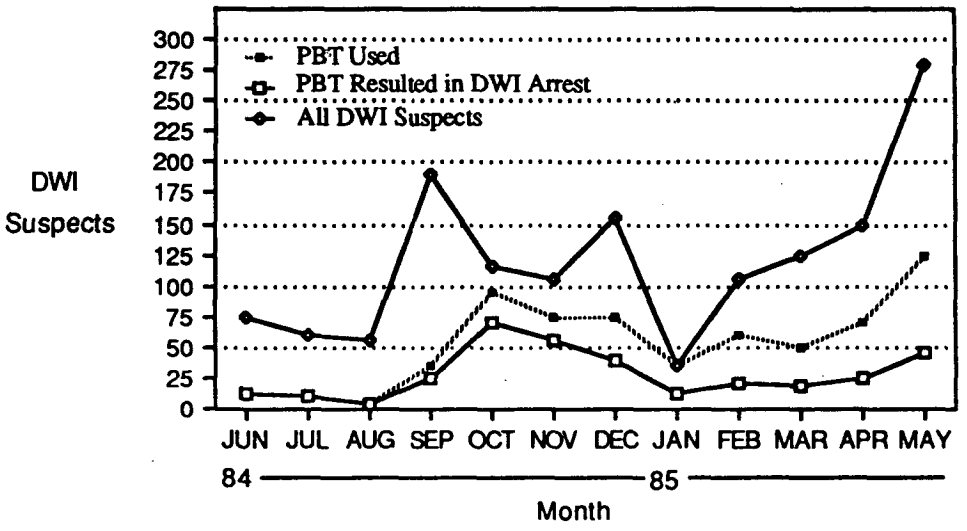


FIGURE 3.8. TOTAL NUMBER OF DWI SUSPECTS BY MONTH, THE NUMBER OF TIMES A PRELIMINARY BREATH TESTER (PBT) WAS USED, AND THE NUMBER OF TIMES PBT USE RESULTED IN A DWI ARREST.

Figure 3.9 shows the number of times the PBTs were used and the number of times that a chemical test contradicted the PBT result. That is, the figure shows the number of individuals who "failed" the PBT test (BAC at or above 0.10%) and "passed" the subsequent evidential-quality breath test (BAC less than 0.10%). Such contradictions were quite rare, although it is not possible to know the number of times that the PBT was wrong in the opposite direction, that is, the number of times that the PBT indicated a BAC of less than 0.10% when the true BAC was at or above that level.

3.4 Faster DWI Processing

The time that it takes an officer to complete the DWI arrest process and return to patrol is an important factor from the perspectives of both the officer and the department. An insufficient number of breath test units located throughout the city appeared to be one processing problem in Indianapolis. To help to overcome this problem, the project proposed providing an additional testing unit to the IPD, which would be installed in an additional location.

The major benefit of the additional breath testing device would be to decrease DWI processing time, especially on weekends, by reducing the amount of time that an arresting officer would spend traveling to a testing device location. The ultimate benefit derived from the reduction in processing time would be the additional time for the officers to be on patrol and available to make more DWI arrests. Although the project did provide an additional breath testing unit to the IPD, an older unit failed at about the same time. It was decided that the older unit would not be replaced, so there was no net increase in the number of units available. There was some revision, however, in the locations where the units were placed.

3.5 DWI Roadblocks

Particularly during fair weather months, the IPD periodically set up roadblocks to apprehend DWI drivers. These roadblocks were set up at various locations each night. At a roadblock site, passing vehicles were stopped in a systematic manner (e.g. every vehicle or every fifth vehicle, depending on traffic conditions) and each driver was given short sobriety tests, generally consisting of PBT tests or field sobriety tests.

While the use of DWI roadblocks (or checkpoints) was a novel strategy at the other project test sites, they had already been used in the Indianapolis area. The difference in the roadblocks after project implementation was that

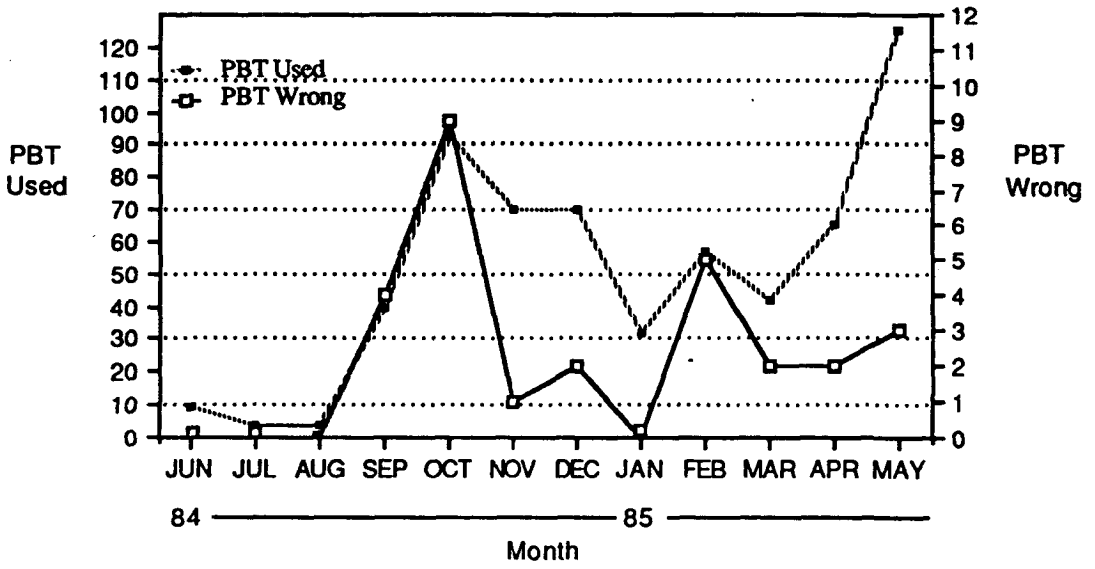


FIGURE 3.9. THE NUMBER OF TIMES PER MONTH A PBT WAS USED AND THE NUMBER OF TIMES THAT AN EVIDENTIAL BREATH TEST UNIT INDICATED A FALSE POSITIVE FROM THE PBT.

the IPD officers would now use PBTs as an additional screening tool. At a roadblock site drivers were briefly interviewed in their vehicles. If the officer suspected DWI, the driver was asked to take a PBT test. Those who failed the PBT test were arrested and normal DWI arrest procedures ensued.

While six roadblocks were conducted during the project year, all of them were cooperative efforts among several Indianapolis area law enforcement agencies. Many of the roadblocks were carried out under the direction of the Indiana State Police, with the IPD providing some officers and logistical support. Four roadblocks scheduled to be carried out by IPD officers were also cooperative efforts involving many officers from other agencies.

Table 3.1 shows the numbers of vehicles stopped, PBT tests given, and persons arrested at two IPD-run roadblocks. These were the only roadblocks conducted solely by the IPD that were fully successful. Two others scheduled by them were abbreviated or canceled due to weather. Information similar to that in Table 3.1 is not available for the roadblocks run by other agencies.

Table 3.1 Results of IPD run roadblocks.

	July 1984	October 1984
Number of Locations	2	2
Number of Vehicles Stopped	200	180
Number of DWI Arrests	9	11

While the DWI roadblocks were not conducted solely by IPD officers, they were still an important part of the overall project due to their publicity value, and were heavily emphasized in the project's public information and education campaign.

3.6 Command Emphasis on DWI Enforcement

Although the IPD had a long history of active DWI enforcement programs and encouraged DWI enforcement by all operational officers, it was decided that the top command of the agency should place renewed emphasis on the subject over the course of the project. The senior management of the IPD agreed to communicate the importance of DWI enforcement to all personnel and to encourage them to

maximize their efforts in DWI enforcement. This emphasis consisted of written directives, the provision of training, and the presence of senior command-level officers at training sessions to reinforce their support and encouragement of DWI enforcement.

Unlike the other proposed DWI enforcement strategies, "Command Emphasis" was not expected to have a direct impact on a measurable aspect of DWI enforcement. Rather, it is entirely a "process" strategy. The strategy was implemented as agreed upon. Directives concerning DWI enforcement were circulated throughout the department and all training sessions were begun with comments by a senior member of the department, often the chief of police.

The police officer survey mentioned previously asked respondents whether they felt there was any change in emphasis placed on DWI enforcement by the top command of the department in the last two years. Only two respondents indicated "Less Emphasis" (a "1" response). All other respondents rated this change in emphasis "4" (no change) or higher. Seventy percent gave this question a "7", "8", or "9" indicating strong belief among the officers that greater emphasis was placed on DWI enforcement.

3.7 Summary

The IPD implemented a total of seven DWI enforcement strategies during this project. Most of the strategies were in place for the full project year although some, such as those involving training, were implemented in stages.

Review of the process data collected indicates that the strategies were generally implemented as intended, were received favorably by officers, and resulted in an increase in DWI arrest activity during the project year. From May 1984 through April 1985 IPD officers made 4156 DWI arrests compared to 3105 for the preceeding year, an increase of 34 percent.

The evaluation of the impact of the implementation of these strategies and supportive public information activities on public perceptions and on crashes is the subject of sections 6.0 and 7.0 of this report.

4. PUBLIC INFORMATION AND EDUCATION

The goal of the public information and education (PI&E) activities was to enhance the potential effectiveness of the DWI enforcement efforts by bringing them to the attention of the public. Whenever possible, major PI&E activities focused on specific enforcement techniques that were being used to detect, arrest and effectively prosecute DWI offenders in an effort to increase the public's awareness that there was a continuing commitment to DWI enforcement and that the police department was taking tangible steps to make DWI enforcement more effective. The PI&E efforts supporting these strategies were introduced throughout the project.

As discussed in the introduction, the basic approach was to work with the enforcement agency in developing an overall PI&E plan for the project period and to provide technical assistance in material development when necessary. The intention was to rely, as much as possible, on local agencies to carry out materials production and distribution and other aspects of implementing the plan. For example, project staff developed strategies for publicizing the components of the DWI enforcement program, but obtaining local media support and exposure of these messages was largely left to the local personnel. As with selection of specific enforcement strategies, the final decisions regarding the most appropriate mechanisms for communicating PI&E messages were made by local personnel.

The objective for PI&E activities in support of enforcement strategies in Indianapolis was to attract hard news coverage. Rather than concentrate project resources on brochures, billboards and other forms of advertising, it was believed that the desired messages could be communicated to a greater number of people by staging newsworthy events that would attract hard news coverage by TV, radio, and print. The objective of concentrating on hard news coverage was supported by two local conditions. First, the site coordinator and the people she worked with believed that people listen more to hard news than advertising. Second, an elaborate statewide advertising campaign on drunk driving was being carried out by the Governor's Task Force on Drunk Driving at the same time this project was being implemented. The Governor's Task Force campaign involved, to a large extent, the development of materials and the use of public service advertising mechanisms to put them before the public. It was

felt by local personnel that these outlets might not be receptive to additional requests for public service advertisements on this subject.

A plan was developed which provided an ambitious set of goals for implementation of a number of PI&E activities, and was built around themes which highlighted specific enforcement techniques as well as auxiliary themes supportive of the overall project. The plan served as an ideal goal for PI&E activities; not all aspects of the plan were actually implemented, nor was the initial schedule followed strictly. Certain enforcement strategies were not implemented exactly according to schedule so the timing of the accompanying PI&E had to be adjusted. Finally, the availability of local personnel committed to the project varied and this also affected the scheduling of PI&E activities. The local PI&E coordinator in Indianapolis was located in the prosecutor's office but coordinated her activities closely with the police. This section of the report describes the PI&E activities that were actually implemented starting in May 1984 through April 1985.

At the outset, a project logo (a symbol indicating no drinking and driving much like international road signs) was developed. This logo, shown in Figure 4.1, was to provide a unifying identification for project PI&E materials.

For each PI&E theme, local personnel were provided the tools to generate the public information activities themselves. A typical theme package included text for a press release and a suggested media event to highlight the topic along with support materials such as handouts or brochures.

The time line of project PI&E materials and activities by enforcement strategy theme is shown in Figure 4.2. The hard news coverage of project activities is represented in Figure 4.3.

4.1: Core Enforcement Strategies for PI&E Efforts

Five of the specific DWI enforcement techniques or elements within these techniques formed the core enforcement strategies for PI&E efforts. These were (1) officer training on the DWI Detection Guide and Improved Sobriety Tests Battery, (2) high priority enforcement locations (HALs and HILs), (3) use of preliminary breath test instruments, (4) faster DWI processing, and (5) sobriety checkpoints. The schedule of enforcement strategy implementation is shown in Figure 3.1. An effort was made to start the enforcement strategies as early in the project as possible so their impact could be felt during the project evaluation period. Each of the enforcement strategies was accompanied by supporting PI&E themes and messages which are detailed later in this

FIGURE 4.1 PROJECT LOGO AND EXAMPLE OF USE OF LOGO AT A SOBRIETY CHECKPOINT

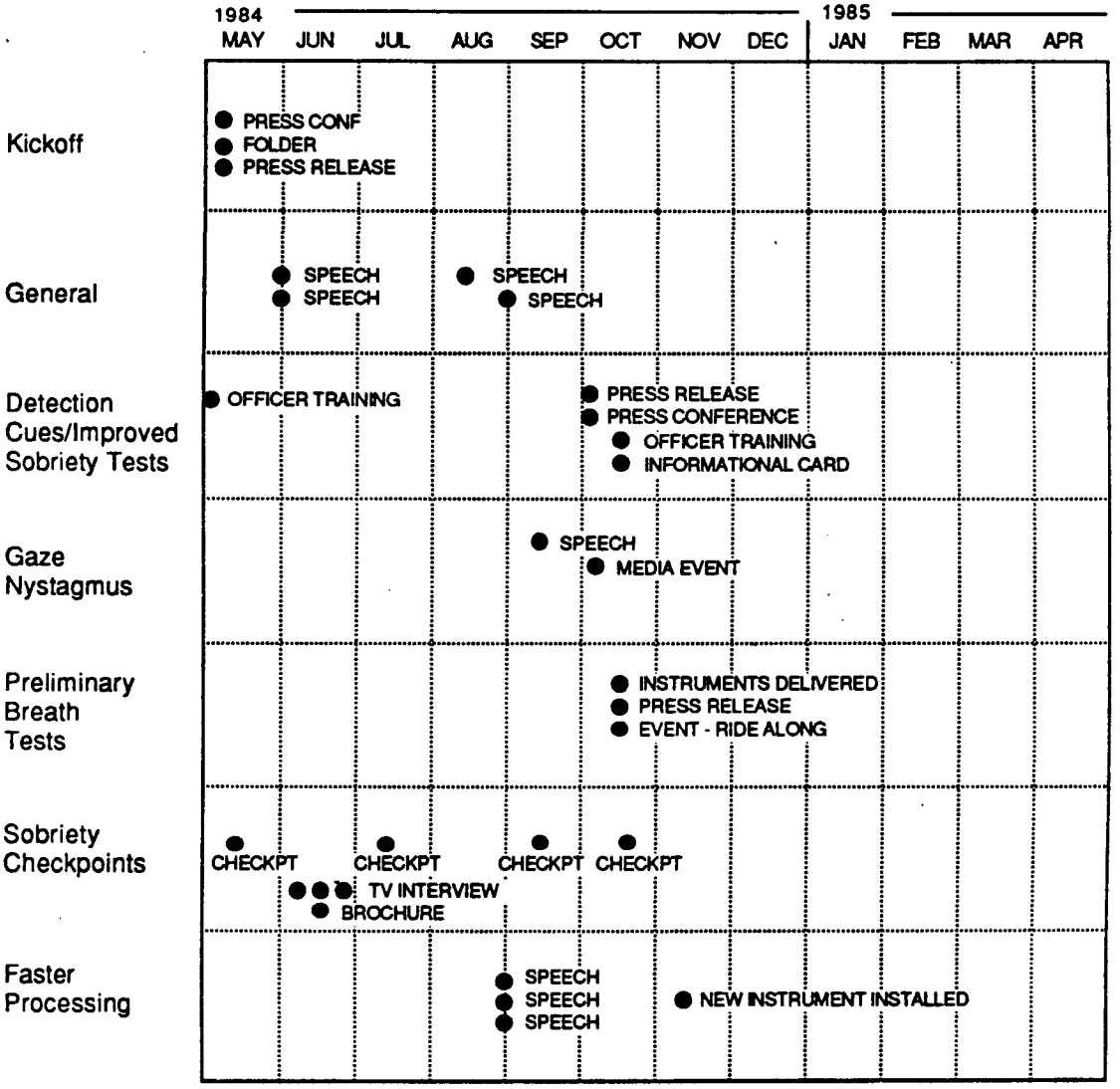


FIGURE 4.2. PROJECT PI&E MATERIALS AND ACTIVITIES BY THEME.

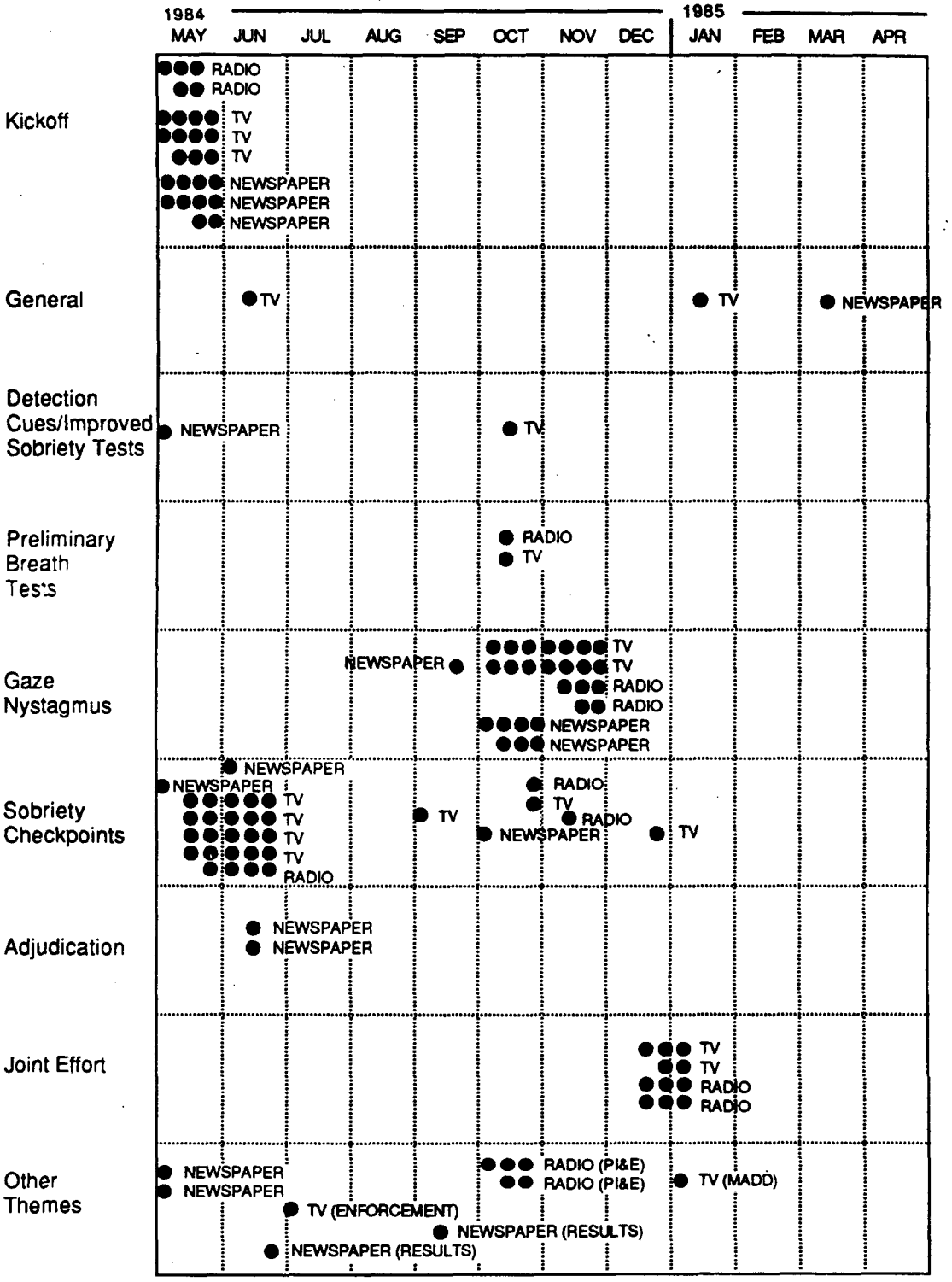


FIGURE 4.3. HARD NEWS COVERAGE OF PROJECT ACTIVITIES BY THEME.

section. The PI&E efforts, in support of the enforcement strategies, were planned to be phased in during the year in an attempt to maintain media interest throughout the project implementation period. However, PI&E activities did wane during the final project months. In addition to strategy-specific themes, all enforcement strategies had a common PI&E theme: new initiatives had increased the likelihood that drunk drivers would be detected, convicted and sanctioned.

