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Evaluation of Community-Oriented Enforcement Demonstration Projects

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This project evaluated the effectiveness of law enforcement agency use of a data-driven approach to traffic enforcement supported by community-oriented policing to improve traffic safety and increase community support for traffic law enforcement. The evaluation included assessments of two demonstrations: one focused on improving seat belt use and one on reducing alcohol-impaired driving. The seat belt use demonstration took place in Norman, Oklahoma, with the control site of Broken Arrow. The alcohol-impaired driving demonstration took place in Joplin, Missouri, with a control site in Cape Girardeau. Both 15-month programs began in 2018 and ended in 2019. Process evaluations documented program implementation, including enforcement and public outreach activities. The evaluation of program effectiveness used public opinion surveys, and seat belt observations for the seat belt use program, conducted before, during, and after program implementation in the program sites as well as in control sites. Community-oriented enforcement, as implemented in these two demonstrations, was not effective in building community support for traffic safety enforcement or increasing the perceived risk of enforcement needed for high-visibility enforcement to be effective. The process evaluations suggested factors that may have resulted in the lack of strong buy-in among community partners. The failure to increase the perceived risk of being punished for illegal behavior may also have resulted from enforcement focused in areas selected by the Data-Driven Approach to Crime and Traffic Safety model rather than suggesting everyone in the community was at increased risk during the program, as well as resource issues.					
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Executive Summary

This project evaluated the effectiveness of law enforcement agency use of a data-driven approach to traffic enforcement supported by community-oriented policing to improve traffic safety and increase community support for traffic law enforcement. The evaluation included two demonstrations: one focused on improving seat belt use and one on reducing alcohol-impaired driving. The seat belt use demonstration took place in Norman, Oklahoma, with the control site of Broken Arrow. The alcohol-impaired driving demonstration took place in Joplin, Missouri, with a control site in Cape Girardeau. Both 15-month programs began in 2018 and ended in 2019. Process evaluations documented the programs' implementations, including enforcement and public outreach activities. The evaluation of program effectiveness used public opinion surveys, and seat belt observations for the seat belt use program, conducted before, during, and after program implementation in the program sites as well as in control sites.

The Norman Police Department (NPD) conducted a program the community named "Buckle Up Like a Champion Today," featuring community partnership, high-visibility seat belt enforcement, coordination of regional task force enforcement efforts, and NPD-directed publicoutreach press releases and social media. While the program included high-visibility seat belt enforcement messages, the slogan did not mention enforcement, which may have undermined the program's effectiveness. Occupant protection citations did not substantially increase during the program, but the number of warnings almost doubled from 18 per month before the program to 38 during the program. NPD actively posted seat belt messages and information about upcoming enforcement on social media and spent 1,466 hours enforcing occupant protection laws, but community participation was less than anticipated. Community survey results indicated negligible change in public attitudes about seat belt enforcement. In addition, the program did not demonstrate a sustained increase in seat belt use.

The Joplin Police Department (JPD) conducted a program the community named "We Are Out There Too! Drive Sober or Get Pulled Over" featuring community partnership engagement, an enforcement plan centered around holidays and special events, use of variable message board trailers and sign displays, and active social media. The program's initial strategic plan included community partnership and enforcement schedule, high-visibility enforcement (HVE), public outreach using scheduled social media output, joint efforts with a regional task force, alcohol screeners to enhance enforcement efforts, and dedicated impaired-driving officers and enforcement details. Media efforts in Joplin appeared strong, especially during holidays and special events. JPD actively used social media throughout the program. On the enforcement side, JPD suffered from staffing shortages and experienced a 23% decrease in the monthly average number of impaired-driving arrests during the program compared to the previous three years. While JPD remained active throughout the program, community partner engagement dwindled. Community survey results indicated negligible change in public attitudes about alcohol-impaired driving enforcement.

Community-oriented enforcement implemented in these demonstrations was not effective at building community support for or increasing the perceived risk of enforcement needed for HVE to be effective. The process evaluations suggested factors that may have contributed to the lack of strong buy-in among community partners. The failure to increase the perceived risk of being punished for illegal behavior may also have resulted from enforcement focused on areas selected

by the Data-Driven Approach to Crime and Traffic Safety (DDACTS) model rather than suggesting that everyone in the community was at increased risk during the program as well as resource issues.

Introduction

The mission of the National Highway Traffic Safety Administration is to reduce deaths, injuries, and economic losses from motor vehicles crashes. Considerable progress has been made, due in large part to NHTSA's efforts to promote a comprehensive, systematic approach to crash reduction. A foundational approach for the high-priority issues of seat belt use and impaired driving includes HVE activities supported by specific marketing and communication techniques. The intention was to deter negative behavior by increasing public perception that police are looking for – and will catch – drivers who take these particular risks. HVE uses paid and earned media to amplify these perceptions. This combination ensures that the messages influence those populations proven to be most susceptible to the high-risk driving behavior that results in crashes, injuries, and fatalities.

Jurisdictions with sustained HVE efforts that combine enforcement with communication and public outreach strategies and focus on roadways with high counts of unbelted occupant crashes, see long-term behavioral changes with positive traffic safety results (Richard et al., 2018). In addition, impaired driving law enforcement models combine coordinated enforcement, education, and public awareness. The use of crash data has also been a vital component allowing for effective and efficient use of enforcement resources to specifically target roadways with high counts of unbelted occupant crashes, high-impaired driving areas, and identification of emerging trends.

NHTSA contracted with program facilitation teams to identify demonstration sites and to collaborate with police departments and community partners to implement the community-oriented enforcement and public outreach program. For the seat belt use program, the facilitators and NHTSA selected the Norman Police Department based on population size, history, experience in seat belt enforcement, use of the DDACTS model, and their willingness to participate in program activities and record keeping for documentation and evaluation. For the impaired driving program, the program facilitator and NHTSA selected the Joplin Police Department based on population size, history, experience in impaired driving enforcement, a dedicated impaired driving enforcement staff of two officers, and willingness to participate in program activities and record keeping. While this report focuses on the program evaluation, separate NHTSA technical reports provides more comprehensive descriptions of the public outreach and enforcement activities as well as lessons learned from Norman and Joplin.

Methods

Site Selection

The seat belt program facilitation team conducted a search to identify a law enforcement agency with experience and history in seat belt enforcement as well as interest in participating in the project. The seat belt demonstration required a community with a population from 50,000 to 200,000 in a State with seat belt use below the national average, unrestrained fatalities above the national average, and historically low levels of seat belt enforcement. After identifying Oklahoma as a State with potential communities, the program facilitators worked with the NHTSA Regional Office, the NHTSA Regional Law Enforcement Liaison, and the Oklahoma Chiefs of Police Association to identify jurisdictions that participated in highway safety grants relating to seat belt enforcement. The program facilitators contacted candidate agencies to identify their willingness to participate in this project, and the facilitators provided the results to NHTSA for consideration. NHTSA invited the Norman Police Department (NPD) to be the demonstration site. NPD agreed to participate, and the program facilitation team and NPD executed a memorandum of understanding.