4.2: Other Enforcement Measures and PI&E Themes

Accompanying the core enforcement strategies were other enforcement measures and supporting PI&E themes. Early in the project, it was indicated that DWI enforcement would be given high priority and command emphasis, and that resources would be brought to bear so that stepped-up enforcement would be a real and permanent initiative, not just a temporary campaign. This increased patrol emphasis was buttressed by training in DWI enforcement. PI&E messages were developed to communicate this long-term commitment to tough enforcement and to substantiate it with messages about augmented resources, improved facilities, and better trained personnel. The details of these latter PI&E themes and messages are also presented later in this section.

4.3: Project Enforcement Themes

4.3.1: Detection Guide and Improved Sobriety Tests Battery. This was the first enforcement strategy implemented by the project. It began before the project kickoff with officer training in the NHTSA test battery excluding gaze nystagmus. In October 1984, training in the use of the DWI Detection Guide and gaze nystagmus was undertaken. The overall project PI&E campaign was launched with a news conference announcing these training programs as one of the strategies in a new program to crack down on drunk drivers. This news conference was covered by all four TV stations plus the area newspapers. Figures 4.4 through 4.7 show the project press releases and examples of subsequent newspaper coverage of this media event.

There were two main messages promoted by this theme: 1) that police have improved their ability to spot cars being operated by drunk drivers, and 2) by using improved roadside tests, police are better able to ascertain whether a driver is likely to be intoxicated. Together, the two messages were intended

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OF MARION COUNTY INDIANA
STEPHEN GOLDSMITH, PROSECUTOR
CITY-COUNTY BUILDING
INDIANAPOLIS, INDIANA 46204

NEWS RELEASE

FOR RELEASE: Monday, April 30, 1984 CONTACT: Ruth Purcell
236-5330

DRUNK DRIVING PROJECT BEGINS

City, county and state police today announced a new effort to crack down on drunk drivers. With the support of the Marion County Prosecutor's Office, a federally funded enforcement program is being launched to reduce alcohol-related accidents in Indianapolis.

" One out of 4 fatalities is caused by a drunk driver in Indianapolis," said Police Chief Joseph McAtee. "We are putting together a multi-faceted program using national consultants. Our enforcement effort will become more effective by the day.

Technical consultants from the University of North Carolina and Northwestern University's Traffic Institute will assist Indianapolis in implementing a number of the country's most innovative techniques. Beginning this week, representatives of the International Association of Chiefs of Police will train 250 patrol officers from the Indianapolis Police Department and the Marion County Sheriff's Department in the latest methods to identify drinking drivers, increasing their likelihood of arrest.

Other enforcement activities included in the program will be announced and phased in during the next few months. They will include use of portable breath testing instruments, high priority location roadblocks, use of improved roadside sobriety tests to screen drinking drivers, and improved and expedited processing.

--more--

FIGURE 4.4 NEWS RELEASE ON PROJECT KICKOFF

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OF MARION COUNTY INDIANA
STEPHEN GOLDSMITH, PROSECUTOR
CITY-COUNTY BUILDING
INDIANAPOLIS, INDIANA 46204

Twelve-month funding from the National Highway Traffice Safety Administration will allow law enforcement officials to develop these activities for on-going use.

"Fewer persons will drive drunk if they know their chances of arrest are constantly increasing." said Marion County Prosecutor Steve Goldsmith. He added, "Strong enforcement and public awareness of the consequences of drinking and driving will significantly reduce the number of drunk drivers in our community."

--END--

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OF MARION COUNTY INDIANA
STEPHEN GOLDSMITH, PROSECUTOR
CITY-COUNTY BUILDING
INDIANAPOLIS INDIANA 46204

NEWS RELEASE

FOR RELEASE: April 30, 1984

CONTACT: Ruth Purcell
236-5330

POLICE OFFICERS BEGIN SPECIALIZED TRAINING

Local police officers began specialized training today in a new effort to reduce drunk driving. Part of the Indianapolis Drunk Driving Enforcement Program announced today by city, county and state police, the training will provide officers with the most effective techniques available for identifying and testing drunk drivers.

By the end of the week, 250 officers will have completed eight hours of intensive training to increase their ability to spot, arrest, and process drunk drivers. These officers will then be certified to conduct this training in regularly scheduled in-service training. All patrol officers will eventually receive this training.

During day-long sessions, officers will learn which driving errors are most common among alcohol impaired drivers, which types of behavior indicate intoxication, how to interview suspected drivers and how to choose and administer roadside sobriety tests. Officers will also be instructed in the use of new breath testing equipment and legal testimony.

Consultants from the International Association of Chiefs of Police will be conducting the training through May 4, 1984, for both Indianapolis Police and Marion County Sheriff's officers. The training will take place at the Indianapolis/Marion County Public Safety Training Center, 901 North Post Road.

FIGURE 4.5 NEWS RELEASE ON DETECTION CUES AND IMPROVED SOBRIETY TESTS

Drunk data

Stepped-up campaign against drunks gets federal boost

By KYLE NIEDERPRUEM

Drunken drivers in Marion County will be facing better-trained and better-equipped policemen who will be benefiting from a federally financed study.

Law enforcement officials announced Monday that $105,000 will be poured into a one-year effort to cut the number of traffic fatalities caused by motorists under the influence of alcohol.

"This will increase the volume of (drunken driving) cases," Marion County Prosecutor Stephen Goldsmith said. "I honestly think we will save some people from being killed."

STATE, COUNTY and city policemen will be taught new techniques for spotting drunken drivers.

Police computers will be "enhanced" so they can compile data on drunken driving. The computers should be able to pinpoint chronic drunken drivers and locations where alcohol-related accidents occur, officials said.

The Indianapolis Police Department plans to purchase 14 portable breath-test devices that will be placed in squad cars. The breath-test machines now used in the area are stationary.

Anti-drunk driving symbol

University study to run one year

Police also will resume using roadblocks, in which drivers are checked to see whether they are sober, said IPD Deputy Chief Paul A. Anee. A special nighttime drunken driving task force resumed two weeks ago.

The National Highway Traffic Safety Administration is supplying $75,000 for the study. The city will provide $30,000 — mostly to cover overtime costs of beefed-up police patrols.

THE STUDY is being administered by the University of North Carolina, which will analyze the results with researchers from the Northwestern University Traffic Institute.

Similar studies will be conducted in Boise, Idaho and Clearwater-Largo, Fla., said John H. Lacey, program administrator at North Carolina.

Lacey said the researchers selected police agencies with good drunken driving programs in an attempt to make them better. A telephone survey will ask Indianapolis residents how they perceive the problem of drunken driving, he said.

As a result of the programs in the three communities, the researchers hope to write a manual that all police departments can use for catching drunken drivers, Lacey said.

Instructors from the International Association of Chiefs have begun teaching policemen how to better discern a drunken driver from a careless motorist.

FIGURE 4.6 NEWSPAPER ARTICLE ON PROJECT KICKOFF

Actions reveal drunk drivers

By SCOTT L. MILEY

A driver who makes a wide turn at night is — 65 times out of 100 — driving while intoxicated.

If a car's headlights are off, there's a 30 percent chance the driver is drunk.

And there's a 55 percent chance a driver had too much to drink if a car suddenly swerves in traffic.

Although those figures sound gloomy, there was good reason for some statistician to have spent hours determining the probability of seeing a drunk on the highway.

"You can protect yourself from drunk drivers by learning to recognize them and getting away from them," says David W. Wantz, assistant director of continuing education at Indiana Central University. As instructor at the Indiana Law Enforcement Academy at Plainfield, Wantz teaches policemen ways to spot drunk drivers.

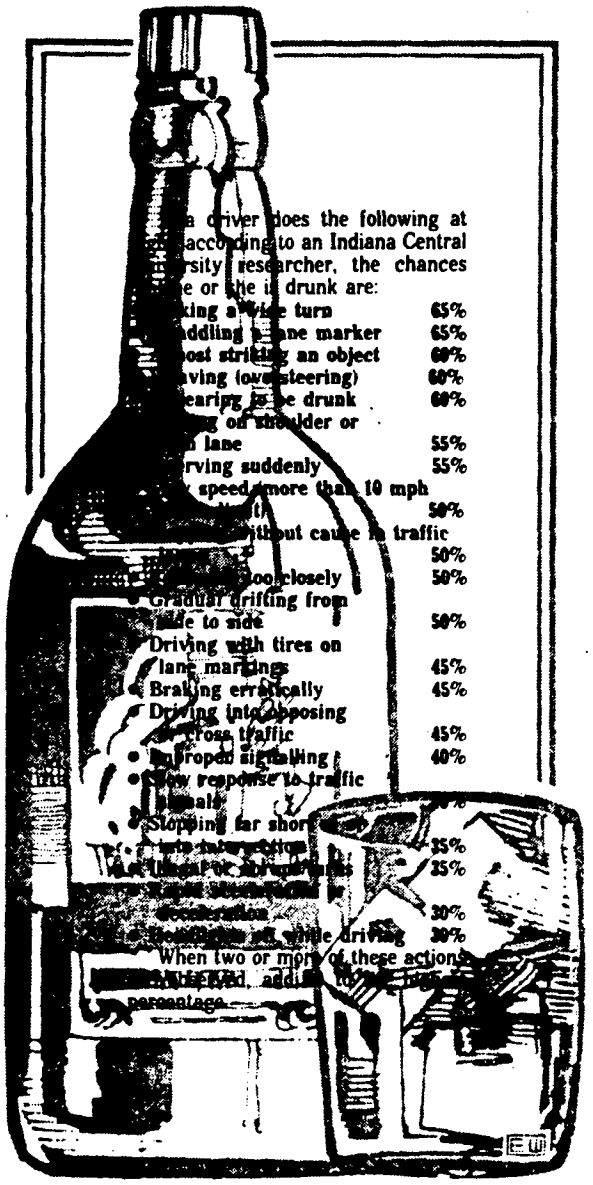
BUT HE THINKS it makes good sense for everyone to recognize traits that can keep them from being in an accident with a drunk driver. In Indiana, a driver with a .10 percent blood alcohol level is considered drunk.

Most campaigns against drunk driving are aimed at halting drinking. Wantz, a former sheriff's deputy in Maryland, goes one step further.

"We should first have these campaigns in place to make us aware of the perils of intoxication. But while we're going through this period of attitude adjustment, we have to protect ourselves from the immediate menace and stay alive while an intoxicated person is out on the road," says Wantz, 29, who also speaks to citizen groups.

"PEOPLE UNDER the influence of alcohol, driving at night, exhibit at least 20 actions that reveal their impairment," he says. "These 20 actions account for 90 percent of all the likely actions a drunk driver will display."

The five most telling signs are: making a wide turn; straddling a lane marker; appearing to be drunk; passing too closely to an object; and weaving in and out of a traffic lane.



The 20 actions were compiled in a 1981 study by the National Highway Traffic Safety Administration of more than 4,600 night drunk-driving arrests.

When two or more of those actions are observed, the viewer should add 10 points to the highest percentage. For example, if a car straddles the center line, there is a 65 percent chance the driver is drunk. And if the car is also moving at 15 m.p.h. below the posted speed limit, the chance increases to 75 percent.

WANTZ SUGGESTS police should be called whenever a drunk driver is spotted.

First, he says, the observer should get as far away from the drunk driver as practical. Then, he or she should obtain a description of the vehicle, noting any special features, and remember any unusual actions observed.

Knowing the signs, Wantz adds, will also help a police dispatcher.

FIGURE 4.7 NEWSPAPER ARTICLE ON DETECTION CUES

to create the impression that there was a greater likelihood of being detected and arrested for drunk driving.

A special event was held in which the media was invited to participate in gaze nystagmus training. Media representatives were used as dosed subjects by trainee officers practicing the gaze nystagmus test. The event was covered by all four TV stations who provided repeated airings, and by several radio stations and the print media. In terms of the volume of publicity, the gaze nystagmus training event was one of the most successful PI&E efforts of the project. The gaze nystagmus coverage is shown as a separate category in the figures. In addition to the special event, speaking engagements were held with civic groups and university organizations. A card depicting visual detection cues was passed out at these engagements. The contents of the card were reproduced in a newspaper article. Figures 4.7 and 4.8 are examples of media coverage of this strategy.

4.3.2: Checkpoints. Sobriety checkpoints were implemented beginning in May. The intended messages of the PI&E program were that checkpoints can be set up at any time and cannot be avoided, that drunk drivers will be detected in the checkpoints, and that, overall, checkpoints increase the chances of getting arrested for DWI.

The PI&E approach was to call a media briefing on short notice the day of the checkpoints. Media representatives were asked to assemble at a specified location on the evening of the checkpoints. The location of checkpoints was not announced to the media before these gatherings. The assembled media representatives were escorted to the checkpoint locations.

Project PI&E materials in support of the checkpoint theme included brochures, posters, and signs to mark checkpoint locations. The brochures, which were handed out to drivers at the checkpoints, explained the purpose of the checkpoints and included a survey form asking drivers about their attitudes concerning the checkpoints. About 80 percent of drivers responding to the survey expressed positive attitudes toward checkpoints. An example of media coverage of this event is shown in Figure 4.9.

Extensive hard news coverage was provided by the media on the checkpoint theme. Publicity was always in connection with the checkpoint events. For the first checkpoint, coverage was provided by all four TV stations plus radio and print articles. The coverage of subsequent checkpoints was less intense,

The eyes have it; new sobriety test unveiled

By BILL KOENIG

A twitching eye has become an important clue, like wobbly legs or slurred speech, to a policeman trying to determine if a driver is drunk.

A new test, with the unwieldy name of "horizontal gaze nystagmus," is used by Indianapolis police to help determine sobriety of drivers. The test is to see if the driver's eye jerks while focused on an object — something the eye does involuntarily when a person is intoxicated.

"We really have the possibility of increasing the number of people arrested for drunk driving without spending an additional cent," Marion County Prosecutor Stephen Goldsmith told a press conference Tuesday.

UNDER THE test, a driver suspected of being intoxicated is asked to follow an object such as a pen or flashlight with his eyes. The driver is also asked to look at the object from one side. In both instances, the eye will twitch if the driver is drunk, officials explained.

The new procedure is being added to so-called "field sobriety tests," such as walking a straight line or other traditional means of checking a driver's coordination.

Those tests and the eye exam don't directly lead to arrests. But they are used by police in deciding whether a driver should submit to Breathalyzer examinations.

Indianapolis police began using the eye tests Tuesday night.

ABOUT 16 IPD police took 16 hours of instruction in the eye examination; up to 60 more police also will be trained. Deputies from the Marion County Sheriff's Department are also expected to take the class.

Roy E. Lucke, a research analyst at the Traffic Institute at Northwestern University, said the eye test was developed on the West Coast during the early 1970s. Since then, Lucke said, the method has been researched and tested at the University of Southern California and agencies such as the National Highway Traffic Safety Administration.

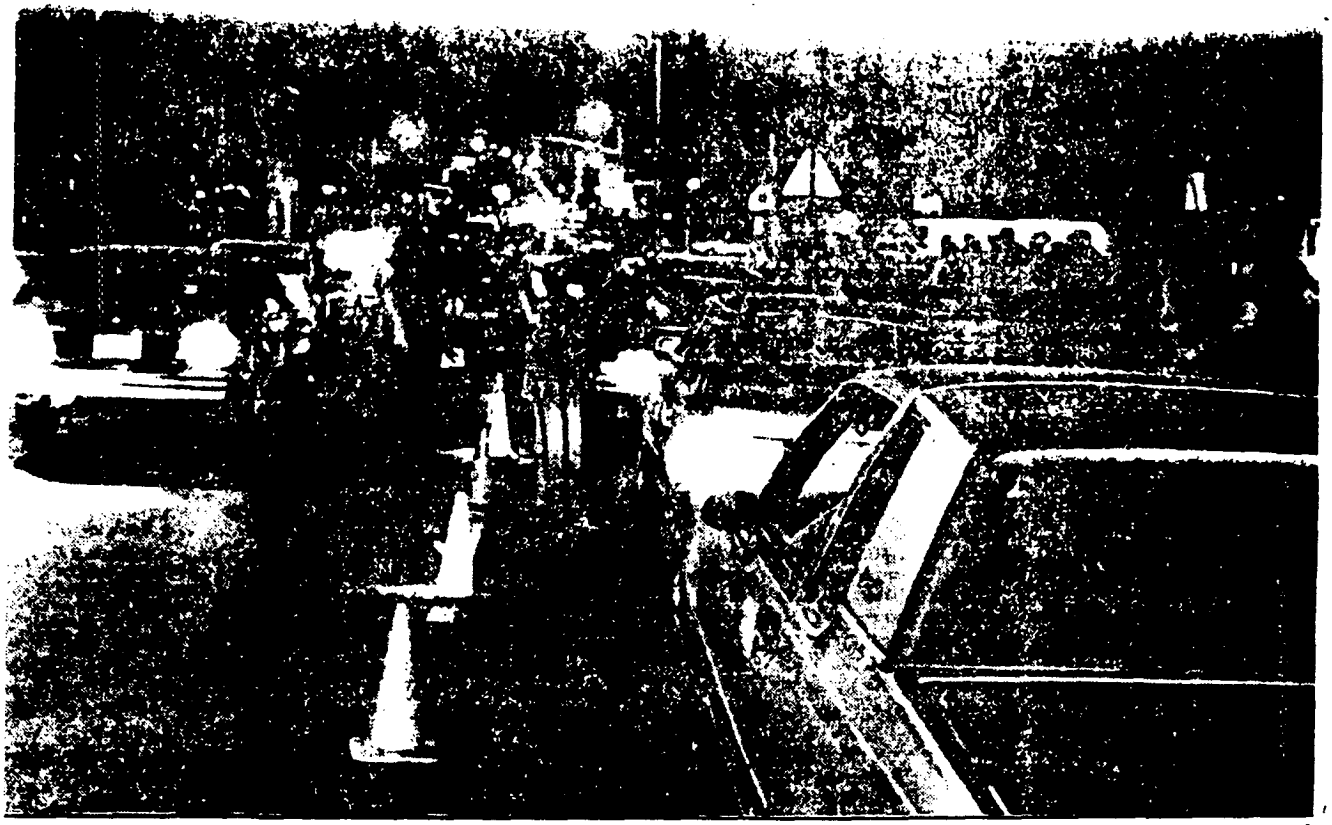
Lucke said if eye movement is jerky "there is an 80 percent chance" that a driver's blood alcohol is at or above 0.10 percent, the legal definition of intoxication.