NPD's staff of 179 sworn uniformed officers included 119 full-time officers who performed traffic enforcement on regular patrol with three officers dedicated to the traffic unit. While NPD used the DDACTS model, the department did not use occupant protection law citation data in planning traffic enforcement details. NPD completed DDACTS training in 2013, but it offered no continuing education in DDACTS since then. When NPD entered the project, Oklahoma had a primary enforcement seat belt law that required the driver and front-seat passengers 9 and older to wear seat belts. The child passenger safety law required children under 2 to be properly secured in rear-facing car seats, all children under 4 to be properly secured in car seats with internal harnesses, and children 8 and under to ride in child passenger restraint systems or booster seats unless they were taller than 4'9", in which case seat belts were permissible. Oklahoma's unrestrained fatality rate in 2016 was 53%, and their seat belt use rate was 86.6%. By comparison, the national unrestrained fatality rate in 2016 for passenger vehicle occupants was 48%, and the national seat belt use rate was 90.1%.

Similarly, the impaired driving program facilitator conducted a search to find an agency with experience and history in impaired driving enforcement that was interested in participating. The facilitator worked with the NHTSA Regional Offices to develop an initial list of 24 jurisdictions, which was subsequently narrowed to four (Joplin; Shreveport, Louisiana; Springdale, Arizona; and Wilmington, North Carolina). NHTSA approved the selection of the Joplin Police Department (JPD) because the Missouri State Highway Safety Office recognized it as having the most productive full-time impaired driving unit, with active participation in past national and State impaired driving mobilizations as well as regular meetings with the community on criminal justice issues.

JPD, which had 112 police officers at the start of the project is a member of the Southwest Missouri impaired driving Task Force, a private-public partnership with Mothers Against Drunk Driving (MADD) and 23 other law enforcement agencies with jurisdictions in southwest Missouri. The task force coordinates their enforcement activity with the Missouri State Highway Safety Office, which provides their grant funds. The evaluation team identified control sites for making comparisons of public intercept survey findings and, for Norman, seat belt observations based on similar population, sociodemographics, and agency characteristics, but in different media markets. For matching with Norman, there were only a few cities in Oklahoma that met these criteria, and the evaluation team selected Broken Arrow in the northeast section of Oklahoma, west of Tulsa, and in the Tulsa Designated Market Area (DMA). Norman, however, is part of the Oklahoma City metropolitan area and DMA. To match with Joplin, the evaluators selected Cape Girardeau in the southeastern part of Missouri and about 335 miles from Joplin.

The researchers evaluated the process of program implementation by

- Observing NPD's and JPD's program planning activities and actions throughout the program;
- Conducting informal discussions with coordinators of the law enforcement effort and community partnership;
- Scanning all public outreach activity, including social media posts; and
- Identifying all enforcement activities, including staff hours, devoted to the program.

The researchers collected outcome measures through public intercept surveys conducted four times throughout the duration of the program in all four sites, and in Norman and Broken Arrow by observing seat belt use during the same four time periods.

Process Measures

Planning and Course of Action

The evaluation team's principal investigator (PI) attended community partnership meetings, conducted informal discussions with program officers and community representatives, reviewed the program facilitator's progress reports, and held informal discussions with the program facilitation team to identify initial program plans and scheduled activities. During the community partnership meetings with the NPD and JPD, the PI recorded attendance, documented each community representatives' interests for program involvement, and described the content of presentations.

In Norman, the PI conducted informal discussions in person and by telephone with the sergeant who coordinated the program and with selected community representatives. The PI worked closely with the program facilitators who shared information about the program including interaction outcomes, status reports, and monthly progress reports. In Joplin, the PI conducted informal discussions in person and by telephone with the two JPD officers who coordinated the program. The PI also conducted informal discussions with selected community representatives from the two hospitals, but no other community representatives were available.

Communications

The program facilitation teams gave the evaluation team with public outreach activity and inventory lists (education material distributed, signs, and equipment). The evaluators accessed additional information by scanning news and social media databases to identify posts and news stories about the program and other seat belt or impaired-driving topics. The evaluators created

Google alerts for the program and control sites using key words and phrases related to seat belt or impaired-driving enforcement and crashes in each area.

In Norman, the researchers tracked television and radio newswires (KFOR NBC 4, NewsOn9, and KOCO5 ABC) and newspaper newswires (*The Oklahoman, The Enid News and Eagle, Muskogee Daily Phoenix and Times Democrat*, and the *Norman Transcript*). Other organizations and sources tracked for Norman included the NPD, the Oklahoma City Police Department, and the Oklahoma University Police Department.

In Broken Arrow, the researchers also tracked television and radio newswires (KTUL ABC 8, KJRH NBC 2, KOKH FOX 25, KOTV NewsOn6 CBS 6, KWGS public radio, and KRMG News 102.3) and newspaper newswires (*News Oklahoman, Tulsa World, Muskogeenow, Muskogee Phoenix, McAlester News, Broken Arrow Ledger, Hays and Salina, Miami News Record, Stillwater News, Pawhuska Journal, Stillwater News Press, and The Radar Online*). The evaluators also tracked the Broken Arrow Police Department.

Other Oklahoma organizations and sources tracked included

- Oklahoma State Highway Safety Office,
- Oklahoma State Highway Patrol,
- Oklahoma Employer Traffic Safety Network,
- Oklahoma Turnpike Authority
- Oklahoma AAA, and
- Oklahoma Challenge.

In Joplin, the evaluators tracked the following media sites, including television, radio, and newspaper:

- BIG 550 KTR Talk Radio,
- Four States Checkpoint Warning Network,
- Inside Joplin,
- Inside the Ozarks,
- Joplin News First/KODE ABC 12,
- KOAM CBS 7 and Fox 14,
- KSNF, KY3 News,
- MO State Highway Patrol,
- NBC 16 Live News,
- Neosha Daily News,
- News Talk KZRG 1310,
- Pawhuska Journal-Capitol,
- Police One,
- The Joplin Globe,
- The Turner Report Blog,
- Save MO Lives,
- Southeast Missourian, and
- Web Extra.

In Cape Girardeau, the evaluators tracked the following media sites:

- Cape Girardeau County Sheriff's Office,
- Cape Girardeau PD,
- Four States Checkpoint Warning network,
- KAPE Radio 100.3 FM News talk,
- KFVS CBS 12,
- MO State Highway Patrol,
- MSHP General HQ,
- Save MO Lives,
- Springfield MO DWI Checkpoint,
- Southeast Missourian,
- STL News Web,
- The ADA News,
- The Alton Telegraph,
- The St. Louis Post Dispatch,
- Tri-County Scanner Page, and
- WSIL ABC3.

To measure social media, the researchers tracked the NPD Facebook and Twitter posts. The researchers also followed the JPD Facebook and Twitter sites, as well as the police chief's own Facebook and Twitter sites.

Enforcement

The researchers collected enforcement data from the NPD and JPD records departments. NPD citation and arrest data included citations for seat belt and child passenger safety infractions, speeding, distracted driving, impaired driving, moving violations, and other arrests and felonies. JPD citation and arrest data included citations for impaired driving, seat belt, child passenger safety, speeding, distracted driving, moving violations, and other arrests and felonies. The researchers collected 3 years of data prior to program implementation and 15 months of data during the program period. They also collected data on NPD's seat belt and JPD's impaired driving enforcement program activities.

Outcome Measures

Public Attitudes and Awareness of Enforcement

The evaluation team researchers developed surveys to measure attitudes toward and awareness of enforcement among licensed drivers who were at least 18 years old. For the seat belt program, the questions addressed the following topics:

- Awareness of enforcement activities specific to seat belt checks,
- Experience with seat belt law enforcement,
- Attitudes towards seat belt law enforcement,
- Seat belt use driving habits and behaviors,
- Contact with law enforcement, and
- Perceived effectiveness of seat belt law enforcement.