POLICE CHIEF Joseph G. McAtee said the new method will aid policemen.

"I think where a police officer gets discouraged is when he takes him (a driver) downtown" for a Breathalyzer test when the driver is not intoxicated. "I think it (the new test) is just another tool," said McAtee.

Officials said nystagmus examinations may be incorrect in a few instances. For example, Lucke said a person with a brain tumor might show involuntary eye movements similar to a drunken driver. But he said the exceptions might entail "2 to 3 percent of the total population and probably less of the driving population."

FIGURE 4.8 NEWSPAPER ARTICLE ON GAZE NYSTAGMUS



Star photos by Rod B

A Marion County sheriff's deputy checks driver near Washington Street and Sherman Drive

Police give drivers chance to comment

Indianapolis police are giving the public a chance to sound off on roadblocks aimed at catching drunken drivers.

Drivers of 109 vehicles stopped at random Friday night and early Saturday received pamphlets containing questionnaires that may be returned to the police department.

Some of the five questions center on whether people think the roadblocks can deter drunken driving.

In other questions, the police ask if drivers found the stops inconvenient.

THE PAMPHLETS were handed out to drivers waiting in line at the checkpoints.

The pamphlets include reasons for the blockades and a list of questions police ask.

Friday night and Saturday morning stops averaged six minutes, Indianapolis Police Department spokesman Lt. Jerry L. Barker said.

Two drivers were arrested for drunken driving, Barker said.

Five others were found to be wanted on misdemeanor warrants and were arrested.

Twenty-five traffic citations also were issued.

The roadblocks were set up from 9 p.m. to 2:30 a.m. at 3400 Lafayette Road, 3800 North College Avenue, and 3800 East Washington Street.

LOCATIONS WERE selected because of high numbers of alcohol-related accidents or arrests.

The roadblocks have been criticized by Indiana Civil Liberties Union Director Michael L. Gradison.

He has said the stops violate drivers' constitutional rights and are not an efficient use of police manpower.

IPD Deputy Chief Paul A. Annee said drunken driving decreases when the department announces roadblocks will be used.

IPD Patrolman Michael Fay waits for licen

FIGURE 4.9 NEWSPAPER ARTICLE ON SOBRIETY CHECKPOINTS

involving hard news stories by one or two TV stations and one or two print media.

4.3.3: High Priority Locations. The individual strategies of stepped up enforcement at high DWI incidence locations and high DWI accident locations were combined into one high priority location enforcement strategy for the purposes of PI&E. A variety of PI&E materials were planned in support of this enforcement strategy including a brochure, a billboard, radio PSAs and news releases. The message to be communicated by these materials was that police know where drunk drivers are, that police would concentrate patrols in these areas, and that this would increase drunk drivers' chances of being arrested.

The high priority locations theme was not emphasized in the PI&E program at the direction of the police. Although concentrated patrols were made in high priority locations, police were reluctant to inform the public about this. There are a number of possible explanations: police did not want to publicize the fact that enforcement was being concentrated in some areas implying harassment for some and neglect for others; police did not want to reveal the location of concentrated enforcement initiatives. The media, for its part, was not interested in publicizing the location theme without knowing the exact locations. The end result was that the locations theme received very limited media coverage.

4.3.4: Use of Preliminary Breath Testing Instruments. The PI&E effort in support of this enforcement strategy was launched in earnest in October as soon as extensive preliminary breath test (PBT) instrument training had occurred. The strategy was announced with a news release, and subsequent newspaper coverage was provided. A TV reporter and video crew accompanied a DWI patrol and TV coverage was provided. PBTs were used at sobriety checkpoints and demonstrated at public gatherings. The message conveyed by PI&E, in support of this theme, was that PBTs improve the ability of police to determine whether a driver is intoxicated.

4.3.5: Faster DWI Processing. This strategy involved the acquisition of a new evidential breath test instrument. Launched in November 1984, it was the last strategy to be implemented in the project campaign. The message communicated by this theme was that new equipment would speed up DWI processing, enabling

police officers to return to their patrol duties more quickly and thus increasing the chances of detecting more drunk drivers. Project PI&E included two news releases and an event which provided a demonstration of the new instrument. The event was covered in a hard news spot by one TV station.

4.4: Other PI&E Efforts

An evaluation of the project's impact must take into consideration that a separate public information initiative directed at combatting drunk driving was running concurrently with the project. This concurrent effort was the statewide public information program implemented by the Governor's Task Force on Drunk Driving. The campaign made extensive use of advertising and concentrated on such themes as accident threat, risk of being arrested, and intervention, and used the theme "Sobering Advice Can Save a Life." It did not promote awareness of any particular enforcement strategies. In addition to regular advertising, the statewide campaign made use of brochures, keychains, buttons, stickers, and posters. Because the statewide campaign made use of such advertising and did not focus on enforcement, it was not viewed as being redundant or in conflict with the project effort. It should be noted that the project stressed specific enforcement initiatives and relied on its own ability to generate hard news coverage.

In addition to the specific enforcement themes detailed in the previous section of this chapter, the project promoted general awareness about enforcement. This general awareness was promoted in a press conference to kick off the project. This press conference was covered by all four TV stations, radio, and in several print articles. The success of the press conference is attributed to prominent figures who were involved, including the Marion County Prosecuting Attorney and the Indianapolis Police Chief. A second event which promoted general awareness was a statewide meeting of young people known as Hoosiers Against Drunk Driving (HADD). Project participation at the HADD conference included demonstrations of the PBTs, dissemination of detection cue cards, and a workshop on detection cues. Hard news coverage was provided by all broadcast media outlets and in numerous print articles.

5. PROCESS ASSESSMENT OF PI&E EFFORTS

The preceding section contained descriptions of Public Information and Education (PI&E) materials, activities, and events supporting each enforcement theme as well as other project and non-project DWI PI&E themes. This section contains a discussion of the process effectiveness of these PI&E materials, activities, and events, taking into consideration both the project effort and non-project media coverage.

5.1: Overall Exposure

One measure of overall exposure is the month-by-month amount of PI&E hard news coverage of DWI issues. This is a reasonably objective measure because it is a direct measure of the actual number of newspaper articles and radio or TV spots that occurred during a specified period.

Figure 5.1 shows a distribution of PI&E coverage by month for newspaper and broadcast units. The figure also shows a comparison of other DWI coverage with project-specific coverage. Project coverage began in April 1984, one month prior to the official kickoff of the project in May, and ended in March 1985 (the project officially ended in April). Figure 5.1 indicates substantial coverage of general DWI issues during the project period followed by a general decrease at the end of the project period.

Useful information can be obtained by looking at month-by-month variations in coverage shown on Figure 5.1. The pattern of coverage is characterized by the project's two major sustained waves of public information. The first thrust began in April, just prior to the project's inception and lasted through June; the second began in October and continued through the holiday season in December. The first wave of publicity was dominated by the officer training in Improved Sobriety Tests, the project kickoff, and by a sobriety checkpoint that took place in May. The second wave centered around the gaze nystagmus training and implementation, two sobriety checkpoints, and the joint holiday activities.

The project's contribution to the overall PI&E impact can be assessed by examining project coverage as a percentage of total DWI coverage. During the months of high levels of project-related PI&E activities, the overall DWI publicity reached the highest levels. Likewise, during the months of low project-related PI&E activity, overall DWI coverage was substantially reduced. The only exception was the month of August, which was the month that the

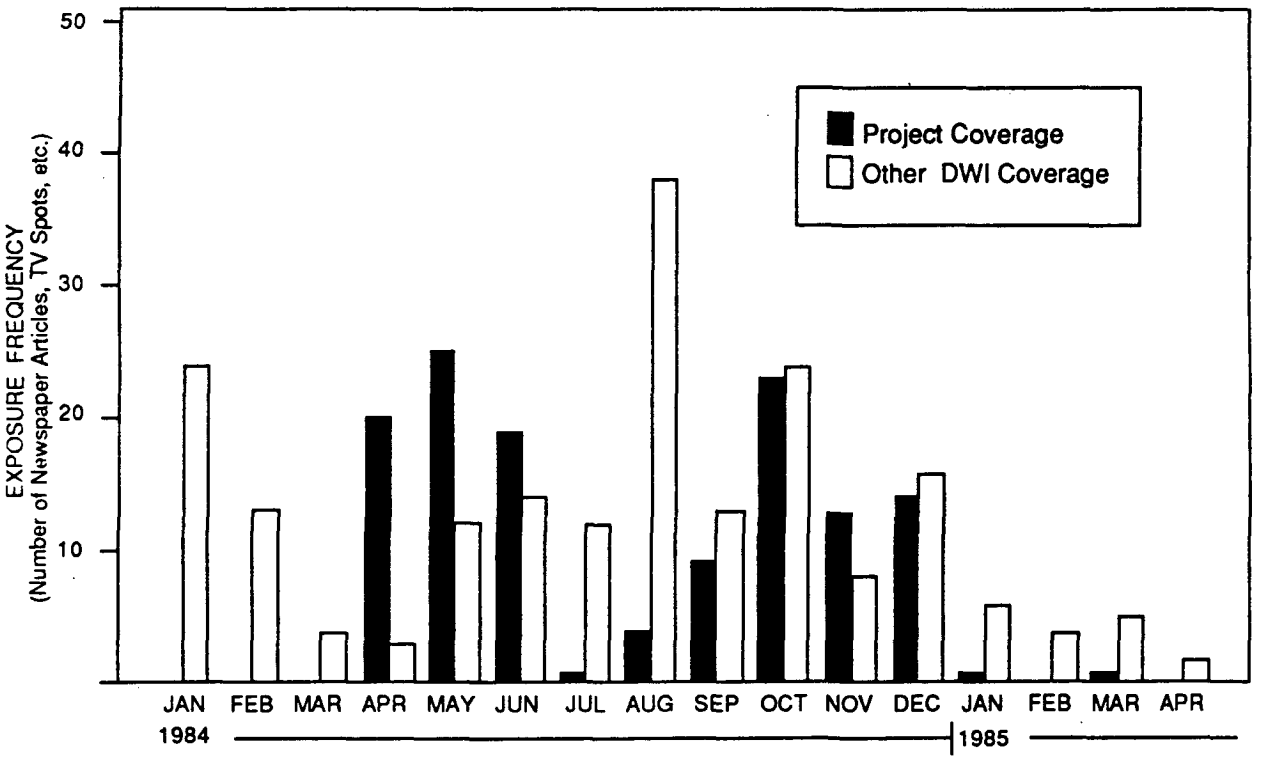


FIGURE 5.1. COMPARISON OF PROJECT NEWS COVERAGE WITH ALL OTHER DWI NEWS COVERAGE BY MONTH.

Hoosiers Against Drunk Driving (HADD) Conference was held and generated extensive DWI publicity. It should be noted that the project coordinator was involved to a large extent in the HADD Conference although the publicity generated was not included as project-related hard news.

The overall project coverage cited above represents a substantial amount of coverage. It should be emphasized that the project garnered a large amount of publicity in stages throughout its duration as evidenced by the actual frequencies of newspaper articles and broadcast hard news in a major metropolitan area with many competing publicity issues.

5.2: Project Impact by Media

In the previous section, project coverage--though substantial--made up only about half of the total overall DWI coverage in terms of total print and broadcast units. Additional insight can be achieved by examining the project's impact by media category shown on Figure 5.2. It appears that newspaper coverage accounts for nearly all the difference between project and overall DWI coverage. While 29 newspaper articles about the project represents very reasonable coverage, this is but a small percentage of overall DWI newspaper coverage. This is the case because overall newspaper coverage deals with numerous diverse issues such as DWI crashes, dram shop laws and the drinking age. These issues may actually have had more coverage during the time period because of the efforts of the project and the Governor's Task Force to bring the DWI issue to public focus.

The conclusions with respect to broadcast coverage are quite different. The project dominated DWI coverage provided by TV and radio hard news. This is laudable in light of the many competing DWI issues vying for coverage during the period, especially the activities of the Governor's Task Force.

We can conclude that the project exerted its greatest impact on broadcast media as opposed to print.

5.3 Project Enforcement Themes

Figure 5.3 shows the extent of media coverage by theme. The two specific enforcement project themes that stand out clearly as the most successful in terms of exposure were Sobriety Checkpoints and Gaze Nystagmus. Also high on the list is the General/Kickoff theme. It seems clear that the project's kickoff and startup were successful in attracting the media and maintaining

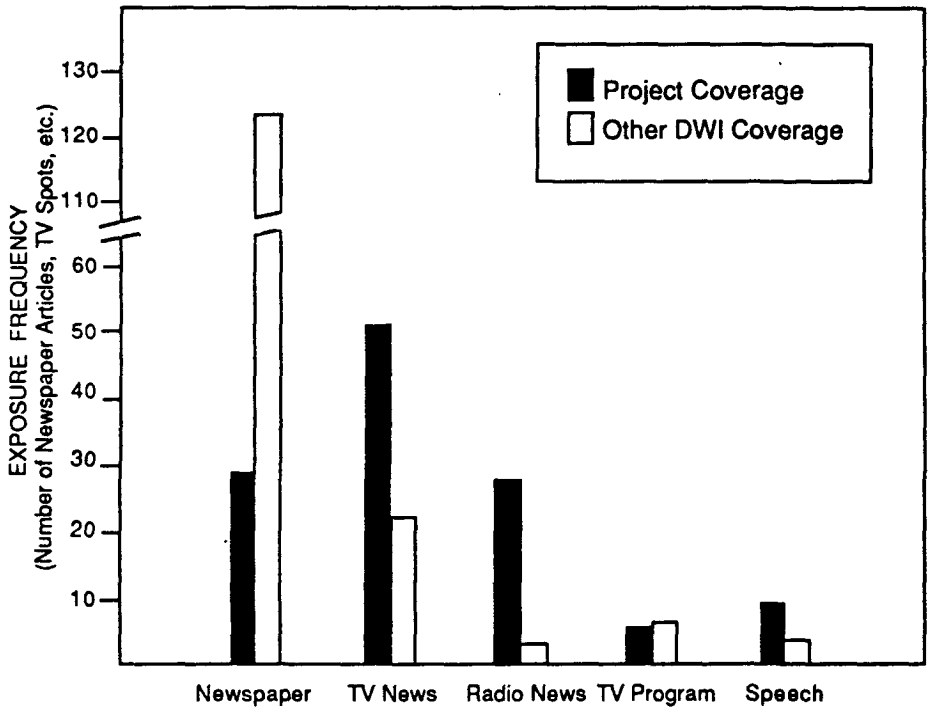


FIGURE 5.2. COMPARISON OF PROJECT NEWS COVERAGE WITH ALL OTHER DWI NEWS COVERAGE BY MEDIA CATEGORY.

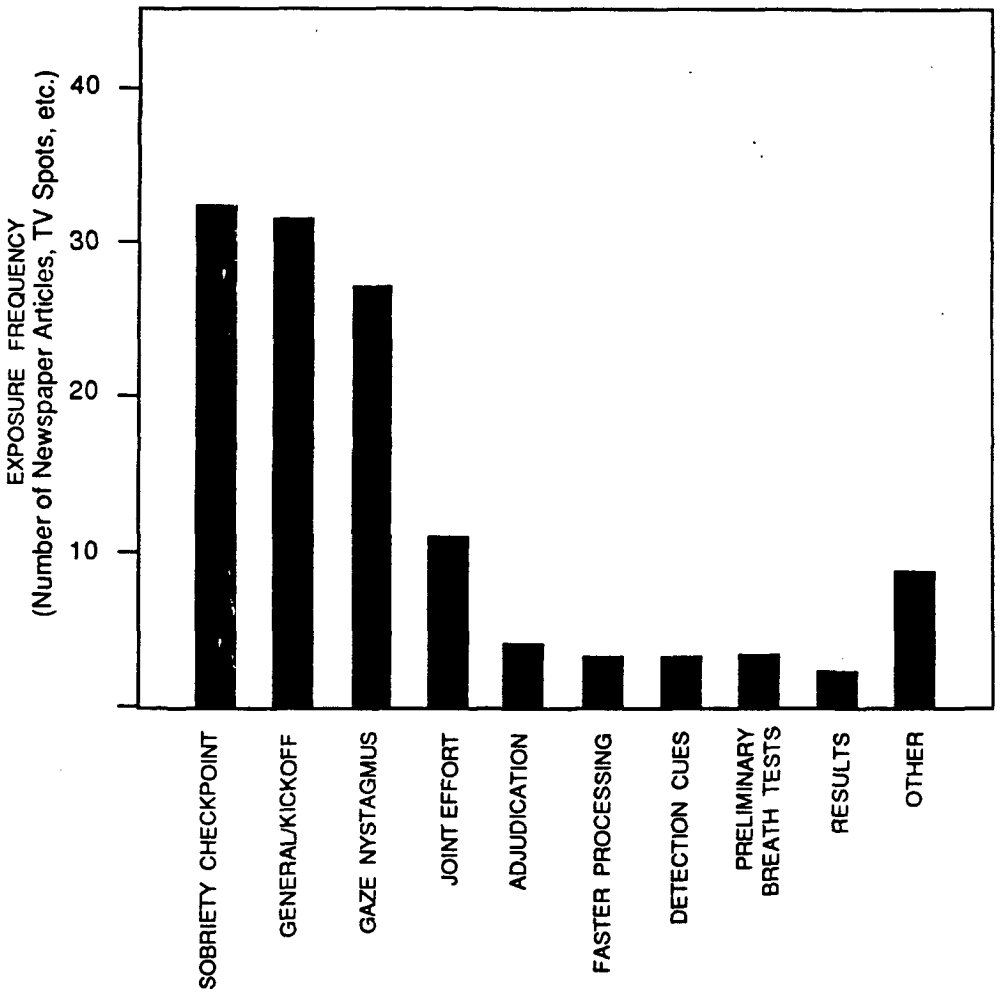


FIGURE 5.3. PROJECT NEWS COVERAGE BY THEME.

coverage. The media continued to provide sustained coverage of general project DWI news.

An additional theme that was not planned at the outset and received substantial coverage was the Joint Effort. This was a combined effort by the Indianapolis Police Department, the state police, and adjoining jurisdictions to discourage drinking and driving during the Christmas holidays with special emphasis on the New Year's Eve traffic. This theme appears to be an attractive one to the media as evidenced by coverage here in the absence of a concerted strategy.

Other project themes did not fare so well. Very limited coverage was provided for the Faster Processing, Detection Cues, and Preliminary Breath Test themes. These themes were less attractive to the media, apparently because they were perceived to be less newsworthy.

6. EVALUATION OF PUBLIC PERCEPTIONS OF DWI

One of the intermediate goals of the project was to raise the public's awareness of DWI enforcement and thus elevate their perceived risk of being apprehended for DWI. To measure whether this intermediate goal was being met, a series of three waves of telephone interviews were conducted in both the experimental and comparison jurisdictions.

The waves were conducted in March 1984, November 1984, and May 1985 (before, during, and after program implementation). The intent was to obtain survey responses from 400 licensed drivers who were also drinkers in both the experimental and comparison jurisdictions. To this end, households within Indianapolis, Indiana and Cincinnati, Ohio were contacted through a random-digit-dialing technique using the telephone exchanges active in those areas. This technique allowed for contacting both listed and unlisted households. Interviews were conducted on weekday evenings and weekend days.

Once a household was contacted, the household was screened for a qualified respondent. A qualified respondent was a licensed driver at least 18 years of age who lived within the city corporate limits. Once the household was established as eligible, the interviewer asked to speak to the youngest male licensed driver in an effort to get an adequate sample of young male drivers, which was perceived to be a high-risk group for DWI. If the youngest male driver was not at home, the interviewers were instructed to ask to speak to any licensed driver. If no licensed driver was at home but one did live there, an attempt was made to schedule a call back with the youngest male driver in the household.

Once a respondent was identified, that person was interviewed about his/her drinking and driving behavior. The initial question involved whether or not the respondent drank beer, wine or liquor. The results described in this report reflect only the responses of licensed drivers who were also drinkers. The initial screening instrument and the questionnaire for licensed drivers who were drinkers appears in Appendix B.

From Table 6.1 one can see that for the first two waves there was a higher proportion of male respondents in Indianapolis than in Cincinnati and that in all waves at both sites the proportion of male respondents approached or exceeded 50 percent. The mean age of respondents varied between 35 and 38 years across waves and sites and was roughly comparable between sites.

Table 6.1 Survey respondents by sex by wave (percent).

	Indianapolis			Cincinnati		
	Mar 84 (Before)	Nov 84 (During)	May 85 (After)	Mar 84 (Before)	Nov 84 (During)	May 85 (After)
Male	234 (58.8)	225 (56.3)	199 (49.8)	218 (53.7)	192 (48.2)	194 (48.5)
Female	164 (41.2)	175 (43.7)	201 (50.2)	188 (46.3)	206 (51.8)	206 (51.5)

Table 6.2 Mean perceived risk of being caught and punished by wave.

	Mar 84 (Before)	Nov 84 (During)	May 85 (After)
Indianapolis	24.2	28.9	27.0
Cincinnati	29.2	31.3	29.9

Table 6.3 Deterrent effect of perceived risk by site and wave.

	Indianapolis			Cincinnati		
	Mar 84 (Before)	Nov 84 (During)	May 85 (After)	Mar 84 (Before)	Nov 84 (During)	May 85 (After)
Deterred or Never Do It	78.0	78.0	84.0	83.5	83.0	82.7
Undeterred	22.0	22.0	16.0	16.5	17.0	17.3

Respondents were asked, "If you were to drive after drinking too much in _____, what do you feel would be the chances of getting caught and punished given what you know about the police and courts in _____?" Table 6.2 shows the pattern of responses to that question.

Though the values for Cincinnati were consistently higher than for Indianapolis, Indianapolis experienced a 19 percent increase in the mean response between the first and second wave with a slight decrease thereafter while in Cincinnati the initial increase was only 6.5 percent. In both jurisdictions women tended to provide higher estimates in response to this question. Thus the preponderance of males in Indianapolis may account for the somewhat lower overall estimates there.

They were then asked whether that perceived risk of being caught and punished was high enough to keep them from driving after drinking too much. ("Is this chance high enough to keep you from driving after drinking too much?")

Again, as can be seen in Table 6.3, the proportion of those who were deterred or stated they would never drink and drive was higher in Cincinnati before, during and after the program. However, in Indianapolis, by the time the program was completed there had been an eight percent increase in proportion of respondents who were deterred while in Cincinnati somewhat fewer respondents fell in that category.

A series of questions were also asked about the perceived risk of being identified in different components of police detection and arrest of drinking drivers. Respondents were asked sequentially their perceived chances of being seen, stopped, and recognized as a drunk driver by police and suffering negative consequences.

For the components dealing with being seen and stopped Indianapolis respondents indicated generally lower levels than those in Cincinnati. Though Indianapolis respondents provided lower estimates of the chances of being recognized as a drunk driver, once stopped, on the first wave, they exhibited a slight upward trend on that variable while Cincinnati respondents exhibited a slight downward trend. Thus, in subsequent waves the Indianapolis estimates exceeded those of Cincinnati. This may be partly in response to awareness of the improved sobriety testing skills training for the Indianapolis Police Department. This training, particularly the alcohol gaze nystagmus component, received rather extensive news coverage. Indianapolis also started out

somewhat lower on perceived negative consequences of an arrest but ended up slightly higher than Cincinnati by the final wave.

Another question was, "In the past month, how many times have you driven after you have had too much to drink?" In Indianapolis there was a slight increase in the proportion of respondents who responded "zero" on successive interview waves (from 85.8% to 89.5%) as opposed to a more stable pattern among Cincinnati respondents (87.2% to 86.5%)(Table 6.4). As can be seen from Table 6.5 a more dramatic pattern was observed on the average number of reported drinking driving events per month per respondent where Indianapolis went from .42 to .27 (a 36 percent decrease) while Cincinnati remained relatively stable (.35 and .36).

Table 6.6 shows the response pattern to the question, "From what you have noticed, read or heard, have there been any changes in the enforcement of drinking driving laws of _____ in the past six months?." Perhaps because of the activities of the statewide task force and recent legislative changes, the highest value achieved on any wave in either site was in Indianapolis on the first wave (81.2%). That wave was conducted before any project-stimulated enforcement activity was begun and before the program was announced. In Cincinnati the same phenomenon occurred but to a somewhat lesser degree. The values for Indianapolis were higher than for Cincinnati across all waves of the interview.

Those who responded that they had noticed changes were queried further as to how they had heard of them. In both jurisdictions, the leading source initially cited on each wave was television news from 34 percent in the first wave to 41 percent on the third wave in Indianapolis and 33 to 40 percent in Cincinnati, followed by newspaper and magazine coverage (27% to 39% in Indianapolis and 27% to 33% in Cincinnati). When asked to describe the changes they had observed, the Indianapolis respondents, particularly during the last two waves, were more likely to indicate specific enforcement activities whereas Cincinnati respondents were more likely to mention specific sanctions. The most striking difference between jurisdictions in response patterns to this question was in the proportion of those responding who cited roadblocks or checkpoints. In Indianapolis over a third volunteered roadblocks during and after the program (up from 20 percent before the program) while in Cincinnati roadblocks were mentioned by fewer than five percent of respondents on any of the waves.

Table 6.4 Percentage of respondents reporting impaired driving events in previous month by site and wave.

	Indianapolis			Cincinnati		
Number of Events	Mar 84 (Before)	Nov 84 (During)	May 85 (After)	Mar 84 (Before)	Nov 84 (During)	May 85 (After)
None	85.8	88.0	89.5	87.2	86.5	86.5
One or More	14.2	12.0	10.5	12.8	13.5	13.5

Table 6.5 Mean number of impaired driving events reported for previous month per respondent by site and wave.

	Mean Number of Events		
	Mar 84 (Before)	Nov 84 (During)	May 85 (After)
Indianapolis	.42	.33	.27
Cincinnati	.35	.32	.36

Table 6.6 Percentage of respondents noticing changes in DWI enforcement by wave.

	Mar 84 (Before)	Nov 84 (During)	May 85 (After)
Indianapolis	78.8	57.0	55.8
Cincinnati	54.3	45.8	49.3

Table 6.7 Percentage of respondents reporting that the chances of being caught and punished have increased in the previous six months by wave.

	Nov 84 (During)	May 85 (After)
Indianapolis	56.8	75.5
Cincinnati	40.7	59.3

On the second and third waves a related question was asked near the end of the interview. That was "Over the past six months, has the chance of being caught and punished for violating the driving under the influence law: increased, decreased or stayed the same?" As can be seen from Table 6.7, a consistently higher proportion of respondents in Indianapolis indicated increases than in Cincinnati (57 and 76 percent on waves two and three in Indianapolis as opposed to 41 and 59 percent in Cincinnati). Very few (less than three percent) reported decreases in either jurisdiction. Again, roadblocks stood out as a specific enforcement strategy that was much more often cited as a reason in Indianapolis than in Cincinnati.

Ironically, in light of the increased awareness of respondents of enforcement activities cited above, there was an increasing trend across waves in the proportion of respondents feeling that the drunk driving laws were not strictly enough enforced in Indianapolis in contrast with a stable proportion of respondents in Cincinnati. The proportion feeling the laws were not strictly enough enforced rose from 51.5 percent on the first wave to 63.0 percent on the final wave in Indianapolis while it remained near 55 percent on all waves in Cincinnati. This may be because of support of the new laws generated by the state level task force. Very few persons in either jurisdiction felt the laws were too strictly enforced.

In an attempt to measure whether the perceived threat of sanctions for DWI might be differentially affecting DWI behavior in the communities, the question, "If you were convicted of drunk driving and it was your first offense, how unpleasant would the consequences be?" was asked. The response patterns were similar in the two communities and varied little between waves with over 75 percent of respondents rating the consequences as very or extremely unpleasant at each questionnaire administration.

Another question dealt with where the respondents usually drank. Responses to this question remained relatively stable in both jurisdictions with the majority (about 60 percent) indicating that they usually drank at home.

In summary, in the direct measurement of perceived risk of arrest and punishment, Indianapolis started out and stayed below Cincinnati though a large increase in perceived risk was evidenced in Indianapolis during the project period. Indianapolis exhibited a dramatic increase in the proportion of respondents who claimed that they would never drive after drinking too much and

also exhibited improvement on other measures of reported drinking driving behavior. The enforcement strategy that seemed to attract the most public awareness was the use of roadblocks. The following section addresses effects the program may have had on alcohol-related and nighttime crashes.

7. EVALUATION OF EFFECT OF PROGRAM ON CRASHES

Since the underlying goal of any program directed towards reducing drinking and driving incidents is to decrease crashes and injuries caused by drinking drivers, it is important to examine data relating to such crashes to seek evidence of program effectiveness. Typically, data series of crashes in which alcohol was reported to be a factor by the investigating officer are examined over time. However, a police report of alcohol involvement is a subjectively determined variable that may be influenced over time by such factors as police officers being better able to identify the presence of alcohol because of more sophisticated training or for that matter becoming less sensitive to the issue because of reduced command emphasis. Only a small proportion of alcohol-related crashes are reported as such as a result of an actual chemical test for alcohol. In the vast majority of cases the indication of alcohol involvement is based solely on the officer's subjective judgement of whether it was present in the driver. For this reason crashes occurring at night, a high percentage of which are thought to be alcohol-related, are also examined as a proxy measure of alcohol-related crashes. This variable is selected because its values are objectively determined and are less likely to be influenced by other factors. If a program is effective in deterring drinking and driving then it would be expected that a decrease in these categories of crashes should be discernable coincident with the onset of the program.

Time series methods were used to analyze monthly data series on alcohol-related crashes and night crashes occurring in Indianapolis during the time period from January 1982 through December 1986. Similar series were also obtained and analyzed from the comparison city of Cincinnati, Ohio. The goal of these analyses was to estimate any changes in the number of alcohol-related or night crashes in Indianapolis that occurred corresponding to the time period during which the experimental enforcement and public information program was being administered. In particular, decreases in night or alcohol-related crashes coinciding with the experimental program could be taken as an indication of the program's success.

Generally, overall crash frequencies exhibit considerable month-to-month variation. Factors which may contribute to this variation include season of the year, changes in traffic density over time, changing economic conditions,

and traffic control and enforcement strategies. If ratios of crash frequencies are formed, many of these factors may tend to cancel out. Thus, series of the percent of all crashes that are alcohol-related or occur at night are usually more stable than series of raw crash frequencies. Along similar lines, ratios of crash frequencies in the experimental community (Indianapolis) to those in a comparison community (Cincinnati) should be free of effects due to change in national or regional enforcement policies, seasonal factors, more global economic trends, etc.

In this study several different monthly data from 1982 - 1986 series were examined to determine if an effect due to the program might be present. These included:

- o percentage of all crashes that occurred at night (Indianapolis)
- o percentage of all crashes that were reported to be alcohol-related (Indianapolis)
- o ratio of frequency counts of crashes occurring at night (Indianapolis) to frequency counts of crashes occurring at night (Cincinnati)
- o ratio of frequency counts of crashes reported to be alcohol-related (Indianapolis) to frequency counts of crashes reported to be alcohol-related (Cincinnati)

Time series analysis is a branch of statistics which deals with the analysis of data series such as those described in the preceding paragraphs. Time series models can be fit to the data series which account for the correlations (autocorrelations) between the data points in the series. Models can also be formulated to contain trends and changes or shifts in level to indicate intervention effects.

Models were fit to the data series listed above using SAS PROC ARIMA. These procedures involve the identification, estimation, and diagnostic checking of models containing autoregressive and moving average parameters as well as deterministic components such as trends and intervention effects.

Each of the models fit to the data series contained two intervention parameters, one representing a shift in the level of the series beginning May 1, 1984, the beginning of the experimental period in Indianapolis. The second parameter represented a similar shift beginning May 1, 1985, after the experimental program had essentially been completed. Thus, if alcohol-related crashes were reduced by the program, we would expect to find a statistically

significant negative coefficient (downward shift) for the first parameter, possibly followed by a positive parameter (upward shift) at the second intervention point if ending the program ended its effect.

Examination of plots of the data series show that for Indianapolis (Figure 7.1) the percentage of alcohol-related crashes varies around a fairly constant level of about 8.5 percent. The Cincinnati data (Figure 7.2) for this series begins at much higher levels in 1982 (about 14 percent) and decreases steadily over time to about 7 percent by the end of 1985. As a result, since the ratios are created by dividing, for each month, a percentage (or frequency) of crashes in Indianapolis that are alcohol-related by those values for Cincinnati, both of those series involving ratios of alcohol-related crashes increase steadily over the span of the data.

The percentage of crashes occurring at night decreases gradually over time for both cities (Figures 7.3 and 7.4). Since the trends on this variable were similar in the two cities, ratios involving night crashes vary around a fairly constant level.

Table 7.1 shows the estimated shift parameters and significance levels from models fit to each of the four data series described above. Thus, a positive number in the columns labeled Intervention (May 1984 being the beginning of the program and May 1985 being its conclusion) would be associated with an increase in alcohol-related or nighttime crashes and a negative number would be associated with a decrease.

Table 7.1 Estimated intervention effects.

Series	Intervention (May 1984)	Significance	Intervention (May 1985)	Significance
1. Percentage of crashes occurring at night in Indianapolis	1.040	n.s.	1.115	n.s.
2. Percentage of alcohol-related crashes in Indianapolis	1.146	$p < .05$	.847	$.05 < p < .10$
3. Ratio of Indianapolis nighttime crashes to Cincinnati nighttime crashes	-.131	$.05 < p < .10$	.087	n.s.
4. Ratio of Indianapolis alcohol-related crashes to Cincinnati alcohol-related crashes	-.001	n.s.	.098	n.s.

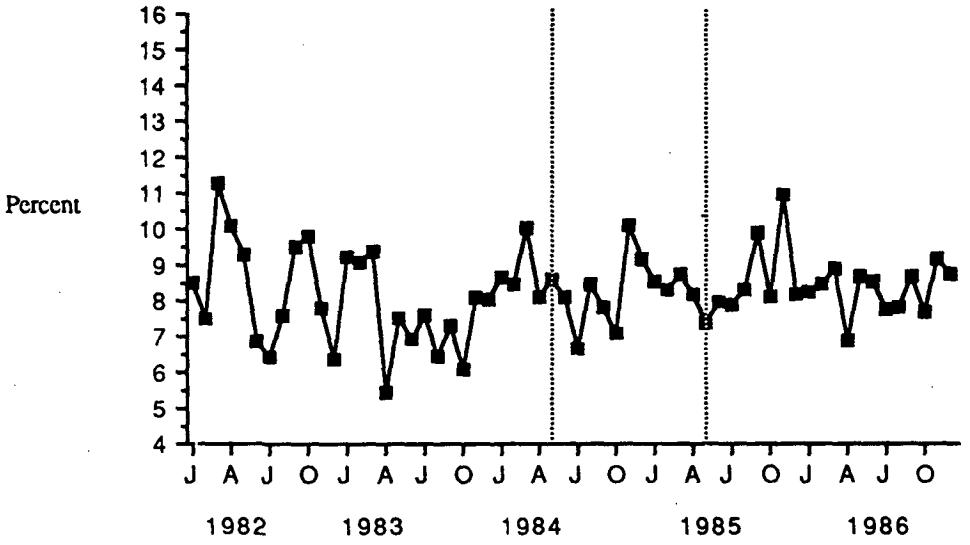


FIGURE 7.1. PERCENT ALCOHOL-RELATED CRASHES FOR INDIANAPOLIS, 1982 THROUGH 1986, WITH INTERVENTIONS AT BEGINNING (MAY 1984) AND END (MAY 1985) OF PROGRAM.

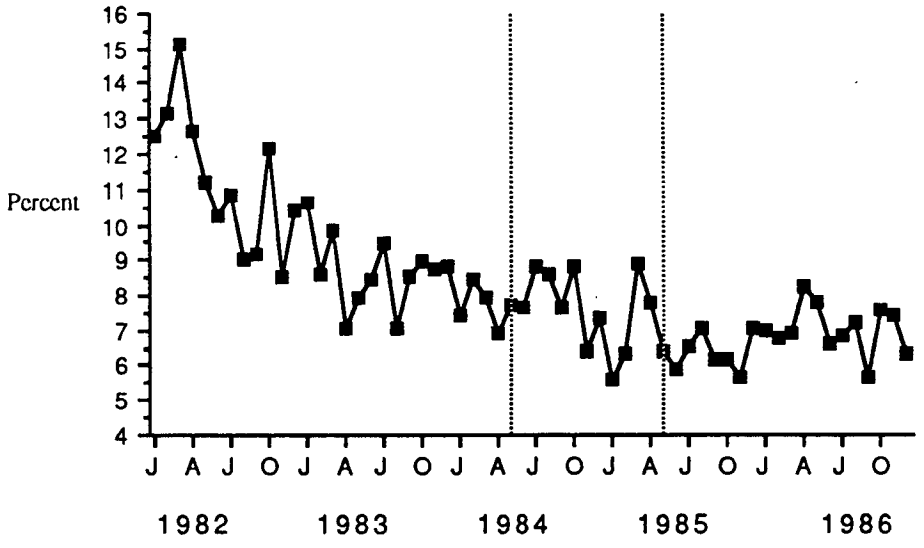


FIGURE 7.2. PERCENT ALCOHOL-RELATED CRASHES FOR CINCINNATI, 1982 THROUGH 1986, WITH INTERVENTIONS AT BEGINNING (MAY 1984) AND END (MAY 1985) OF PROGRAM.