For the impaired-driving program, the questions addressed the following topics:

- Awareness of enforcement activities specific to impaired driving,
- Experience with enforcement specific to impaired driving,
- Attitudes towards enforcement specific to impaired driving,
- Impaired-driving habits and behaviors,
- Contact with law enforcement, and
- Perceived effectiveness of law enforcement specific to impaired driving.

Nine participants, representing a cross-section of sex, age, and race/ethnicity, completed cognitive testing of each draft survey. For cognitive testing, the surveys were administered inperson by an interviewer in a private setting. Following completion, the interviewer and participant discussed each question to ensure that the interviewer understood the respondents' thought process in answering the question. NHTSA reviewed the cognitive test findings, and the evaluation team revised the survey to address NHTSA's recommendations. The evaluation team also prepared Spanish versions.

The Office of Management and Budget approved the survey instrument and methodology (OMB Control Number 2127-0725). Chesapeake Institutional Review Board for Human Subjects Research (Columbia, Maryland) reviewed the plan and its survey forms and determined that the research project was exempt from IRB oversight.

Data collectors administered the public intercept surveys four times: 1 year before program implementation (pre-intervention1), 2 weeks before program implementation (pre-intervention2), at mid-program, and 2 weeks following the end of the program (post-intervention). The evaluators included a variety of subpopulations of drivers by administering the surveys to community members at various locations. The team administered the surveys at the driver licensing offices, tag centers, public libraries, and grocery stores during each data collection period. The data collectors recruited survey participants using a screening form that described the survey and included two inclusion questions. Prior to each data collection wave, the PI obtained permission from the site managers for the data collectors to conduct surveys.

Observations

In Norman and Broken Arrow, the evaluation team conducted observations of seat belt use over the same four periods as described for the public attitudes and awareness surveys. (No observation of alcohol-impaired drivers was planned for Joplin or Cape Girardeau.) To determine the sample size for the seat belt observations, the evaluation team conducted a power analysis to calculate the minimum sample size required to detect a meaningful effect. The researchers looked at the State average and past NHTSA seat belt observation studies conducted for similar program evaluations (Decina et al., unpublished/a, unpublished/b). These studies showed seat belt use increases of less than 5% in three sites, 5% to 7.5% in five sites, and more than 10% in two sites. Three sites had slight decreases in seat belt use in post-intervention periods. Assuming the baseline seat belt use rate of 89.2% and a small effect size (using a measure of effect size, Cohen's W, of .10 for a chi-square test), a sample size of 1,488 would be required for a power of .90. The expected magnitude of change would be 2 to 3 percentage points in seat belt use. The research team decided that a sample size of 2,000 would provide an adequate sample size to determine .01 and .05 levels of significance in the analysis as well as a buffer in case of obtaining lower data collection totals due to weather or low traffic volume.

Analyses compared and contrasted seat belt use by seating position (driver or front-seat passenger) and observation phase for the program and control sites. The research team conducted analyses for the full sample and by sex, age (under 25, 25 to 59, and 60 and older), and vehicle type (passenger car, SUV, van, and pickup truck). To determine whether any changes in seat belt use could be attributed to the program, as opposed to other statewide seat belt use efforts, the researchers conducted a mixed effects logistic regression analysis using both the program and control site data in the model.

The research team identified 12 seat belt observation locations for the program (Norman) and control (Broken Arrow) sites. They used annual average daily traffic (AADT) data from State maps available on the State website to select locations that provided relatively high volumes of traffic. The team created a spreadsheet that provided details for local observers for each selected observation location including:

- Street address/intersection, which specified the location with respect to local roads;
- Latitude/longitude of the observation location;
- Estimated Average Daily Traffic, if available, to indicate traffic volume on the road to be observed;
- Enforcement presence to indicate whether any enforcement efforts were planned on the roadway;
- Observer positioning, meaning the specific spot where the observer should stand to observe the selected stream of traffic;
- Direction of traffic stream the observer should watch; and
- A hyperlink for a pin map of the locations.

All locations were selected to limit observations to vehicles coming from the left of the observer and in the lane closest to the observer; observers never viewed traffic across the road. In some cases, travel speeds and sight lines allowed the observer to monitor more than one lane in the same direction. The seat belt observers followed the NOPUS guidelines (Uniform Criteria for State Observational Surveys of Seat Belt Use – 23 CFR part 1340) for seat belt use observations of drivers and front-seat passengers as their vehicles traversed the designated intersections on the days and times the researchers scheduled the seat belt observations. The research team conducted teleconference training with the observers to review observation techniques, instructions, and information to collect besides seat belt use (i.e., location, date, times, weather).

Results

Norman Process Evaluation

Norman's 15-month community-oriented seat belt enforcement program, called "Buckle Up Like a Champion Today," ran from April 15, 2018, to July 14, 2019. The process evaluation uses the observations of the community planning and program activities, discussions with law enforcement and community partners, communication scans, and enforcement data to assess the implementation of the program.

Community Engagement in Pre-Intervention Planning

After a project kick-off meeting in September 2016, NPD initiated in-person meetings and teleconferences with community members and invited partners from public and private organizations. These community partners, including Norman Chamber of Commerce, Cleveland County Sheriff's Office, East Side Business Association, Norman Regional Hospital, State Farm Insurance, AAA Oklahoma, Oklahoma University Student Affairs, Safe Kids Oklahoma, Norman Senior Center, Oklahoma Highway Safety Office (OHSO), Norman Fire Department, Oklahoma Highway Patrol, Campus Corner Association (shopping district near the college), and BOLD Multimedia,¹ supported the program and attended some of the subsequent planning meetings.

NPD hosted four in-person community partner planning meetings from April 2017 to February 2018. Attendees of the first meeting included a State Farm Insurance agent and partner of the Norman Public School Education Board, staff from OHSO, and a representative of AAA Norman. The goal of the meeting was to bring partners and stakeholders together for strategic planning with the NPD to collaborate on methods to change the community's perceptions and acceptance of seat belt enforcement. Discussions focused on program messaging, public outreach and communication plans, and how to coordinate public outreach with the seat belt enforcement activity.

Representatives from OHSO, Norman Regional Hospital, Safe Kids and Campus Corner Association attended the second meeting in September 2017. The group focused on how to design and disseminate public outreach messaging to all the diverse groups in the municipality, how to involve community partners, and identifying a program slogan and logo. The group favored the slogan *Buckle Up Like a Champion Today*, a spinoff of the University of Oklahoma's sports slogan *Play Like a Champion Today*.

Attendees of the third planning meeting December 2017 included NPD staff and community partners representing OHSO, State Farm, AAA Norman, Safe Kids, and the Norman School District. This meeting focused on enforcement. The NPD captain updated the partners on training that officers had received in the past two years. He also identified the two DDACTS zones that would be used for seat belt law enforcement. The captain stated that DDACTS data would assist in more accurately targeting efforts to employ traffic enforcement strategies. The captain requested a variable message board (VMB) to increase visibility of the enforcement

¹ Norman, Oklahoma.

effort, especially on nighttime details. The OHSO representative mentioned the possibility of using the program slogan on its official ODOT VMBs on highways entering Norman.