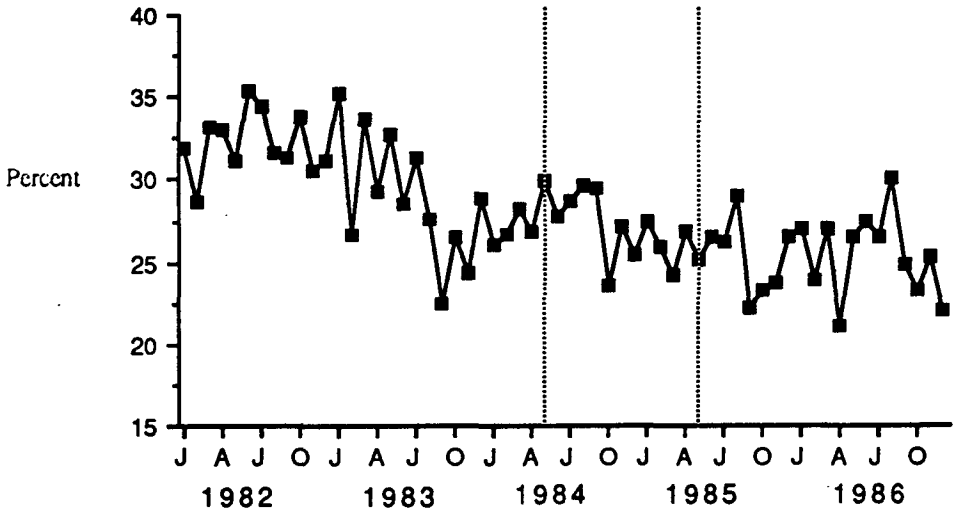


FIGURE 7.3. PERCENT NIGHT CRASHES FOR INDIANAPOLIS, 1982 THROUGH 1986, WITH INTERVENTIONS AT BEGINNING (MAY 1984) AND END (MAY 1985) OF PROGRAM.

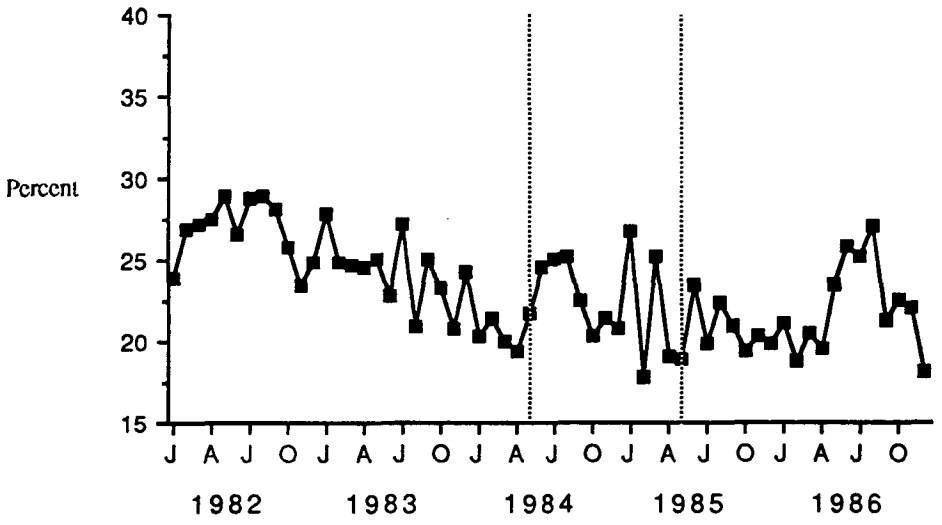


FIGURE 7.4. PERCENT NIGHT CRASHES IN CINCINNATI, 1982 THROUGH 1986, WITH INTERVENTIONS AT BEGINNING (MAY 1984) AND END (MAY 1985) OF PROGRAM.

No picture of consistently significant intervention effects emerges from the estimates of Table 7.1. There does seem to be some evidence of an increase in May 1985 when the program ended, but very little evidence of a decrease in May 1984, particularly for alcohol-related crashes. However, using the ratio for nighttime crashes to compare Indianapolis to Cincinnati indicates an effect in the desired direction. Figure 7.5 shows a plot of the monthly data series consisting of the ratio of crashes occurring at night in Indianapolis to those occurring at night in Cincinnati (Series 3 from Table 7.1). This series shows a significant reduction at the onset of the project. A slight but non-significant increase at the end of the project period is also apparent.

While the May 1984 to May 1985 dates represent the official beginning and ending points of the program, it may be that other intervention points would more realistically reflect program activities. For example, the data suggest somewhat more of a decrease in June 1984 than May 1984 and more of an increase in alcohol-related and nighttime crashes in April 1985 than in May 1985. Though the program was announced May 1, 1984 the actual increases in enforcement activity did not occur until June 1984 because of the Indianapolis Police Department's special requirements in conjunction with hosting the Indianapolis 500 automobile race. In addition, project activity tended to wane towards the end of the planned project period. Models fit to each of the ratio type data series with the initial intervention at June 1, 1984 all yielded results indicating a reduction in alcohol-related or nighttime crashes coincident with an intervention at that time. The negative effect (decrease) was statistically significant only for the ratio of nighttime crashes ($p \approx .05$). The proportion of crashes occurring at night decreased by eleven percent for the project period. Figure 7.6 depicts that series.

The overall conclusion that may be drawn from this analysis is that the program had no effect on alcohol-related crashes as measured by officer's report of alcohol involvement but that an effect on nighttime crashes was evident during the period when the project activities were underway. The implications of these findings are discussed in the next section.

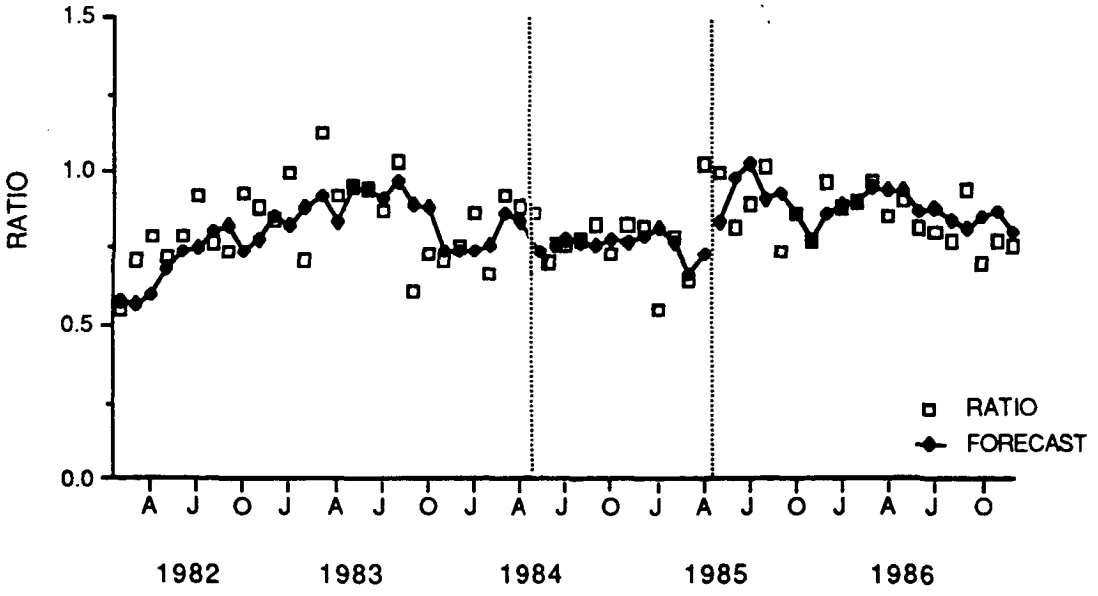


FIGURE 7.5. MODEL WITH INTERVENTIONS AT BEGINNING (MAY 1984) AND END (MAY 1985) OF PROGRAM FIT TO NIGHT CRASH RATIO SERIES.

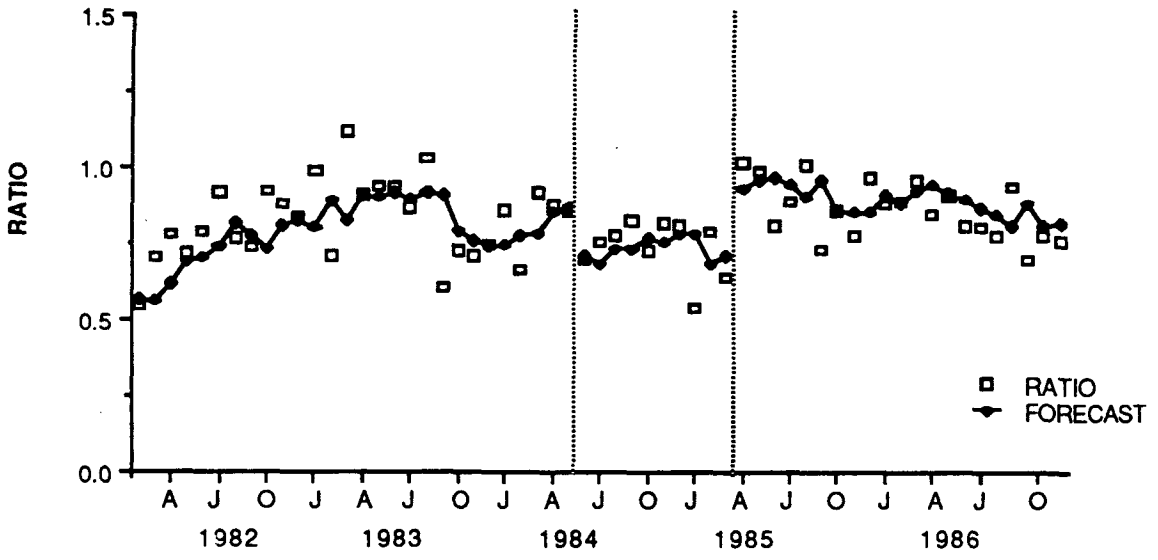


FIGURE 7.6. MODEL FOR NIGHT CRASH RATIO SERIES WITH INTERVENTIONS SHIFTED TO JUNE 1984 AND APRIL 1985.

8. CONCLUSIONS AND RECOMMENDATIONS

The primary objective of this field test project was to attempt to determine whether the combination of a number of DWI enforcement techniques, integrated with a public information and education program, can result in a measurable reduction in alcohol-related crashes and nighttime crashes. An intermediate objective was to determine whether such a program affects survey measures of items such as perceived risk of arrest, awareness of DWI enforcement activities, and reported drinking-driving behavior. This is the report on the activity at the third of three test sites which participated in this project. The other test sites were Clearwater/Largo, Florida, where a clear and measurable effect on crashes was discerned, and Boise, Idaho where no such effect was identified. In Indianapolis, the results are somewhat equivocal. There were generally positive results on the survey measures and possible positive effects on nighttime crashes but no evident effect on police-reported alcohol-related crashes. This section is a discussion of possible reasons for those findings and their implications.

Indianapolis is by far the largest of the three test sites and as such poses different challenges in the implementation of both enforcement and public information activities. For example, the uniformed police force is much larger so that delivering training to the appropriate personnel poses a greater logistical problem. Though not all officers received the DWI enforcement training, it is clear that the training was scheduled by the IPD in a way to insure that those most likely to be able to make use of it would receive it first.

Likewise, with so many competing priorities, (for example, hosting several large sporting events) there was some concern that command emphasis on DWI appropriate to the project's needs would not be available. However, the Deputy Chief in charge of the Operations Division and the Assistant Deputy Chief in charge of the Traffic Branch both communicated their support and interest in DWI enforcement to patrol personnel during training sessions. Many training sessions were also attended by the Chief of Police. The project also received visible support from the County Prosecutor. Thus real command emphasis was afforded DWI. However,

competing demands may have resulted in fluctuations in the level of that emphasis during the project year.

In Indianapolis, the public information activities were coordinated by a person supported by the project who was housed in the County Prosecutor's office (which is in the same building as the police headquarters). This arrangement was deemed appropriate because the County Prosecutor was active in DWI issues (he was Chairman of the Governor's Task Force to Reduce Drunk Driving), had access to the media and had a history of working closely with the police department on this issue. The public information coordinator was skilled and effective in arranging media events and coverage of elements of the program that were deemed newsworthy. Though she was readily able to coordinate closely with the Police Department during the first two-thirds of the project period, that may have been more difficult during the last few months because she was relocated to another office less convenient to the headquarters building because of additional duties. This may, in part, account for the lessened coverage observed late in the project period.

Another issue which affected the public information program in Indianapolis was the presence of the very active public service advertisement(PSA)-oriented public information program of the Governor's Task Force. Their topical orientation was more towards individuals helping one another ("Sobering Advice Can Save A Life"). This obviated the pursuit of PSA activities in support of the specific enforcement techniques and necessitated reliance on hard news coverage to publicize the program. Indianapolis was actually quite successful in obtaining that coverage but it tended to result in sporadic intense attention to the program rather than a sustained continuous coverage that might have resulted from a combination of hard news with PSA activities. These issues notwithstanding, the Indianapolis program did achieve a generally positive effect on public perceptions. Perceived risk of arrest was increased at the mid-point of the project, awareness of specific enforcement activities was achieved (particularly in the case of roadblocks), and reported drinking driving behavior was reduced.

The results of analysis of the crash data were somewhat more problematic with no discernable effect on police reported alcohol-related crashes though an effect on nighttime crashes which diminished at the

conclusion of the program was observed. One possible explanation for the lack of demonstrated effect on alcohol-related crashes (a subjectively determined variable) is that investigating officers may have been sensitized to the issue by the command emphasis and training and thus be more likely to detect and report alcohol involvement in crashes. This may have masked any effects which may have been present. This is a distinct possibility in a department as large as the IPD where some officers with little responsibility for DWI enforcement but occasional accident reporting responsibilities become aware of the project thrust.

A more likely explanation is that Cincinnati was experiencing a long-term decline in the level of alcohol involvement on crashes (from a much higher initial level). The proportion of crashes that were alcohol-related in Indianapolis was already quite low. Thus to reduce the ratio of alcohol-related crashes in Indianapolis to those in Cincinnati in the face of Cincinnati's continuing decline was difficult. In retrospect Cincinnati may have been a poor choice as a comparison site. Though they were not planning implementation of any new programs, they were long term recipients of federal traffic safety assistance funds and continued that activity during the Indianapolis program period.

What is encouraging in terms of whether this approach to deterring DWI merits pursuit is that when one examines nighttime crashes with the intervention point placed where the new enforcement activities actually began (June 1984) there are consistent reductions in all measures of nighttime crashes on the order of ten to eleven percent. These effects seem to diminish at the end of the project period, when there is also evidence that public information coverage waned over the last five months. Thus the evidence from this field test site gives some support to the concept that combining public information with DWI enforcement may realize effects on crashes but that those effects are likely to be transitory in the absence of a continuing, concerted effort.

Also evident from the combined experience in Indianapolis and the Clearwater/Largo site, where public information activities focussed actively on both hard news coverage and PSA activities, is that if hard news is to be used it should be supported by PSA activities in order to have the desired effect. It is not clear whether PSA activities alone would be sufficient but it seems likely that hard news coverage would add

credibility to PSA messages while PSA activities can be sustained more consistently over time.

In terms of specific enforcement activities attracting the attention of the public, at both sites roadblocks or checkpoints clearly were the most effective in increasing awareness of DWI enforcement activities.

APPENDIX A

Description of DWI Arrest and Adjudication Practices in Indianapolis, Indiana and Cincinnati, Ohio

INDIANAPOLIS, INDIANA
POLICE DEPARTMENT BACKGROUND DESCRIPTION

Introduction

This portion of the Appendix describes the general characteristics of the Indianapolis, Indiana, Police Department (IPD), and specifically examines its DWI (Driving While Intoxicated, sometimes referred to as DUI: Driving Under the Influence or OMVUIL: Operating Motor Vehicle While Under the Influence of Liquor) enforcement practices. The text generally describes these characteristics prior to the implementation of the DWI General Deterrence project in Indianapolis. Changes which occurred during the operational phase of the project are noted with indented text.

This report is divided into four sections. The introductory section briefly describes the rest of the report and provides an overview of DWI enforcement in Indianapolis. The next section provides background information on the city and the police department. The third section describes all aspects of the DWI arrest process. The final section of the report discusses the records system of the Indianapolis Police Department including how reports are filed, what summary reports are routinely provided, and what additional information is available through the system relating to DWI enforcement and accidents.

DWI Enforcement Overview. DWI enforcement has been emphasized by the Indianapolis Police Department for many years. Specific enforcement can be traced to the implementation of an ASAP (Alcohol Safety Action Project) program in 1971. The primary purpose of the ASAP program was to focus extra enforcement on DWI violations through the use of special DWI enforcement teams consisting of regular IPD officers hired back on their off duty time. All overtime was paid by the ASAP grant and the project was terminated when outside funding ended.

Interest in DWI enforcement was rekindled as a result of the national focus on DWI-related problems in the early 1980's. As a result of local interest and demand, the Indianapolis PD began fielding DWI enforcement teams during high-incidence late night/early morning hours by reassigning other personnel. These enforcement teams were used from October 1981 through March 1983 except for some summer months when officers were needed for other assignments.

There have been recent changes in Indiana state law that have affected some aspects of the DWI process. The most important of these laws became effective on September 1, 1983. The new laws increased the penalties for repeat DWI offenders (mandatory incarceration and license suspension) and provided for an automatic license suspension for those who exceed 0.10% w/v alcohol on a BAC test or those who refuse to take a BAC test.

Background

The General Environment. Indianapolis is located in the center of the State of Indiana on a broad, level plain. The city is mostly surrounded by farmland. The city has a population of about 711,000 that has been dropping slowly for the past several years. Indianapolis frequently hosts special events which draw hundreds of thousands of people to the city. The largest attraction is the Indianapolis 500 auto race held over the Memorial Day weekend. Additional races, the Indiana State Fair, and various other athletic events are responsible for the other large population surges. The city population is racially and ethnically diverse but has a smaller minority population than many other large cities. The city has a broad economic base with considerable heavy industry and many petrochemical plants.

Local Government. The city is governed by a mayor and council. The mayor and four council members are elected at large; 25 additional council members are elected from single-member districts. The government is locally called the "unigov" referring to the fact that the mayor and councilmen are elected by all residents of Marion County, not just those within the City of Indianapolis. The mayor appoints a police chief who is responsible for all police services within the boundaries of Indianapolis. There is an elected sheriff who provides police services for the unincorporated areas of the County.