On the public outreach front, the community partners and NPD brainstormed about kickoff event location, speakers, and distribution of literature. The evaluation PI shared the results of the baseline seat belt observation data with the group. The use of public service announcements (PSAs) was also discussed and where to use these announcements (e.g., college sporting events). The group identified the local driving school and the high schools as additional partners. The school board president planned to involve the high school student video production club and to include safety messages in the school's daily announcements.

The last pre-intervention planning meeting in February 2018 included an enforcement planning session, without the community partners, followed by a partner planning session. Attendees at the partner planning session included NPD staff and community partners representing Safe Kids, Norman Public Schools, Norman Regional Hospital, AAA, and OHSO. At this meeting, the NPD captain indicated that the crime analyst had analyzed citation and crash frequencies from last year by day of week and time of day to determine where enforcement should occur. The NPD captain described the program enforcement strategies and staffing. NPD would schedule 20 to 30 hours per week for 5 to 7 officers to voluntarily conduct seat belt enforcement as a group on an overtime basis in an area identified as a "seat belt enforcement zone" using DDACTS. The funding for overtime enforcement would be provided by an existing OHSO grant. The hours of work would be based on DDACTS data and include nighttime enforcement. Seat Belt Enforcement Zone signs could be included. Also, all NPD officers were encouraged to proactively enforce seat belt laws when availability allowed.

Also, during the February 2018 meeting, the NPD public information officer (PIO) advised that due to Norman City Government regulations, she would be responsible for all social media involving NPD's enforcement activity, including advisories of upcoming operations and seat belt use observation results. Community partners would be limited to sharing NPD posts; they would not be permitted to broadcast NPD messaging. The PIO and captain planned to have officers speak with local businesses during their regular patrols, and request that they display the campaign messages on their storefront windows. On the community partnership front, the State Farm/Norman School Board partner provided a \$5,000 grant to support the program with the funds intentioned for high school social media video production. Radio station KFOR agreed to provide free PSAs promoting the campaign message.

NPD and community partners participated in follow-up teleconferences (late March and early April 2018) to confirm speakers for the kickoff event. The teams reviewed topics for the speakers, including current seat belt use in Norman, risks of not wearing a seat belt, benefits of wearing a seat belt, and goals and objectives of the seat belt enforcement program. The PIO released the media alert for the kickoff event, and advised that following the press conference, NPD would provide marketing packets (social media messages, graphics, newsletter blurbs, stickers, and posters) to community and business partners.

The NPD PIO confirmed completion of the program logo, designed by an NPD officer with input from fellow officers, and final layout by a graphic design arts firm. The NPD captain assured

everyone that the high-visibility seat belt enforcement could sustain public awareness throughout the spring and summer, and the program would involve the high schools in the fall.

The evaluation team interviewed representatives of the Norman Regional Hospital and Citizens Police Academy and provided a topic discussion list to the representatives. Topics related to progress on program planning, their assessment of the extent to which public outreach would be effective for the program, their assessment of other community traffic safety benefits from the program, and their expectations about the program. The hospital representative felt she could provide public outreach on the safety message of wearing a seat belt through the hospital's television network. There were more than 3,000 employees and 350 physicians in total at the main and branch locations. The Citizens Police Academy representative stated that her volunteers could distribute public outreach material (i.e., posters, banners, and educational brochures) throughout the community. Discussions with both partners also centered on slogan designs, kickoff meeting logistics, and potential contributions of other community partners present at the meeting.

Community Engagement in Intervention

NPD posted a press release on the day of the kickoff event (April 16, 2018) that described the program, timeline, slogan, and continuance of their seat belt enforcement efforts. The press release emphasized the involvement of the community. NPD representation at the kickoff included the chief, the deputy chief, and the captain and his traffic enforcement patrol leaders. The Oklahoma Highway Safety Office and the associate administrator of NHTSA Region 6 office attended. Also in attendance were the program facilitation team public outreach coordinator, the NHTSA contract manager, partners from AAA Norman and State Farm/Norman school board, the OU spirit team and an OU mascot. There was no media coverage of the event. While a Facebook Live post featured the NPD police chief and the NHTSA Region 6 associate administrator and OHSO posted a press release of the event on their websites, the lack of media coverage meant that the program missed the critical "visibility" component of HVE.

The NPD captain and PIO were involved in four teleconferences with some of their community partners and the program facilitators. At each teleconference, the NPD captain and PIO provided an update of the enforcement and public outreach activities, respectively. The first post-kickoff call occurred 2 months into the program and included community partners representing five organizations (OHSO, Norman Regional Hospital, State Farm Insurance, AAA Oklahoma, and Norman Public Schools). In addition, a Norman PD school resource officer and a volunteer from NPD's Citizen Police Academy participated. Ideas for involving the two high schools were considered during the session. The second teleconference in September 2018 included two partners, the OHSO program manager and the Norman Public Schools communication director. The captain explained how the variable message board would be used in the program. The school board president noted that the school district would not be able to participate in the program in this school year. The third teleconference, conducted in December 2018, had no partner participation and just involved program activity update. The final partner meeting was held in June 2019 and functioned as a wrap-up call for the program ending a few weeks later. Three community partners (AAA Oklahoma, OHSO, and State Farm) participated in this final meeting.

NPD participated in 12 community events and civic group meetings where they discussed seat belt use. Events included Oklahoma University football game days, the 3-day Norman Music

Festival in April, the Medieval Fair at Reaves Park in April, 4th of July Norman Day, and the Campus Corner "Know your Limit" campaign in August.

OHSO kept the enforcement activity viable using grant money to pay for officer overtime. However, partners were not able to get the *Buckle Up* message displayed on the overhead signs on highways entering Norman, and there was no community participation on record in distributing program materials or messages. The school district was unable to commit to activities discussed at the initial pre-intervention meetings (i.e., seat belt checkpoints in school parking lots, officer contact with students to increase seat belt compliance, and program information embedded into school curriculum). There were several complications with the planned student video PSA production including difficulty procuring actors, a change in multimedia company, and inability to complete the videos within the program period.

Communications

The NPD PIO posted 12 program-related press releases on the NPD website during the program. The press releases provided the program slogan and described activities such as *Click It or Ticket* and Operation Cadence. The PIO developed PSA-style messages and graphics for the Norman public access channel and the NPD lobby television.

The PIO made 500 campaign-related social media posts (302 on Facebook, 180 on Twitter, 16 Instagram stories, and 2 on Nextdoor). The NPD website hosted project information and safety messaging for community education and reference. At the start of the social media campaign the NPD Facebook page had approximately 38,000 followers and the NPD Twitter account had 1,960 followers. By program end the NPD had 52,000 Facebook followers and 8,000 Twitter followers.

The evaluation included scans of other social media and internet sources during the program period. Social media, newswires, and TV and radio news services posted occupant protection-related reminder messages, crash reports with occupant restraint status, and announcements of NHTSA seat belt enforcement campaigns (e.g., *Click It or Ticket*). These sites included OHSO (10 Facebook posts with one covering the program campaign and logo). Oklahoma Employers Traffic Safety Network (Our Driving Concern), with 60 Twitter posts (35 seat belt use reminders, 18 car seat proper use reminders, and 7 holiday driving safety messages) with 481 followers; and various newswires and TV and radio newswires that reported 37 crash reports identifying occupant restraint status.

Twenty-five news spots covered NPD's occupant protection and enforcement projects. The local sports talk radio covered the project kickoff and ran 15 monthly PSAs during the enforcement period, encouraging motorists to buckle up. One newsprint story appeared in the *Muskogee Phoenix* describing the kickoff event and the project details. There were 11 other newspaper stories during the program period regarding NPD's occupant protection and enforcement projects.

A VMB and eight 4x4 lime green reflective signs and stands (four with "Traffic Enforcement Zone" and four with "Seat Belt Enforcement Zone") were used in the campaign. The VMB was used at 65 locations starting at 4 months into the program. The VMB displayed the program slogan, *Buckle Up Like a Champion Today* throughout the program period, alternating phases

with NPD's other traffic safety enforcement efforts. The VMB was placed in many DDACTSbased locations. The VMB was also used in other highway safety enforcement details (e.g., drunk driving, speeding, texting), as well as in busy shopping areas during the holiday season, reminding drivers to buckle up. The reflective signs were used at seat belt enforcement zone sites. NPD distributed 300 clear stickers, 200 bumper stickers, and 600 window clings displaying the logo and slogan to the public.

Enforcement

Prior to the intervention, NPD supervisors and officers completed the Traffic Occupant Protection Strategies (TOPS) course; Below 100, Intensive Below 100, and the Train-the-Trainer Below 100 courses; and DDACTS training. TOPS, provided to 15 officers, emphasized crash dynamics, benefits of occupant restraints, and enforcement. Below 100, delivered to 16 officers, emphasized each individual officer's control to dramatically lower line-of-duty deaths and injuries: controlling police vehicle speeding; wearing bullet-proof vests; and wearing a seat belt. In addition, two NPD officers completed the Intensive Below 100 training. This course familiarized attendees with the key elements of Below 100 and is a pre-requisite course for the Train-the-Trainer course. Following the Intensive Below 100 training, a Below 100 trainer conducted a 4-hour Below 100 Train-the-Trainer course attended by 5 NPD officers.

During the same summer session, two subject matter experts from the International Association of Directors of Law Enforcement Standards and Training conducted a one-day strategic agency planning session with 11 NPD supervisors on the use of DDACTS. NPD acknowledged the need for instruction to new supervisors about the background and use of DDACTS in their department. NPD felt that this training was imperative to provide the rationale for identifying seat belt enforcement zones (overlaying high crash, violation, and crime areas with locations associated with low seat belt use). While three DDACTS training sessions were planned for NPD line officers throughout the program period, the NPD captain advised in December 2017 that the department was short-staffed and could not spare officer time away from their duties to attend the two-day workshops.

Prior to program implementation, the traffic patrol unit supervisor/project coordinator and the community relations officer met with the evaluation team at the police department. The evaluation team provided a list of questions to assess NPD's perceptions of the extent to which they could successfully implement high-visibility seat belt enforcement to improve the community's seat belt use and the extent to which community partners and the community would engage in influencing increased seat belt use in the community.

The officers were experienced in the use of DDACTS and mentioned anecdotal cases of its value. They expressed confidence in their ability to accomplish program goals relating to seat belt enforcement details in these high traffic incident and crime areas. They mentioned the need to use enforcement zones because the city council would not approve checkpoints. They believed a challenge would be to emphasize to line officers the need to stay in the confines of the enforcement zone. They felt that the program could have other positive enforcement effects, such as catching more speeders and distracted drivers. The officers felt that the seat belt use rate in Norman was high. They had little confidence in the program's ability to raise the seat belt use rate much higher. The supervisor provided an estimate of staff hours needed to meet the program goals and requested a variable message board (VMB) as part of the grant.

NPD funded 20 to 30 hours of overtime per week for seat belt law enforcement through their grant with OHSO. Rather than conducting *general traffic* enforcement as they did for the OHSO grant, officers focused solely on *seat belt* enforcement for this project. Unfortunately, the program did not provide details about how the sites were selected but rather referred to the use of DDACTS to select high-crime, high-crash areas where large proportions of occupants were unbelted as well as areas with high proportions of occupant restraint citations. Seat belt saturation patrols were conducted in areas that NPD determined had a lower compliance rate as indicated by higher than average proportions of occupant restraint citations compared to other areas of the city. Saturation patrols consisted of 1 to 3 units that saturated an area for a 2- to 3-hour period to increase visibility of enforcement. Table 1 presents a summary of NPD enforcement activity by month.

Month/Year	Seat Belt Saturation Patrols	Data Targeted Details (hours)	Other Enforcement Details	
May 2018	36	91.25	<i>Operation Cadence</i> with Cleveland County Sheriff's Office for Memorial Day	
June 2018	46	224.5		
July 2018	47	219.75	<i>Operation Cadence</i> with County Sheriff's Office for 4th of July	
August 2018	33	121.75	<i>Operation Cadence</i> with County Sheriff's Office, Purcell PD, and OHP for Labor Day weekend	
September 2018	0	0	<i>Operation Cadence</i> with County Sheriff's Office, Purcell PD, and OHP for Labor Day weekend. VMB out in various locations 24/7, used for traffic control during game days	
October 2018	21	49	VMB out in various locations 24/7, used for traffic control during game days	
November 2018	34	89.75	<i>Operation Cadence</i> on Black Friday. VMB out in various locations 24/7, used for traffic control during game days	
December 2018	12	26	VMS 24/7 in shopping districts	
January 2019	45	65.75	VMB 24/7 in high-complaint area	
February 2019	51	130.5	VMB 24/7 in high-complaint area	
March 2019	23	54.75	VMB 24/7 in high-complaint area	
April 2019	31	85.75	VMB 24/7 in high-complaint collision areas and at the Norman Music Festival	
May 2019	28	133	VMB 24/7 in DDACTS zone with <i>Click It or Ticket</i> (CIOT) message	
June 2019	42	174	VMB 24/7 with CIOT message	
Total	449	1465.75		

Table 1. NPD Monthly Seat Belt Enforcement Activities

Table 2 presents the number of citations and warnings by infraction type during the 1,466 hours of project-targeted details. NPD made 2,167 occupant restraint contacts (seat belt and child safety seat) during the program period for an average of 1.48 occupant restraint contacts per enforcement hour. Although occupant protection was the focus of the program, the seat belt and

CPS contacts accounted for only 9% of all moving violation citations and 2% of all warnings issued during the details.

Infraction	Citations	Warnings	Total Contacts	Contacts per Project Enforcement Hour
Seat Belt	1,530	556	2,086	1.42
Child Passenger Safety	68	13	81	0.06
Moving Violations (All)	18,469	31,558	50,027	34.13

Table 2. NPD Citations and Warnings During the Program Period

NPD implemented a new record management system in July 2015. Due to differences in the codes used in the old and new systems, NPD indicated that data before August of that year were unreliable. Therefore, the pre-intervention period for data extraction began on August 1, 2015, and ended on April 15, 2018. Due to differences in the length of the pre-program (32 months) and program periods (15 months), the researchers normalized the data by calculating the average per month. Table 3 presents NPD's average number of citations and warnings per month by study period.

Table 3. NPD Monthly Average Citations and Warnings Program Change

Infraction	Pre-Program Period Monthly Average		Program Period Monthly Average		Percent Change	
	Citations	Warnings	Citations	Warnings	Citations	Warnings
Seat Belt	102	18	102	37	-	111%
Child Passenger Safety	4	1	5	1	27%	-

NPD increased the number of seat belt warnings and citations for child passenger safety violations during the program period as compared to the pre-program period, but there was no substantial change in citations for seat belt violations or in the relatively small number of CPS warnings. And while it does appear that seat belts warnings increased substantially, the program did not provide a reason or justification for focusing on warnings instead of citations. The study did not collect citation and warning data from Broken Arrow for comparison.