There is also an eight-member city Public Safety Board appointed by the mayor that is responsible for coordinating all police and fire services in the city. The local government is considered to be stable and recent elections have not resulted in dramatic changes in personnel or policies. The council rarely becomes directly involved in police department operations. Also, the city government is considered to be relatively stable financially and operates with a balanced budget.

The Police Department. The police department has a current strength of approximately 960 sworn officers and 300 civilian employees. Authorized

strength is higher, but there have been problems filling vacancies. Some records and all custodial services are provided to the Indianapolis Police Department by the Marion County Sheriff's Office. The IPD headquarters are in a multi-purpose city/county facility located in the center of the city. The police department also has several substations scattered around the city. These substations are frequently unattended and are used only for briefings and the completion of paperwork. Over the past several years general crime and traffic accident rates have been declining.

Organizationally, the Indianapolis Police Department contains three major divisions: operations, criminal investigations, and administration; each is commanded by a deputy chief. Some other, smaller sections such as personnel, internal affairs, or community relations, report directly to either the police chief or the assistant chief. The Operations Division is subdivided into four commands, each with responsibility for one quadrant of the city. All operational personnel have traffic enforcement responsibilities, but specific levels of effort vary according to individual, and place and time of assignment.

The Traffic Branch. In addition to the four patrol quadrants, the Operations Division also has a traffic branch. The major sections within traffic are enforcement (all on solo motorcycles working between 6 a.m. and 10 p.m.), parking enforcement, radar operations, and accident investigations (AI). In practice, the late shift (10 p.m. to 6 a.m.) accident investigators make a large number of DWI arrests. This is considered to be one of their primary duties when not actually investigating an accident.

Agency Personnel. The department has an extremely low turnover of officers in general, and those assigned to the traffic section usually remain there. The Indianapolis Police Department officers are among the highest paid in the state and many officers have college degrees. Officers bid for duty assignments and shift. All operational personnel work eight-hour, five-day (on average) weekly schedules with fixed shift assignments.

Police Training. All new officers are trained in the Indianapolis PD Academy. Initial training consists of 18 weeks of instruction which includes a 4 to 8 hour block on DWI enforcement. New officers also participate in ride-alongs with experienced officers while they are in the academy. After graduating from the academy, officers are assigned to a field training officer

for eleven weeks and are then given assignments based on the Department's needs.

The agency has frequent in-service training programs which are scheduled periodically throughout the year. Officers are released from general duties for a period dependent on the time required to cover the topic. Traffic topics are sometimes covered in these sessions.

Other Factors Influencing DWI. There are active citizens groups involved in the DWI system in the Indianapolis area. Both MADD (Mothers Against Drunk Driving) and SADD (Students Against Driving Drunk) have large, local organizations. The police cooperate with these organizations by supplying speakers and data. The local liquor dealers association has voiced concern over some of the recent DWI enforcement efforts. The association claims that its members are losing customers as a result. Additionally, a statewide DWI Task Force was formed early in 1984. It is chaired by the Marion County Prosecutor, and has received considerable local media coverage.

The DWI Enforcement Process

Local Enforcement Strategies. While the Indianapolis Police Department has no written DWI enforcement policies (other than arrestee processing), there are several that could be considered informal policies. Among the informal DWI enforcement strategies is that of concentrating enforcement activities around high incident DWI locations. The officers believe they know where many DWI episodes originate and watch for DWI offenders in those areas. Another strategy that has been used recently is road blocks.

The Enforcement Process. Many impaired drivers are detected as a result of observed driving behavior that suggests a possible DWI offender to an officer on patrol. Frequently, officers will not suspect DWI until direct contact is made with a driver. IPD officers have had no specific training in DWI detection cues. Other than the sporadic use of DWI task forces, more DWI arrests are made by AI officers. When the AI officers are not assigned to accidents, they will specifically look for DWIs, particularly on the 10 p.m. to 6 a.m. shift. After observing driving behavior that indicates a possible DWI offender, an officer will usually stop the suspect as soon as possible. All officers ride in one-person vehicles and there is no formal provision for providing backups on a stop. Frequently, however, officers check on each other when one is making a nearby stop.

During the course of the project, considerable DWI training was provided to Indianapolis PD officers. Almost all operational officers attended a one-day seminar covering the NHTSA-developed DWI detection cues and the use of improved sobriety tests. AI officers and others who frequently worked on the DWI task force received further instruction on the improved sobriety testing battery including the use of horizontal gaze nystagmus, as well as training in the use of preliminary breath test instruments (PBTs).

Pre-arrest Screening. While making the initial personal contact with a driver, an officer will look for cues that indicate a possible DWI. These include odor of alcoholic beverage, slurred speech, difficulty in finding a driver's license or registration, and dilated or bloodshot eyes. Once DWI is suspected, the officer will usually have the driver shut off the engine and exit from the vehicle.

At this point, the officer will ask the suspect to take several field sobriety (psychophysical) tests and also observe the suspect's general balance and demeanor. These tests include saying the alphabet; standing with heels together and then raising one foot while counting to thirty; walking heel-to-toe, turning, and then walking back in the same manner; and touching finger to nose. The use of these tests is not uniform throughout the department so they are carried out with little consistency from case to case. The tests are conducted at roadside whenever possible.

After a number of officers had received the DWI enforcement training described above, the use of the sobriety test battery resulted in greater consistency in both the types of tests given and how they were administered.

The Indiana implied consent law is somewhat unique in that a suspect does not have to be arrested for the officer to request a chemical test. Therefore, if DWI is suspected as a result of the roadside tests or other indicators of impairment, the officer usually asks the suspect to take a breath test prior to making the arrest decision. If the suspect agrees to a breath test, the officer will handcuff the suspect and transport him or her to the closest breath-testing facility in the police car. If a suspect refuses to take a

test, he/she is usually immediately arrested for DWI and transported to the county jail.

The arresting officer is also responsible for the disposition of the offender's vehicle. If the vehicle is parked in a safe location, it is usually locked up and left there. If there is a sober licensed driver in the vehicle, they may be asked to drive the vehicle to another location. Finally, if the vehicle is in an unsafe location, the arresting officer will temporarily move it to a nearby safe location while the breath test is being administered. If the suspect passes the breath test and there is no evidence of drug involvement, the officer will return them to their vehicles. When the vehicle has been temporarily placed in a location where it cannot remain, and an arrest is made, a tow truck will be called and the vehicle removed.

The Indianapolis PD has breath-testing instruments at six locations throughout the city and has access to others located elsewhere in Marion County. At the breath testing facility, the process is essentially a one officer operation. Almost all IPD officers are qualified to run the breath-testing instruments and most perform the test themselves on persons that they arrest. A breath-testing machine operation checklist is filled out at the time of the test. No audio or video tapes are made of any part of the process. If a suspect fails the test, he/she is then formally arrested. The arresting officer can either personally transport the arrestee to the county jail, or call for a patrol wagon to make the transport.

The Booking Process. After the chemical test and all field sobriety tests are completed, the arresting officer must fill out an arrest report form and conduct a preliminary search of the offender. The arrest report must accompany the arrestee to the jail. If the officer makes the transport, he/she will hand the report and suspect over to jail personnel and have no further contact with the arrestee. Similarly, if a patrol wagon is called, the arresting officer breaks contact with the arrestee when the wagon personnel take over. In either case, jail personnel will complete the booking process (fingerprints, photographs, etc.).

A cash bail bond must be posted on DWI arrests and the offender is held in jail until bond is posted or a bond hearing held before a judge. There is no required minimum lockup time; jailers try, however, to retain an offender until he or she is sober enough to function normally. If bail is present, the offender must be released.

The arresting officer can go back on patrol after relinquishing custody of the suspect. Some reports must still be completed, but the time at which this is done varies considerably. A patrol officer usually completes all of the necessary paperwork before returning to patrol activities. Late shift officers, however, particularly accident investigators, frequently defer paperwork completion until the usually quiet 4 to 6 a.m. period. The arrest report mentioned previously, any accompanying simple traffic citations (such as for the violation that initially drew the officer's attention), and a receipt for the arrestee's driver's license must all be completed while the offender is still in the arresting officer's custody and left at the jail.

The formal DWI arrest is made through an Information and Complaint issued by the county prosecutor's office. A data form needed to complete that report must be delivered to the prosecutor's office before the suspect's initial court appearance. If the arrest is made after 2 a.m., the initial court appearance will be the following day at 9 a.m.; if the arrest is made before 2 a.m., the court appearance will be the same day at 9 a.m. The arresting officer must dictate an arrest narrative (called the teletype report). This is done over the telephone into a recorder and transcribed later. The arresting officer must also complete vehicle tow, implied consent refusal, and accident reports, if applicable. It is estimated by police supervisors that a typical DWI arrest takes 90 minutes from initial contact to completion of all paperwork. If the paperwork is deferred, the officer can be back in service in about 45 minutes after the initial stop.

The Adjudication Process. For most DWI arrests, the officer must appear in court twice. At an initial hearing, the arrestee will be asked to enter a plea. Guilty pleas are usually not accepted unless there is a defense lawyer present. Generally, a trial date is set at the initial hearing. In most cases, plea bargaining takes place and the case does not go to trial. The usual negotiated arrangement is a guilty plea to the charge, a $250 fine, an alcoholism screening evaluation, and a 60-day license suspension. For repeat offenders, a larger fine and a one-year license suspension are imposed. Plea bargains are almost always discussed with the arresting officer before they are agreed to.

Personnel Issues

Indianapolis officers are not specifically evaluated on their DWI arrest performance. AI officers are evaluated informally on their DWI performance. If an officer puts in overtime hours for a DWI case, the officer is compensated at straight time with a two-hour minimum for court (actual court time is seldom that long).

DWI-Related Records

Report Approval and Filing. All reports handwritten by officers (except State traffic accident reports) are sent to the central records facility where they are computer coded and filed. Teletype reports are transcribed at central records, computer coded, and filed with copies sent to appropriate bureaus and sections. For example, unsolved crime reports are sent to Investigations and accident reports are sent to the AI Bureau. At the AI Bureau, teletype accident reports are compared with the handwritten State reports. The State reports are then filed by the Traffic Branch and a copy sent to the State. Most reports are review by supervisory officers, but there is no formal report approval process.

Summary Reports. A monthly report is issued containing a citywide summary of accidents including information about whether they were alcohol-related; year-to-date summaries are provided in the same report. The monthly report also contains a listing of the number of DWI arrests made by enforcement and accident investigation officers. The total number of arrests made department-wide cannot be verified since Traffic Branch tallies seldom agree with summaries from central records.

Adjudication Data. The Indianapolis Police Department does not routinely receive conviction data from the courts. A new computer system designed to track all arrests from the police, through the prosecutor's office, and to final court disposition is in the process of coming on-line. When the system is fully operational, the police will have full access to all conviction data.

During the course of the project, Indianapolis PD personnel developed a microcomputer-based DWI tracking and report system. The outputs from that system show dispositions, individual officer activity, and other information on arrest and offender demographics.

INDIANAPOLIS, INDIANA
ADJUDICATION SYSTEM DESCRIPTION

Background

DUI Laws

The Indiana General Assembly rewrote the drinking driving laws during the 1983 legislative session. The law changes took effect September 1, 1983. One major law revision was the creation of a new offense, driving with a blood alcohol content of .10% or more. The .10% offense was classified as a Class C misdemeanor, a less serious offense than operating a vehicle while under the influence (OMVUI), a Class A misdemeanor. In practice, Class A and Class C misdemeanor offenders receive substantially the same penalties. A second and more innovative major revision was the establishment of a pretrial license suspension procedure under which either refusing a chemical test or failing it (registering a BAC of .10% or above) is grounds for immediate license seizure by the charging police officer and summary suspension by the Indiana Bureau of Motor Vehicles (BMV). According to one prosecuting attorney, the pretrial suspension removes any incentive on the defendant's part to delay the proceedings, since delays only extend the suspension period.

The 1983 law revision imposed a 30-day minimum suspension period on first offenders, and a 5-day minimum jail term (or 10-day community-service requirement) on multiple offenders. In addition, driving while under suspension for an alcohol related offense was made punishable by a mandatory term of 60 days' imprisonment. Other 1983 amendments limited the liability of medical personnel performing chemical tests at a police officer's direction, authorized multiple chemical tests, and restricted drinking driving offenders' eligibility to complete an alcohol treatment program and thus earn dismissal of the charges.

It is generally believed that while the 1983 OMVUI amendments affected sanctioning, they did not substantially change either enforcement or prosecution.

Indiana's Court System

Indiana's court system is partially unified. State law provides for a Supreme Court, an intermediate appellate court called the Court of Appeals, and a trial court of general jurisdiction called the Circuit Court in each county.

A number of counties, including Marion County, also have a Superior Court, whose jurisdiction is coextensive with that of the Circuit Court. Marion County also has a trial court of limited jurisdiction called the Municipal Court.

In Marion County, the Circuit Court hears the most serious felony cases, and the Superior Court generally declines to exert its criminal jurisdiction. Therefore, most criminal cases in Marion County are heard in the Municipal Court, whose criminal jurisdiction includes Class D felonies, misdemeanors, infractions, and ordinance violations. It consists of 15 judges recommended by a nominating commission and appointed by the governor for a four-year term. One of the judges is designated the presiding judge. There is currently no court administrator in the Marion County Municipal Court; that function is assumed by its presiding judge.

All OMVUI cases resulting from arrests within the county are prosecuted by the Marion County Prosecuting Attorney's Office. Enforcement is primarily carried out by the Indianapolis Police Department (IPD) within the 400,000-resident IPD Police Service District, which includes downtown and surrounding portions of the city. Outside of that district, Marion County sheriff's deputies and local police carry out most DWI enforcement. The Indiana State Police and, to a lesser degree, sheriff's deputies, patrol Marion County's interstate highways.

Arraignment

Recent amendments to the Indiana criminal procedure code renamed the arraignment the "initial appearance" and prescribed a detailed set of procedures governing the initial appearance. At the initial appearance the judge reads the offense charged, determines whether the defendant is poor and whether an attorney should be appointed, and sets an "omnibus" date - actually the trial date - 45 to 60 days in the future. The judge does not ask the defendant to plead at this point; if no plea is entered a preliminary plea of not guilty is entered. If the bail commissioner found the defendant ineligible for release on recognizance and the defendant could not post bond, the judge also reviews the bail commissioner's decision at the initial appearance. Some Municipal Court judges reportedly evaluate the officer's probable cause affidavit at the initial hearing, although Indiana law does not require any hearing. If the judge determines that probable cause exists, a cause number

and court code are entered on the probable cause affidavit. The court retains the original affidavit, forwards one copy to the BMV, and returns another copy to the charging officer.

Defendants rarely fail to appear at their initial appearance, or for subsequent stages of the criminal proceeding; the "no-show" rate was estimated to be three percent.

One judge expressed his belief that those who drafted the new OMVUI law expected a larger number of defendants to plead guilty at the initial hearing. He explained that has not happened because many defendants do not have enough money to retain an attorney so soon after arrest, and most judges are reluctant to accept a guilty plea from a defendant not represented by counsel.

It is in the defendant's interest to complete the process quickly in an OMVUI case. While the criminal prosecution is proceeding, the BMV processes the pretrial suspension documents. It was estimated that three weeks elapse from the time a driver's license is seized and the driver receives a suspension notice from the BMV. The three weeks represent time spent forwarding the probable cause affidavit through the prosecutor and judge, and the time spent by the BMV entering probable cause and arrest data into its computer system and generating a suspension notice. The Bureau apparently updates its computer records and generates suspension notices once a week. Because the suspension is not imposed automatically when the license is seized, it is possible for a driver to continue driving after receiving a suspension notice. If challenged, the driver can produce the receipt issued by the charging officer at the time of arrest; a police officer must check the license status against the BMV computer to determine whether the receipt is still valid. In spite of the delay in imposing a license suspension, most OMVUI defendants come under suspension for at least some of the time between arrest and final disposition of the case.

Plea

There is no standard procedure for pleading guilty; most such pleas are negotiated after the initial appearance and before the omnibus hearing date. Most defendants charged with OMVUI eventually plead guilty to that charge or the .10% offense. Those who plead guilty receive a mandatory license suspension, and risk a felony prosecution for a second drinking driving conviction within five years of the first. In addition to the severe penalties

there is no pretrial diversion in Marion County even though Indiana law allows an alcohol or drug offender to earn one dismissal of the charge by completing a treatment program. The Prosecuting Attorney's Office also refuses to plea bargain alcohol-related charges away; thus there is very little possibility that a person charged with OMVUI will avoid a conviction unless the prosecution's case is weak or poorly prepared. Nevertheless, most defendants plead guilty because a lengthy pretrial delay only prolongs the BMV's suspension period, and the chemical test results and the new .10% provision combine to make defending a drinking driving case futile under the new law. There is no uniform procedure for pleading guilty. Most pleas are negotiated and offered to judges before the scheduled omnibus date.

Drinking driving cases account for the largest portion of Municipal Court judges' caseload. It was reported that the OMVUI law has perhaps increased judges' workloads in several respects, especially the paperwork associated with the prehearing suspension procedure and hearings on chemical test refusals. Refusing a test is grounds for a mandatory one-year suspension. Under the new law, prosecutors are no longer in full control of the suspension process; in addition, they are no longer willing to dismiss a refusal case in exchange for a guilty plea to an alcohol related offense. The one-year penalty is considered severe enough to encourage more defendants to appeal suspensions under the new law than the old. There are some who believe that the refusal penalty is so harsh that judges may be willing to mitigate it by ruling, in close cases, that the defendant did not refuse the test. One factor currently holding down the number of implied-consent appeals is that they are considered "civil"; hence, defendants who appeal are not entitled to be represented by appointed counsel.

Sanctioning

The new OMVUI law increased the use of mandatory sanctions, especially a 30-day minimum license suspension for first offenders and jail or community service for multiple offenders. With respect to nonmandatory penalties, the Marion County Prosecuting Attorney's Office prepared a set of recommended plea-agreement terms, including recommended sanctions.

Sentence is imposed when the defendant's guilty plea is accepted. Many defendants discuss alcohol treatment with probation department staff before the

plea is made, and some defense counsel arrange for alcohol evaluation and treatment immediately after the arrest. When the defendant pleads or is found guilty, the judge notifies the BMV of the disposition.

One Municipal Court judge said that the typical first OMVUI offender receives a 30-day license suspension, the minimum required by law, plus 180 days' restricted license (the law requires at least 60 days) and fines and costs totaling $100. He reported that a common sentencing practice is to impose a 30- to 90-day jail sentence and then suspend it provided the defendant abides the terms of probation. This provides the defendant with an incentive to obey the probation order. Except for the night of the arrest, few first offenders spend time in jail unless the offense was accompanied by such "aggravating factors" as fleeing from the officer, resisting arrest, committing another crime at the same time, or committing a flagrant traffic offense - such as speeding far over the limit - while under the influence. The Prosecuting Attorney's Office's standard plea agreement terms call for 10 days' jail time which can be served on five weekends, when aggravating circumstances exist. This program, called "alternate weekend sentencing," is geared toward second offenders subject to mandatory jail terms and first offenders with aggravating circumstances. Weekends are typically served at residential treatment facilities where offenders spend some time renovating the facilities and attending counseling sessions. Offenders pay the cost of the weekends, which can total more than $200. In lieu of jail, some offenders perform manual labor on weekends; these offenders do not receive any alcohol treatment. State law does not require community service for first offenders. There appears to be some variation with respect to community-service sanctions; at least some offenders are required to complete 20 to 40 hours' community service.