The Supervisor felt that he reached the program's enforcement goals. He was pleased that he could use seat belt enforcement zone signs and the VMB that he moved around the community to high traffic incident spots. He identified additional benefits of the program, such as stopping traffic violators who were speeding and disregarding traffic control devices. The supervisor felt that maintaining seat belt enforcement programs required outside grant funding, such as that provided by Oklahoma SHSO for this program.

Joplin Process Evaluation

Joplin's 15-month community-oriented impaired-driving enforcement program, "We Are Out There Too! Drive Sober or Get Pulled Over," ran from May 3, 2018, to August 2, 2019. The process evaluation used the observations of the community planning and program activities,

discussions with law enforcement and community partners, communication scans, and enforcement data to assess implementation.

Community Engagement in Pre-Intervention Planning

The JPD initiated program meetings with the community and developed an invitation list of partners from public and private organizations that included prosecutors, defense attorneys, and judges; physicians and staff from two Joplin hospitals; high school faculty; members of the media; and local state university faculty members. The PIO led all meetings for the JPD. At the meetings, the JPD informed the community about the program, and solicited their help in spreading the program message to the public. JPD conducted two meetings prior to program implementation and three meetings during the program period.

The first pre-intervention meeting was well attended with 28 people representing multiple organizations and was covered by local news media. In addition to JPD, the organizations included the following:

- Bar & Restaurant Owners Against Drunk Driving (BROADD),
- Freeman Health System,
- Jasper County Circuit Court,
- Jasper County Prosecuting Attorney's Office,
- MoDOT Highway Safety Office,
- KOAM/KFJX TV News,
- KODE TV News,
- MADD Missouri,
- MADD Newton & Jasper Counties,
- Mercy Hospital Joplin,
- Missouri Southern State University, and
- SAFEKIDS Newton & Jasper Counties.

At the first meeting, the JPD and facilitator provided community partner organization representatives with information about the project's goals and objectives, national data concerning impaired driving, results from the community surveys, and a project timetable.

The facilitator requested that attendees assist in developing a project strategic plan to provide awareness about impaired driving in the community and to support law enforcement efforts toward reducing impaired driving. The Joplin Community Partners completed a multi-page strategic plan divided into three subcommittees: Communications, Enforcement, and Education/Outreach. Each subcommittee was charged with developing activities specific to the overall 15-month strategic plan. The strategic plan included outreach at community events, media notices about impaired driving enforcement, and enforcement activities centered on holidays and events when impaired driving and impaired driving traffic crashes occur. The strategic plan was meant to be a fluid document likely to change.

JPD conducted three community meetings in the 6-month period prior to program implementation: October 2017, January 2018, and April 2018. Each committee also held two conference calls during the planning phase. The 15-month strategic plan was designed to

complement and support each committee's activities. Media events would highlight impaired enforcement activities and describe how citizens as well as visitors were impacted by impaired driving. The committees planned outreach events to target all sectors of the Joplin community and spread the message about supporting law enforcement.

The Joplin community partners developed a campaign theme, "We Are Out There Too! Drive Sober or Get Pulled Over," to convey the message that in addition to law enforcement out there doing their job to keep the public safe, other community members are also supporting impaireddriving enforcement. "Drive Sober or Get Pulled Over" is NHTSA's national campaign, and the JPD felt strongly about having an enforcement message in the campaign theme. Additionally, the "We are out there too!" slogan showed how all sectors of the community were affected. As an impaired person thought about getting into his or her vehicle, the Joplin Community Partners wanted that person to know the police were out enforcing impaired-driving laws. The Joplin Community Partners also wanted impaired drivers to realize that all segments of the community were also using the roadways and in harm's way when they decide to drive.

The components of the strategic plan by subcommittee follows. The Enforcement Subcommittee planned efforts to coincide with Missouri statewide mobilizations.

- 1) June 29 July 4, 2018: Independence Day Impaired Driving Enforcement
- 2) August 17 September 3, 2018: Drive Sober or Get Pulled Over Mobilization
- 3) December 14, 2018 January 1, 2019: Holiday Impaired Driving Enforcement
- 4) March 2019: St. Patrick's Day Impaired Driving Enforcement
- 5) June/July 2019: Independence Day Impaired Driving Enforcement

In addition, JPD planned regular impaired driving enforcement in Joplin during 2018 Cinco de Mayo (May 2018), 2019 NFL Playoffs (January 2019), Super Bowl Weekend (February 2019), and 2019 Cinco de Mayo (May 2019). The Traffic Division Sergeant stated that JPD would use a data-driven approach to allocate resources and conduct enforcement in areas where impaired-driving crashes occur. Impaired driving enforcement would be focused on areas where the data showed highest incidences of traffic crashes and impaired driving arrests.

The Communications Subcommittee recognized that project funds were not allocated for paid media. They relied heavily on the use of earned media to obtain free media coverage and distribution of media messaging through social media, particularly through JPD's Facebook account. They planned topics for each enforcement period, such as highlighting daily impaired driving arrests, emphasizing impaired driving crashes, offering interview opportunities to the media outlets, and placing variable messaging signs in enforcement zones.

The Outreach/Education Subcommittee complemented both the media and enforcement plans. During community events, volunteers for the Outreach/Education Committee planned face-to-face contact with Joplin residents to spread the message about supporting impaired-driving enforcement and the dangers of impaired driving. The Outreach Committee planned to conduct about a dozen outreach events throughout the campaign, to reach diverse populations in Joplin. Volunteers from the committees proposed to attend different events and work with various sectors of the community, including schools and businesses. While attendance was high for the first pre-intervention meeting, the remainder of the meetings and teleconferences had less than one-third of the community participants in attendance. The JPD's PIO moderated all meetings. The Traffic Unit Officer in charge of the enforcement effort attended and shared the enforcement plans and current enforcement activity. Community partner involvement centered around the public outreach from the two hospital systems and the social media marketing company's enhancement of the JPD posts. The JPD also spread the program message at their scheduled community health and safety events throughout the program period.

Community Engagement in Intervention

On May 3, 2018, the JPD held a press conference at the Joplin Public Safety Facility to kick off the project. Speakers at the press conference included the JPD chief, the NHTSA Region 7 administrator, the National Law Enforcement Initiatives manager for Mothers Against Drunk Driving, and a retired superintendent of the Missouri State Highway Patrol. Four television news stations and the Joplin Globe covered the event. KOAM TV and Fox 14 TV shared information about the kickoff on Facebook. In turn, the Four States Checkpoint Warning Network shared the post on the Network's Facebook page.

In the initial community partner discussions, the trauma program coordinator and media relations coordinators of the two hospitals in Joplin assisted with public outreach through social media (particularly Facebook, where they had a large following) as well as closed-circuit TV systems that had exposure to thousands of hospital visitors in various waiting rooms and medical offices. At that time, there was no plan for the specific messages or public outreach activities.

By mid-program, one hospital created a holiday video promoting the importance of not driving impaired. They promoted the video on social media and showed it on the TV monitors in the emergency department waiting room, with an estimated exposure to 3,600 hospital visitors. The other hospital representative advised that her hospital planned to work with a social media and marketing company to produce a video for the TV message boards in hospital waiting room areas. She was following the JPD social media posts and was waiting for JPD's information spots to put on TV message boards in the waiting rooms. Both hospitals faced competing safety issues to address in their programs, but they noted that they would help with JPD's program and public outreach.