The probation department performs diagnoses and referrals, conducts presentence investigations and monitors compliance. Some intake work has been "farmed out" to the local alcoholism council and mental health facilities. However, a defendant convicted of OMVUI is not assured of alcohol treatment. A person convicted of a misdemeanor in Marion County faces several probation options. Some offenders are not referred at all. Some are referred to a nonreporting probation program and receive no alcohol-related intervention. Others are referred to "traditional" probation, which does not necessarily require the offender to complete any alcohol rehabilitation programs. The remaining OMVUI offenders, about 50 percent, are referred to the Probation

Department's alcohol/drug department. The alcohol/drug coordinator estimated that her staff of eight maintained a caseload of over 3,000 probationers, conducted 25 intake interviews per day, and performed 130 presentence investigations per month. She reported a four-month backlog between arrest and treatment, a delay that currently makes it difficult to evaluate the effects of the new OMVUI law.

Misdemeanor offenders can be placed in any of a number of alcohol-treatment programs. The lowest level of treatment, called Level I education, consists of ten hours' alcohol and driving education. Level I education is prescribed for first offenders whose BAC is less than .15% and who test negative on the so-called Miller test. (There is some evidence that the new .10% offense has increased the number of offenders in this class.) The next lowest level is called Level II education, which consists of alcohol education plus intensive (four nightly four-hour sessions) group therapy, followed by evaluation to determine whether further treatment is necessary. Level II education is prescribed for first offenders whose BAC exceeds .15% or who test positive on the Miller test.

Offenders with prior convictions or evidence of serious alcohol problems are placed in treatment programs: individual or group outpatient programs, preferably involving the offender's family; intensive (four nights a week) outpatient programs consisting of Alcoholics Anonymous, therapy and education, designed for inpatient treatment candidates who lack sufficient time for a hospital stay; and inpatient treatment ranging from four to six weeks hospital care, followed by aftercare, to nine months confinement in a state mental institution to treat polydrug addictions.

The Probation Department also handles a smaller (250 offenders) Class D felony caseload. These offenders typically receive treatment ranging from education to inpatient treatment at a mental hospital in lieu of imprisonment. Inpatient facilities, including private hospitals, operate on a sliding fee scale to accommodate those lacking funds. Multiple felony offenders are subject to mandatory prison sentences and therefore referral to probation is less likely.

Although Indianapolis' education and treatment facilities are reported to be excellent, the OMVUI probation program faces several problems. The first of these is that many offenders receive no alcohol education or treatment. One apparent reason is that some defendants plead guilty in exchange for avoiding

potentially expensive and time-consuming treatment. Other possible reasons include a lack of information about individual offenders (no formal presentence report is prepared for first offenders) and the perception that first offenders do not require treatment. A second problem is that the probation department supports itself by assessing probationers the costs of their treatment. At the same time, half of those placed in treatment programs are unemployed and most earn less than $15,000 per year. Finally, the Marion County probation department suffers from the usual economic problems of staffing and funding.

CINCINNATI, OHIO
POLICE DEPARTMENT BACKGROUND DESCRIPTION

Introduction

This portion of the Appendix describes the general characteristics of the Cincinnati, Ohio, Police Department (CPD), and specifically examines its DWI (Driving While Intoxicated) enforcement practices. This summary is based on information collected in the same time period (June 1984 through May 1985) during which the combined enforcement and public information and education strategies were implemented in the Indianapolis, Indiana, project test site.

This report is divided into four sections. The introductory section describes the rest of the report and provides an overview of DWI enforcement in Cincinnati. The next section provides background information on both the city and the police department. The third section describes the typical DWI arrest process in Cincinnati beginning with an officer's initial detection of a DWI suspect and continuing through case adjudication. The final section of the report examines the records system of the Cincinnati Police Department including how reports are filed, what summary reports are routinely provided, and what additional DWI information is available through the system.

DWI Enforcement Overview. DWI enforcement has been an emphasis area for the Cincinnati Police Department for several years. There is strong citizen support for strict DWI enforcement and a number of organized DWI enforcement support groups are active in the city. The department participated in a county-wide DWI task force staffed by hire-back officers and paid for by grant funds from the state. These officers were deployed from 8 p.m. to 4 a.m. on Thursdays, Fridays, and Saturdays at known high DWI activity locations. During the same period, the CPD also used public information and education campaigns to help to deter DWI. These campaigns included presentations to schools and civic organizations, media campaigns, and displays at various events. The current DWI laws went into effect on January 1, 1983.

Background

The General Environment. Cincinnati is located in the south-central part of Ohio and its southern border is formed by the Ohio River. The Cincinnati metropolitan area extends well into northern Kentucky. The city has a permanent population of about 385,000 that has been slowly declining in recent years. The entire metropolitan area, especially those parts located in

Kentucky, has been growing. Minority groups provide about one-third of the city's population; blacks are the largest such group. Population density is fairly high, and consists of 48 identifiable neighborhoods. The city has a broad industry-based economy and is the home of many large corporate headquarters.

Local Government. The city has a manager/council form of government. Nine council members are elected at large and the mayor is then chosen by the council members from among their number. There is little political influence on the department from either the council or the manager. The police chief reports to a director of public safety who then reports directly to the manager. The director's influence is felt mostly in the areas of budgeting, personnel, and long range planning. The local government is considered to be stable and recent elections have not resulted in dramatic changes in personnel or policies. Also, the city government has been financially stable since the late 1970s.

The Police Department. The police department has a current strength of 868 sworn officers and 173 civilian employees. Most civilians hold clerical and communications operator positions. Police headquarters are located in an older building in the center of the city. There are five district headquarters located throughout the city. Some specialized police sections, including traffic, are located in other, decentralized locations.

The internal structure of the department is typical of many large police agencies. Below the chief (colonel) are four bureaus, each headed by a lieutenant colonel (assistant chief). The bureaus are investigations, operations, technical services, and personnel. The department's planning and budgeting office director also reports directly to the chief. The current chief, who came from within the agency, has held that position for several years. Operations is by far the largest bureau within the agency. All operational personnel have traffic enforcement responsibilities and specific levels of effort vary according to individual and place and time of assignment.

The Traffic Branch. In addition to the five districts, the operations bureau also has an operational support section which includes a traffic branch. The major functions within traffic are selective traffic enforcement, coordination of DWI enforcement efforts, interstate patrol, major accident investigation, and review of all accident reports. Traffic officers with street assignments concentrate on DWI enforcement during the late night and

early morning hours. Twenty-one officers are assigned to traffic, twelve of whom are assigned to some form of traffic patrol (and accident investigation, when necessary). They work staggered eight hour on-duty schedules and have either Friday and Saturday or Sunday and Monday off. Traffic officers issue about 25% of all of the DWI citations.

Agency Personnel. The department has a low turnover of officers; most individuals retire from the department and most are from the greater Cincinnati area. The Cincinnati Police Department officers consider themselves to be paid reasonably well, but they are not the highest paid in the region. There were layoffs of personnel in the late 1970s, but all were eventually recalled. The department is expected to remain stable in size or increase slightly over the next few years.

Police Training. All new officers receive their initial training at an academy run by the CPD. Recruit academy classes are run on an as-needed basis. No classes had been run within two years of the start of the project. DWI topics are only briefly covered in the academy curriculum. The department does not have regularly scheduled in-service training programs other than for annual weapons qualification.

The CPD has over 200 officers who are qualified to operate breath test instruments. These officers must attend annual refresher training, and that training often includes updates on DWI detection and processing techniques. Training on the NHTSA-developed DWI Detection Guide was conducted for all officers during shift briefings in 1983. All traffic officers also received training on the NHTSA-developed improved sobriety testing battery, including use of horizontal gaze nystagmus. The CPD has certified instructors for this training, and additional classes are periodically offered for interested general patrol officers.

Other Factors Influencing DWI. There are citizens groups involved in the DWI system in the Cincinnati area including an active MADD chapter which has developed considerable support in the community for strict DWI enforcement. There is also an organized liquor dealers association that has generally been supportive of efforts to encourage responsible drinking.

The DWI Enforcement Process

Local Enforcement Strategies. The Cincinnati Police Department has no written DWI enforcement strategies, although they do have specific policies

concerning times and locations for DWI selective enforcement. In general, any officer detecting a possible DWI driver is expected to stop the suspect and investigate as necessary. The CPD makes approximately 3,500 DWI arrests annually 21% of them resulting from accident investigations. The CPD has not used roadblocks for DWI enforcement, but the Ohio State Highway Patrol has used them in the area.

The Detection Process. Other than those involved in accidents, most DWIs are detected as a result of observed driving behavior that suggests a possible DWI offender to the officer. After seeing such behavior, an officer will usually stop the suspect as soon as possible. The DWI arrest process is usually conducted by a single officer, and backup officers are seldom requested. About 75% of all CPD patrol officers (and all traffic officers) ride alone in their vehicles.

Pre-arrest Screening. While making the initial personal contact, the officer will look for additional cues that indicate a possible DWI offender. These include odor of alcoholic beverage, slurred speech, difficulty in finding a driver's license or registration, and dilated or bloodshot eyes. Once DWI is suspected, the officer will usually have the suspect turn off the engine and exit from the vehicle.

At this point, the officer will ask the suspect to take one or more field sobriety (psychophysical) tests and will also observe the suspect's general balance and demeanor. Which tests are used is determined by the officer. Those trained in the use of the improved sobriety test battery usually use those tests. Other officers generally use straight line walk, balance, and/or finger-to-nose tests.

The arrest decision concerning a suspected DWI offender is made by the apprehending officer alone. If an arrest is made, the officer will handcuff the offender and transport him or her to the nearest district police station in the police car.

The arresting officer is also responsible for the disposition of the offender's vehicle. If the vehicle is parked in a safe location, it will usually be locked and left there; this is the preferred disposition. If there is a sober licensed driver in the vehicle, he or she may be asked to drive the vehicle. If the vehicle is in an unsafe location, the arresting officer will call for another officer to drive it to the district station. Suspects' vehicles are rarely impounded.

The Citation/Arrest Process. At the station, the arrest process usually involves only the arresting officer. During the required 20 minute observation period prior to administering a breath test, the suspect is usually asked to repeat some or all of the field sobriety tests. Over 200 CPD officers are certified to run the breath test equipment, and most usually run it for their own arrests. If an operator has to be called in to assist, the operator will usually remain at the station and help the arresting officer complete the necessary paperwork. Neither video nor audio tapes are used.

About 12% of all persons who are requested to take any type of chemical test refuse to do so. Almost all tests given are breath tests, but exact percentages are not available. If the arresting officer suspects any drug involvement, a urine specimen is requested instead of a breath test. Collection equipment is available at the district stations. In accident cases where the DWI suspect is taken to a hospital, the officer usually asks medical personnel to take a blood sample. If a breath test result is inconsistent with the suspect's apparent condition, the officer usually requests a blood test.

The Booking Process. Individuals who are first time DWI offenders (based on a driver's license status check) are not booked. They are issued a citation for DWI and any other offenses, and are released if someone will take responsibility for them or if transportation (often a taxicab) can be arranged. Repeat offenders, those charged with additional, serious violations (usually accident related), and non-Ohio residents are arrested rather than cited. In those cases, the arresting officer must then complete a "verified complaint form" which is forwarded to the prosecutor's office for the actual placing of charges. The arresting officer must also begin the booking process which includes fingerprints and photographs, a search, and a booking form. The offender is then taken to the county jail and turned over to custodial personnel there.

The arresting officer usually completes all necessary paper work in the station before returning to patrol activities. In a typical arrest situation, several forms must be completed. The DWI citation, a separate per se violation citation (if the offender exceeded a BAC of 0.10% on a breath test), a receipt for the offender's drivers license, other traffic citations, and a notice of request to take a chemical test must be completed while the offender is still in the arresting officer's custody.

The general narrative of the violation and enforcement action is placed on the "Intoxilyzer Test Report Form," and continued on supplementary forms, as necessary. The officer must also complete a vehicle tow report, a notice of refusal to take a chemical test, and/or an accident report as needed. It is estimated that a typical DWI enforcement action takes 90 minutes from initial contact to completion of paperwork. If an arrest is made, the process usually takes about two hours.

The Adjudication Process. Most (93%) DWI defendants enter a "guilty" plea at the first court hearing. The officer does not appear in court for this hearing and so, in most cases, does not see the defendant again. If the defendant enters a "not guilty" plea at the initial hearing, a trial date is set. The arresting officer must appear at the trial. A bench trial usually takes only one-half hour, but a jury trial may take as much as four hours.

Personnel Issues.

DWI arrest performance and quality are a part of the evaluation process for Cincinnati PD officers. The department acknowledges and gives high ratings to officers who demonstrate superior DWI enforcement performance. If an officer puts in overtime hours on a DWI case, the officer is compensated at time-and-a-half given as extra time off. Officers receive straight time for the first three hours in court and time-and-a-half after that. DWI arrests late in a shift usually result in overtime credit.

DWI-Related Records

Report Approval and Filing. The paperwork generated by a DWI arrest is processed in different ways. The "Intoxilyzer Test Report Form" and the arrest report (if needed) are reviewed by field sergeants prior to the end of a shift. The arrest report then goes to central records for data entry into the CPD computer system. Copies of all traffic citations issued also go to central records for data entry. After the initial review, the Intoxilyzer report is sent to the traffic branch where it is again reviewed. The arresting officer is required to amend the report if any errors are discovered. The reports are then sent to the records section where some data elements are entered into a computer data base and the paper report is filed.

Summary Reports. The CPD issues two monthly DWI-related reports. One report, prepared for each district commander, indicates the number of arrests made by each district officer. Another report indicates total DWI arrests made

by each district and the traffic section. The total number of arrests made in a year is included in the department's annual report. Annual reports that show the number of alcohol-involved traffic accidents are also prepared. Spot maps show the distribution of accidents in the city. The maps are used for selective enforcement activities.

Adjudication Data. The Cincinnati Police Department receives conviction data on a monthly basis from the county prosecutor's office.

CINCINNATI, OHIO

ADJUDICATION SYSTEM DESCRIPTION

Drunk Driving Laws

The Ohio legislature made a number of amendments to the drunk driving laws during the 1982 legislative session. Those law changes, which took effect March 16, 1983, included the following:

- The substitution of a per se standard (.10 percent) for the former presumptive standard of intoxication;
- Increased mandatory minimum penalties. For a first offense the mandatory minimum penalties include 72 consecutive hours in jail, a 60-day license suspension, and a $150 fine (the maximum possible fine for any drunk driving offense is $1,000). For a second offense the mandatory minimum penalties include 10 consecutive days in jail, a 120-day license suspension and a $150 fine. For third and subsequent offenses the mandatory minimum penalties include 30 consecutive days in jail, a 180-day license suspension, and a $150 fine;
- A one-year license suspension for refusing a chemical test (increased from six months); and
- A limited pretrial suspension procedure, under which a driver who fails or refuses to submit to a chemical test for intoxication is subject to a license seizure. If it is determined at a hearing held five days after arrest that the driver falls into one of several categories, then the driver's license is suspended until the trial.

Ohio's Court System

Ohio's court system is not unified. The Ohio Constitution provides for a Supreme Court, intermediate appellate courts called Courts of Appeals, trial courts of general jurisdiction called Courts of Common Pleas, and other inferior courts established by the legislature. Ohio's statutes provide for trial courts of limited jurisdiction is called Municipal Courts in cities and some counties and County Courts in unincorporated areas outside cities. In Cincinnati the trial court of limited jurisdiction called the Hamilton County Municipal Court. Its territorial jurisdiction includes the entire county. It has jurisdiction over civil actions involving $10,000 or less, state law misdemeanors (including drunk driving), and ordinance violations. The Municipal Court bench consists of 14 judges (including the presiding judge) whose assignments rotate weekly. One judge is assigned a docket consisting of

drunk driving arraignments only. Drunk driving offenses are charged under state law, but cases are prosecuted by the Cincinnati City Prosecutor's Office.

Drunk Driving Adjudication

The first proceedings in a drunk driving prosecution in Cincinnati are the "five-day hearing" and the arraignment and plea. The five-day hearing, which is very informal and which in fact is held five days after the arrest whenever possible, results in a determination by the judge whether the driver's license should be returned or suspended until the trial. The driver, the defense attorney (if any), and the prosecuting attorney are present at the hearing; the police officers are not. The prosecutor's file, called a "court jacket," contains a cover sheet, the intoxication report prepared by the police, the Intoxilyzer printout, a copy of the defendant's local criminal record (obtained from the Municipal Court).

Under Ohio law the grounds for pretrial suspension of a driver's license are: causing serious harm to another person; having a prior drunk driving conviction; failing to appear at the hearing; committing the charged offense while driving with a suspended license; and presenting a "danger to the public safety." Only the fifth ground, presenting a danger to the public safety, appears to generate any disagreement over how the law should be interpreted. Thus the five-day hearing is normally pro forma.

Whenever possible, the five-day hearing is combined with the arraignment and plea, a proceeding at which the driver is advised of the charges against him or her and given the opportunity to plead. Some defendants ask to continue (postpone) the arraignment and plea until they can find an attorney; in such a case the arraignment and plea are continued but the five-day hearing is still held. Most defendants plead guilty to drunk driving or the .10 percent offense at the time of arraignment and plea, either on the scheduled date or on the continued date. If the defendant asks to plead guilty, the judge recites the facts of the drunk driving arrest, advises the defendant of the possible penalties, and asks the defendant's attorney (if he or she is represented by one) to offer evidence in mitigation of the offense. Data for 1984 compiled by the City Prosecutor's Office report a conviction rate of 97.7 percent and a guilty plea rate of 93.4 percent. The great majority of guilty pleas are entered at the arraignment and pleas, either the originally scheduled one or the continued one. About three to four percent of those charged with drunk

driving unsuccessfully raise pretrial motions and plead guilty after losing the pretrial hearing. The major factors that influence a defendant to plead guilty to drunk driving are the high probability of being found guilty at the trial and the high legal costs ($500 or more, a sum that exceeds the total fines, court costs, and driver-intervention program costs) associated with contesting the charges.