Communications

JPD posted a press release on May 1, 2018, that described the program, the slogan, and emphasized the continuance of their impaired-driving enforcement efforts, especially during holiday periods. The press release also noted community involvement, listed the participating organizations, and mentioned the use of social media for the campaign.

Earned media on the impaired driving enforcement program and general impaired driving safety messaging occurred throughout the program period. The *Save MO Lives* was a social media page for the Missouri Coalition for Roadway Safety in Jefferson City, Missouri. They are a partnership of safety advocates that banded together to reduce traffic crashes and fatalities.

Another social media site, *4 States Checkpoint Warning Network*, provided a social media place where people could share experiences and get up-to-date information about law enforcement

checkpoints in the Joplin metro area. *Inside Joplin* was a social media page that included a blog that discussed government, politics, education, the arts, and entertainment in Joplin and the surrounding area. The *Turner Report* was an alternative news source that offered news and commentary for the Joplin area. The *Joplin Globe*, a newspaper with circulation around 30,000, had a media presence which may have reached even more. The radio and television news stations in the Joplin area were KZRG, KOAM CBS 7, Fox 14, KODE ABC 12, and KSNNBC 16, and KY3 News. KSNF and KODE operated a social media presence through Joplin News First, which was staffed by a roving reporter. The social and earned media scans also included the Missouri State Highway Patrol's Division of Public Safety social media and press notices about highway traffic crashes and traffic violations/citations/arrests. Most of the newswire sites ranged from 1,000 to 5,000 followers; but the TV station sites had more than 15,000 followers. Table 4 summarizes the content of the posts.

Topic Area	Number of Posts
Report on an impaired driving arrest	204
Reminder about not drinking and driving	137
Report on crash involving impaired driving	101
General non-specific impaired driving information	59
Stepped up impaired driving enforcement by each PD message	45
Holiday driving impaired driving safety message	30
JPD impaired driving enforcement program campaign message	21
Alert about a impaired driving checkpoint	8
JPD impaired driving enforcement program campaign description and objectives	6

Table 4. Jo	oplin Earne	ed Media I	Posts by	Topic Area
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Funding was also provided for a local social marketing firm to develop social media graphics starting mid-program. Toward mid-program, the firm attended a community partnership meeting to design and produce an eight-month social media marketing campaign to raise awareness in the Joplin media market about the risks of drinking and driving. At the start of the JPD social media campaign, the JPD Facebook page had approximately 38,000 followers and the JPD Twitter account had 1,960 followers. The campaign spanned a wide demographic who lived in or around Joplin and who also "liked" or "followed" the JPD Facebook page. JPD used a boost feature on their Facebook posts. The boost allowed page administrators to target Facebook users matching chosen demographics (e.g., 18- to 35-year-old males). Each boost reached approximately 7,000 to 11,000 Facebook users for a week. At the end of the program, the JPD Facebook page had 42,044 followers (4,000 gain) and had 40,756 "Likes."

The JPD made social media posts throughout the course of the program, generally on Fridays. The chief also used his personal Facebook and Twitter accounts to promote the program and its message. The two highest "reaction" months in terms of likes, comments, and shares were March 2018 (pre-project enforcement) and March 2019 (during project enforcement). During March, JPD focuses impaired driving efforts on St. Patrick's Day, when impaired-driving crashes are elevated. The Joplin city administrator asked JPD to reduce impaired driving enforcement and safety message posts in July 2018, based on personnel reductions in the JPD. The restriction was lifted in September 2018.

The project allocated funding for equipment, materials, and services deemed necessary for enforcement and community outreach in their program implement activities. JPD purchased and used two portable messaging trailers to raise public awareness of the dangers of driving impaired. The trailers had speed detection capability, so informed motorists of their speed and presented the program's message, "*Drive Sober or Get Pulled Over, #wereouttheretoo.*" The trailer displayed flashing red and blue lights when a vehicle traveled more than 10 miles over the speed limit. JPD personnel could change the message remotely, while remaining in their police cruiser, to update the enforcement theme (e.g., St. Patricks' Day, New Year's Day, Cinco de Mayo). This was safer than manually updating at the sign near traffic. JPD personnel placed the message boards in strategic locations with high prevalence of impaired driving crashes and arrests. Deployment of the message trailers began in October 2019.

The officers emphasized the importance of the VMBs placed at six key locations that had high levels of impaired driving crashes and arrests during high-profile drinking weekends (e.g., Super Bowl, St. Patrick's Day) and holiday seasons. The two flashing message boards used the messages "Drive Sober or Get Pulled Over" and "Report Impaired Drivers to Police 417-623-3131." In addition, four sign boards were installed permanently at other city locations and the Missouri State Highway Safety Office put up a sign board over the Christmas holiday season.

The PIO reported that the department would continue sharing social media posts on the first Friday of every month at 3 p.m., pinned to the top of the Facebook feed. Program-related impaired driving enforcement would continue during holiday periods in the spring and summer 2019.

Enforcement

The enforcement subcommittee identified training topics, based on needed skills and knowledge to complete the project. The program team provided the first training to supervisors and line officers at the beginning of the program in October 2017, focused on "Place of Last Drink" (POLD). This training was an initiative to identify patterns of alcohol use and allowed law enforcement agencies to concentrate education and enforcement efforts towards areas of concern by identifying sources of alcohol for those who drink alcohol and drive (e.g., bars and restaurants). Alcohol compliance checks focusing on over-service were typical enforcement activities related to POLD data analyses. The other training sessions were cancelled due to JPD personnel shortages. Just prior to the July 4, 2019, enforcement detail (near the end of the program) JPD gave brief impaired driving enforcement training to patrol officers. This training activity, initiated by the facilitator and agreed upon by JPD, aimed to finish the program with a strong impaired driving enforcement effort for the July 4th holiday.

The PIO and the traffic unit supervisor (sergeant) met with the evaluation team before the start of the program in person and at the mid-point of the program by telephone. The evaluation team provided a topic discussion list to the officers in advance of the discussions. Topics included the effectiveness of DDACTS, challenges for the program, enforcement approach strategies, confidence about program implementation and soliciting community support and action, confidence that the program would reduce crashes and crime, and perception of other program benefits.

During the initial discussions, JPD stated that it would use its IMPACT (Injury Methods Practical Against Crime Trends) approach for the program. The approach was like DDACTS, but it focused on general knowledge and experience of the officers. It was not based on actual crime or crash data. The sergeant coordinating the impaired driving enforcement effort felt that this approach could be effective while in place but noted that traffic violations and crime activity revert to normal levels when the operations discontinue. However, he said more outstanding warrant arrests were made using the IMPACTS approach and felt it was a crime deterrent. He believed that motorists who travelled past stopped drivers would reconsider conducting criminal behavior in the immediate area.

The sergeant felt saturation patrols and checkpoints would be effective for the program. He planned to conduct saturation patrols during the holiday periods and two impaired driving checkpoints over the course of the program period. (While Missouri banned State-funded checkpoints in August 2017, local jurisdictions could use them.)

By mid-program, funding was in place for two VMBs, signs, and impaired driving detection flashlight instruments. The Sergeant explained how they would use VMBs during enforcement details, as well as the value of the flashlights for all the patrol officers.