If the defendant pleads not guilty, he or she is directed to the court's assignment commissioner, who schedules trial dates. Although defendants charged with drunk driving have the right to a jury trial, that right must be requested or else it is forfeited. This provision is one additional reason for the low number of jury trials for drunk driving in the Municipal Court. Ohio has a speedy-trial statute which in effect provides for a 90-day time limit for trying drunk driving cases. The actual time from arraignment to trial depends on the officers' schedules as well as the defendant's ability and willingness to try the case immediately. In some instances, a pretrial conference is held at which informal discovery occurs. Because of the recent trend toward assigning police officers to fixed, rather than rotating shifts, the possibility that officers involved in a drunk-driving arrest may not appear apparently has increased. Thus it has been reported that more defense attorneys are demanding trials in the hope that the officer scheduled to testify will not appear. It reportedly is not uncommon for the defendant to plead guilty on the day of the trial when he or she discovers that all of the prosecution's witnesses have appeared. One source reported that the most successful injury-trial strategy is to refuse the test, testify at trial that the refusal was the result of advice from an attorney, and, in the course of testifying, dispute the officer's testimony about intoxication. Still, trials are quite rare in Cincinnati; data compiled by the City Prosecutor's Office reported that there were only 12 jury trials out of 3,349 cases during 1984. One individual within the system expressed surprise that the number of trials and requests for trials has not increased. Not only are trials rare, but dispositions of not guilty of drunk driving are also rare: dismissals, acquittals, and reductions to reckless driving accounted for a combined total of only 78 outcomes (2.3 percent) in 3,349 cases decided during 1984.

Even though the Municipal Court judges do not have a formal set of sentencing guidelines, there appears to be uniformity among the judges in their sentencing practices, especially with respect to first offenders. Most first

offenders receive the minimum 72-hour jail term, a $150 fine, and a 60-day "soft" license suspension (the driver may drive to and from work or treatment), and one year's probation. The probation order may require alcohol treatment if the probation department considers it advisable.

Ohio law has provided for mandatory jail penalties for first offense drunk driving for more than ten years; however, that legislation specifically allows a first offender to serve his or her 72-hour sentence in a treatment facility rather than a jail or workhouse. It is believed that confining first offenders to jail does nothing to rehabilitate them, is too stressful for some, and adds to the overcrowding problem in the local jails. Thus, first offenders serve their 72-hour jail terms in a driver-intervention program, which is operated Fridays through Sundays at Drake Hospital. Offenders must complete the driver-intervention program at their own expense (approximately $175). The municipal Court bench is working with Talbert House, the operator of the program, to evaluate the driver-intervention program, especially with respect to whether the program has reduced the amount of recidivism.

Second and third offenders are more likely than first offenders to receive penalties more severe than the minimum penalties required by law. These offenders must serve their sentences in jail rather than a treatment facility. The fact that second offenders must serve 10 consecutive days in jail and third offenders must serve 30 consecutive days has added to the jail overcrowding problem.

Municipal Court judges tend to be harsh with drivers who violate the terms of their probation (for example, by committing another drunk-driving offense or failing to complete treatment). Possible penalties include the imposition of substantial jail terms or lengthy license suspensions. For example, a typical first offender's jail sentence is 180 days, all but 72 hours of which are suspended; a probation violation could trigger reimposing part or even all of the suspended jail term.

After a defendant is found guilty and sentenced, it is typical for any license suspension imposed by the Bureau of Motor Vehicles for test refusal to be "overridden" by the court as part of the plea agreement disposing of the case. Thus, drivers who refuse to submit to a test often receive the same license suspensions as those who submitted to the test but failed it.

APPENDIX B

Initial Screening Instrument and Questionnaires Used in Drinking and Driving Survey

MARKET FACTS, 1010 LAKE STREET, OAK PARK, IL 60301

JOB NO. 633102
CARD 01
Qu. No. 1-3
4 | 2 | 4 | 5

DRINKER 1
NON-DRINKER..... 2 (6)

DRINKING & DRIVING
SCREENER

INTERVIEWER:_____ 7 | | | | | 10

FIELD STATION: _____ 11 | | | | | | 15
(16-18 OPEN)

DATE: _____ TIME BEGAN: _____AM/PM TIME ENDED:_____AM/PM

Hello. My name is _____. I am conducting a survey for the city of _____. I would like to ask you a few questions about your opinions on certain important highway safety issues, particularly drinking and driving. Your answers will be very important to us and of course will remain strictly confidential. I would like to speak with the youngest male licensed driver who is at least 18 and who is home right now.

IF HE IS THE YOUNGEST OR WHEN THE YOUNGEST MALE COMES ON THE LINE, REPEAT INTRODUCTION AND READ: I would like to ask you a few questions about your opinions on some highway safety issues. Your responses will be very valuable and will remain strictly confidential.

GO TO QU. 1, BELOW.

IF THE YOUNGEST MALE LICENSED DRIVER IS NOT AT HOME, READ: Is <u>any</u> licensed driver there with whom I could speak? IF YES, REPEAT INTRODUCTION (IF NECESSARY) AND READ: I would like to ask you a few questions about your opinions on some highway safety issues. Your responses will be very valuable and will remain strictly confidential.

GO TO QU. 1, BELOW.

IF NO, READ: Is there an evening this week when I could call back and speak with the youngest male licensed driver who is 18 or older?

Date: _____ Time: _____

IF NO, READ: Is there an evening this week when I could call back and speak with <u>any</u> licensed driver?

Date: _____ Time: _____

IF NO, READ: Thank you for your time. Good-bye.

1. RECORD RESPONDENT'S SEX.

MALE 1
FEMALE..... 2 (19)

SCREENER

2. Do you reside within the _____ corporate limits? (IF RESPONDENT HESITATES, READ: In the city limits and subject to city taxes.)

(20)

Yes 1
No ..... 2 → (READ: "I'm sorry but we are limiting this study to residents of that area so I won't need to ask you any further questions. Thank you very much!)

3. Would you please tell me your age.

_____ years old (21-22)
Refused 88

4. How many years have you been driving?

_____ years (23-24)
Refused 88

5. Would you please estimate how many miles you, personally, drive in a typical year? (IF RESPONDENT HESITATES, READ: Say, less than 10,000 miles, 10,000 to 20,000 miles or more?) (CIRCLE ONLY ONE RESPONSE)

Less than 10,000 miles 1
10,000 - 19,999 miles 2 (25)
20,000 - 49,999 miles 3
50,000 miles or more 4

6. Drinking is an accepted part of business and social activity for most people. In general, how often do you drink beer, wine or liquor? (CIRCLE ONLY ONE RESPONSE)

(26)

Every day 1
Several times a week 2
Once a week 3
Several times a month ..... 4 → (GO TO DRINKER (BLUE) QUESTIONNAIRE)
Once a month 5
Less than once a month 6
Never ..... 7 → (GO TO NON-DRINKER (GREEN) QUESTIONNAIRE)

MARKET FACTS, INC., 1010 LAKE STREET, OAK PARK, IL 60301

JOE NO. 633102

DRINKER QUESTIONNAIRE

7. If you were to drive after drinking too much in _____ what do you feel would be the chances of getting caught and being punished given what you know about the police and courts in _____? How many times out of one hundred would you be caught and punished?

_____ times out of one hundred (27-29)

*IF PERSON ASKS, "What do you mean too much? READ: If, in your opinion you felt you might have drunk more than the legal limit. OR IF PERSON ASKS WHERE, READ: Where you would be likely to be driving when returning home from a bar or party.

*IF PERSON ASKS, "What is the legal limit?" READ: I can't tell you now but can at the end of the survey. For now, please just tell me what you think your chances of being stopped would be if you thought that you had drunk too much to safely drive.

*IF PERSON SAYS, "I don't know." READ: Please make an estimate.

8. Is this chance high enough to keep you from driving after drinking too much?

Yes .....1 → (GO TO QU. 8a)
No .....2 → (GO TO QU. 8b) (30)
Would never do it anyhow..3 → (GO TO QU. 9)

8a. How low would the chance of getting caught and punished have to be for you to decide to drive after drinking too much? How many times out of one hundred?

_____ times out of one hundred (31-33)

GO TO QU. 9

8b. How high would the chance of getting caught and punished have to be for you to decide not to drive after drinking too much? How many times out of one hundred?

_____ times out of one hundred (34-36)

9. How much do you agree or disagree with the following statements?

A. If it were legal I would drive after drinking too much. Do you strongly agree, agree somewhat, neither agree nor disagree, disagree somewhat, or strongly disagree with this statement? (CIRCLE ONLY ONE RESPONSE)

Strongly agree 1
Agree somewhat 2
Neither agree nor disagree.. 3 (37)
Disagree somewhat 4
Strongly disagree 5

B. I would drive after drinking enough to be legally drunk. Do you strongly agree, agree somewhat, neither agree nor disagree, disagree somewhat, or strongly disagree with this statement? (CIRCLE ONLY ONE RESPONSE)

Strongly agree 1
Agree somewhat 2
Neither agree nor disagree ... 3 (38)
Disagree somewhat 4
Strongly disagree 5

10. In your opinion, how strictly are the drunk driving laws enforced in _____ -- too strictly, about right or not strictly enough?

Too strictly 1
About right 2 (39)
Not strictly enough 3

11. If you were driving in _____ after drinking too much, what are the chances out of one hundred that you would simply be seen by the police?

_____ chances out of one hundred (40-42)

12. How high would the chances of being seen by the police need to be in order to strongly influence your decision not to drive after drinking too much"

_____ chances out of one hundred (43-45)

Would never do it anyways..... 777

13. If you were driving in _____ after drinking too much, and you were seen by the police, or others, what are the chances out of one hundred that you would be stopped by the police?

_____ chances out of one hundred (46-48)

14. How high would the chances of being stopped by the police need to be in order to strongly influence your decision not to drive after drinking too much?

_____ chances out of one hundred (49-51)

Would never do it anyways 777

15. If you were driving in _____ after drinking too much and were stopped by the police, what are the chances out of one hundred that the police would recognize that you were a drunk driver?

_____ chances out of one hundred (52-54)

16. How high would the chances of being recognized as a drunk driver by the police need to be in order to strongly influence your decision not to drive after drinking too much?

_____ chances out of one hundred (55-57)

Would never do it anyways 777

17. If you were identified as a drunk driver, what are the chances out of one hundred that you would suffer some negative consequences?

_____ chances out of one hundred (58-60)

18. How high would the chances of suffering negative consequences need to be in order to strongly influence your decision not to drive after drinking too much?

_____ chances out of one hundred (61-63)

Would never do it anyways..... 777

19. If you were convicted of drunk driving and it was your first offense, how unpleasant would the consequences be? Extremely unpleasant, very unpleasant, somewhat unpleasant, slightly unpleasant, or not at all unpleasant. (CIRCLE ONLY ONE RESPONSE)

Extremely unpleasant 1
Very unpleasant 2
Somewhat unpleasant 3 (64)
Slightly unpleasant 4
Not unpleasant at all 5

20. How unpleasant would these negative consequences have to be to strongly influence you not to drive after drinking too much? (CIRCLE ONLY ONE RESPONSE)

Extremely unpleasant 1
Very unpleasant 2
Somewhat unpleasant 3
Slightly unpleasant 4 (65)
Not unpleasant at all 5
Would never do it anyways 7

21. How often in the last year would you say you have driven within one hour of drinking beer, wine or liquor?

_____ times (66-68)

READ: SOME PEOPLE OCCASIONALLY DRIVE AFTER THEY HAVE HAD TOO MUCH TO DRINK. REMEMBERING THAT THIS SURVEY IS STRICTLY CONFIDENTIAL, I'D LIKE TO ASK:

(69-78)

22. In the past month, how many times have you driven after you've had too much to drink? 79 [0][1] 80

CARD 02
Dup 1-3

_____ times (19-20)

(4-18 OPEN)

23. Were there any times in the past six months when you decided not to drive because you or someone else thought you had had too much to drink?

Yes 1
No 2 (21)

24. During the past six months have you asked someone who'd had too much to drink not to drive?

Yes 1
No 2 (22)

25. How long have you lived in _____?

_____ years (23-24)

26. From what you've noticed, read or heard, have there been any changes in the enforcement of the drinking and driving laws of _____ in the past six months?

Yes 1
No ..... 2 → (SKIP TO QU. 31) (25)

27. How did these changes come to your attention? (RECORD CODES BELOW IN ORDER MENTIONED)

	FIRST RESPONSE (CIRCLE ONE)		SECOND RESPONSE (CIRCLE ONE)		THIRD RESPONSE (CIRCLE ONE)	
Saw an arrest.....	01	(26-27)	01	(28-29)	01	(30-31)
Billboard	02		02		02	
Newspaper	03		03		03	
Brochures	04		04		04	
TV news	05		05		05	
TV ad	06		06		06	
Radio news	07		07		07	
Radio ad	08		08		08	
Word of mouth	09		09		09	
Speakers	10		10		10	
Schools	11		11		11	
Other (Specify) _____ ..	12		12		12	

28. How would you describe the changes in the enforcement and administration of the drinking and driving laws in _____ in the past six months? (PROBE: ANYTHING ELSE?)

_____ 32
_____
_____ 33

29. How much, if at all, would you say (INSERT FIRST RESPONSE TO QU. 28) has influenced your decision not to drive after drinking too much? Strongly, moderately, or not at all? (CIRCLE ONE RESPONSE)

Strongly 1
Moderately 2 (34)
Not at all 3

30. How much, if at all, would you say (INSERT SECOND RESPONSE TO QU. 28) has influenced your decision not to drive after drinking too much? Strongly, moderately, or not at all? (CIRCLE ONE RESPONSE)

Strongly 1
Moderately 2 (35)
Not at all 3

31. When you drink, where do you usually do your drinking? (RECORD CODES BELOW IN ORDER MENTIONED)

	FIRST RESPONSE (CIRCLE ONE)		SECOND RESPONSE (CIRCLE ONE)	
Bars/Taverns	01	(36-37)	01	(38-39)
Restaurants	02		02	
Cocktail lounges	03		03	
Other people's homes.....	04		04	
Sporting events	05		05	
Cars/vans	06		06	
Other (PLEASE SPECIFY)_____				
_____	07		07	
At home	08		08	

32. If you had been out drinking and felt that you really shouldn't drive home because you'd had too much to drink, what would you most likely do? (RECORD CODES BELOW IN ORDER MENTIONED)

	FIRST RESPONSE (CIRCLE ONE)		SECOND RESPONSE (CIRCLE ONE)	
Have a friend drive	01	(40-41)	01	(42-43)
Take a bus/cab	02		02	
Call home	03		03	
Sleep in car	04		04	
Stay over	05		05	
Call a friend	06		06	
Call free taxi service if available	07		07	
Other	08		08	
Drive self	09		09	
Take a walk	10		10	
Ask spouse to drive	11		11	

33. In which of the following ranges does your annual household income fall?

Less than $10,000 1
From $10,000 to 25,000 ..... 2 (44)
From $25,000 to $50,000 3
Over $50,000 4
Refused 8

34. What was the last grade level that you attended in school? (RECORD HIGHEST GRADE ATTENDED)

_____ highest grade attended (45-46)

(47-55 OPEN)

These are all the questions I have. My supervisor may want to verify that I completed this interview, so may I verify with that I reached you by dialing: (RECORD PHONE NO. BELOW)

(56)[ ][ ][ ]/[ ][ ][ ] - [ ][ ][ ][ ] (62)

Thank you very much for sharing your views with us about drunk driving. Hopefully the results of this survey can be used to further improve efforts to combat drunk driving. Thank you again!

PLEASE STAPLE THIS QUESTIONNAIRE TO THE BACK OF THE SCREENER. IN THE UPPER RIGHT CORNER OF THE SCREENER, CIRCLE CODE 1, FOR USING A DRINKER QUESTIONNAIRE.

MARKET FACTS, INC., 1010 LAKE STREET, OAK PARK, IL 60301

JOB NO. 633102

NON-DRINKER QUESTIONNAIRE

(NON-DRINKERS - PERSONS ANSWERING "NEVER" TO QU. 6 ON THE SCREENER)

7. If you were to drive after drinking too much in _____ what do you feel would be the chances of getting caught and being punished given what you know about the police and courts in _____? How many times out of one hundred would you be caught and punished?

_____ times out of one hundred (27-29)

*IF PERSON ASKS, "What do you mean too much? READ:If, in your opinion you felt you might have drunk more than the legal limit. OR IF PERSON ASKS WHERE, READ: Where you would be likely to be driving when returning home from a bar or party.

*IF PERSON ASKS, "What is the legal limit?" READ: I can't tell you now but can at the end of the survey. For now, please just tell me what you think your chances of being stopped would be if you thought that you had drunk too much to safely drive.

*IF PERSON SAYS, "I don't know." READ: Please make an estimate.

(Qu. 8-9 not used in this version) (30-38 OPEN)

10. In your opinion, how strictly are the drunk driving laws enforced in _____ -- too strictly, about right or not strictly enough?

Too strictly 1
About right 2 (39)
Not strictly enough 3

(Qu. 11-18 not used in this version) (40-63 OPEN)

19. If you were convicted of drunk driving and it was your first offense, how unpleasant would the consequences be? Extremely unpleasant, very unpleasant, somewhat unpleasant, slightly unpleasant, or not at all unpleasant. (CIRCLE ONLY ONE RESPONSE)

Extremely unpleasant..... 1
Very unpleasant 2
Somewhat unpleasant 3 (64)
Slightly unpleasant 4
Not unpleasant at all 5

(Qu. 20-23 not used in this version) (65-78 OPEN)

79 [0][1] 80

JOB NO. 633102
Page 2
CARD 02
Dup 1-3
(4-21 OPEN)

24. During the past six months have you asked someone who'd had too much to drink not to drive?

Yes 1
No 2 (22)

25. How long have you lived in _____?

_____ years (23-24)

26. From what you've noticed, read or heard, have there been any changes in the enforcement of the drinking and driving laws of _____ in the past six months?

Yes 1
No ..... 2 → (SKIP TO QU. 33) (25)

27. How did these changes come to your attention? (RECORD CODES BELOW IN ORDER MENTIONED)

	FIRST RESPONSE (CIRCLE ONE)		SECOND RESPONSE (CIRCLE ONE)		THIRD RESPONSE (CIRCLE ONE)	
Saw an arrest	01	(26-27)	01	(28-29)	01	(30-31)
Billboard	02		02		02	
Newspaper	03		03		03	
Brochures	04		04		04	
TV news	05		05		05	
TV ad	06		06		06	
Radio news	07		07		07	
Radio ad	08		08		08	
Word of mouth	09		09		09	
Speakers	10		10		10	
Schools	11		11		11	
Other (Specify) _____	12		12		12	

28. How would you describe the changes in the enforcement and administration of the drinking and driving laws in _____ in the past six months? (PROBE: ANYTHING ELSE?)

_____ 32
_____
_____ 33

(Qu. 29-32 not used in this version) (34-43 OPEN)

33. In which of the following ranges does your annual household income fall?

Less than $10,000 1
From $10,000 to $25,000 2
From $25,000 to $50,000 ..... 3 (44)
Over $50,000 4
Refused 8

34. What was the last grade level that you attended in school? (RECORD HIGHEST GRADE ATTENDED)

_____ highest grade attended

(45-46)

(47-55 OPEN)

These are all the questions I have. My supervisor may want to verify that I completed this interview, so may I verify with that I reached you by dialing: (RECORD PHONE NO. BELOW)

(56) [ ][ ][ ]/[ ][ ][ ]-[ ][ ][ ][ ] (62)

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