The PIO discussed challenges related to keeping the community partners engaged. The initial pre-intervention planning meetings were well-attended, but participation leveled off as the kickoff date approached. He noted traffic enforcement is usually unpopular and hoped that the community partners would stay engaged and promote the program, which was necessary for increasing community support. Neither officer was confident that the community would maintain a reduced level of impaired drivers after the program was over.

While the program was designed to help JPD be pro-active, staff shortages put them into a more reactive mode during the planned enforcement period. Officers had to work extra shifts to cover the staff shortages, which undermined the impaired driving enforcement effort. The shortage in 2018 only slightly recovered in the first half of 2019 with 6 new officers in place on patrol. The program ended in July 2019.

Table 5 provides data collected during impaired driving enforcement details conducted by JPD officers in conjunction with multi-agency efforts by the Southwest Missouri impaired driving Task Force. The enforcement details coincided with holidays and events that the task force focused on, and with State and national impaired driving mobilizations during Labor Day weekend, Independence Day week, Christmas/New Year's holidays, and other celebrations associated with impaired driving in Joplin, such as St. Patrick's Day and Cinco de Mayo. There were no stepped-up multi-agency impaired driving enforcements in October and November 2018 or in January and February 2019; JPD conducted impaired driving saturation patrols during those periods independent of the task force. The task force used social media to publicize the notice of the stepped-up efforts and arrests.

Date	Length of Detail (Hours)	Number of Officers Involved	Number of Citations	Number of Arrests	Number of Contacts Associated	Total Enforcement (Citations, Arrests, and Contacts)
May 2018	18.5	6	8	5	38	51
June 2018	27.5	5	14	11	30	55
July 2018	14	2	3	1	14	18
August 2018	34	6	6	16	57	79
September 2018	14	2	6	4	20	30
December 2018	6	3	5	8	18	31
March 2019	6	10	12	5	38	55
May 2019	10	1	3	0	5	8
June 2019	5.5	2	1	2	5	8
July 2019	11	15	36	8	43	87
Total	146.5	52	94	60	268	422

Table 5. JPD Monthly Impaired Driving Enforcement Activities

Over the course of the program period, JPD conducted 22 details specific to the impaired driving enforcement program, each averaging 7 hours, for a total of 146.5 hours. These details involved saturation patrols, generally on Fridays (6 details) and Saturdays (8 details), using one to three officers. However, four officers attended the kickoff event, 10 officers participated in the Saint Patrick's Day event, and 13 officers participated in the 4th of July (end of program) event. A total of 52 officers participated in the program-specific details. The enforcement details resulted in 268 traffic stop contacts, 94 citations, and 60 arrests.

The evaluation team also collected enforcement data for three years before the program. Table 6 presents the average monthly counts of citations and arrests before and during the program. The researchers reached out to the Cape Girardeau Police Department (the control site) to gain access to impaired driving enforcement data for comparison, but they chose not to release this information.

Table 6. JPD Monthly Average	Citations and Arrests	Program	Change
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Infraction	Pre-Program Period Monthly Average		Program Period Monthly Average		Percent Change	
	Citations	Arrests	Citations	Arrests	Citations	Arrests
Impaired Driving	25	24	26	18	+4%	-23%

Outcome Measures

The public intercept surveys asked 14 questions related to the desired program outcomes as well as the process. This section focuses on questions that measure the desired outcomes of greater community support for and higher perceived risk of traffic safety enforcement for the projects. Responses are compared against hypotheses related to the expected program outcomes.

Greater Support for Traffic Safety Enforcement

Q2. Do you think police officers in [community] are spending too much time, too little time, or about the right amount of time enforcing traffic laws?

H1: Residents are more likely to believe police spend too little time enforcing traffic laws midprogram and at the end of the program compared to the beginning of the program.

Q3. In your opinion, how big a problem is people not wearing seat belts/drunk driving in [community]?

H2: Residents are more likely to believe people not wearing seat belts (Norman) or drunk driving (Joplin) is a big problem mid-program and at the end of the program compared to the beginning of the program.

Q7. In your opinion, should catching people who don't wear seat belts/drunk drivers be a high priority, a medium priority, or a low priority for police in [community]?

H3: Residents are more likely to believe catching people not wearing seat belts (Norman) or drunk drivers (Joplin) is a high priority mid-program and at the end of the program compared to the beginning of the program.

Q8. How much do you agree or disagree with this statement? Police in [community] should do more to encourage seat belt use/stop drunk driving.

H4: Residents are more likely to strongly agree that police should do more to encourage seat belt use (Norman) or stop drunk driving (Joplin) mid-program and at the end of the program compared to the beginning of the program.

Higher Perceived Risk of Traffic Safety Enforcement

Q4. In your opinion, how likely is it that drivers in [community] who DON'T wear seat belts will receive a ticket/have had too much to drink will be caught by police?

H5: Residents are more likely to believe it is very likely that drivers who don't wear seat belts will receive tickets (Norman) or have had too much to drink will be caught by police (Joplin) will receive a ticket mid-program and at the end of the program compared to the beginning of the program.

Q5. How much do you agree with the following statement? Police in [community] are writing more seat belt tickets/arresting more drunk drivers than they were a few months ago.

H6: Residents are more likely to strongly agree that police are writing more seat belt tickets (Norman) or arresting more drunk drivers (Joplin) mid-program compared to the beginning of the program. (Note that the comparison of post-program to baseline is not relevant because the questions ask about change in the past few months, but the programs lasted 15 months.)

Table 7 summarizes the change in survey responses in Norman versus Broken Arrow and in Joplin versus Cape Girardeau and indicates which of the differences where statistically significant at the 0.05 level.

Question	Baseline	Baseline to Mid	Baseline to Post
H1: Too little time enforcing traffic laws			•
Norman (program)	10%	+6%	-
Broken Arrow (control)	10%	+2%	+1%
Joplin (program)	15%	-1%	+2%
Cape Girardeau (control)	13%	-	+1%
H2: Not wearing seat belts / drunk driving is a big problem	•		
Norman (program)	6%	+2%	+2%
Broken Arrow (control)	12%	-4%	-6%
Joplin (program)	20%	-2%	-
Cape Girardeau (control)	12%	-3%	+1%
H3: Police catching people who don't wear seat belts / drunl	k drivers sh	ould be high	priority
Norman (program)	17%	+2%	+2%
Broken Arrow (control)	22%	-2%	+2%
Joplin (program)	71%	-6%	-4%
Cape Girardeau (control)	67%	-4%	-
H4: Strongly agree police should do more to encourage seat	belt use / s	top drunk driv	ving
Norman (program)	32%	-1%	-4%
Broken Arrow (control)	33%	-	-1%
Joplin (program)	42%	-5%	-3%
Cape Girardeau (control)	32%	-3%	-1%
H5: Very likely drivers who don't wear seat belts will			
receive a ticket / have had too much to drink will be			
caught by police			
Norman (program)	18%	-4%	-1%
Broken Arrow (control)	16%	-	-3%
Joplin (program)	13%	+1%	+2%
Cape Girardeau (control)	14%	-	-5%
H6: Strongly agree police are writing more seat belt tickets			
/ arresting more drunk drivers than a few months ago.			
Norman (program)	4%	-	NA
Broken Arrow (control)	3%	+3%	NA
Joplin (program)	5%	+1%	NA
Cape Girardeau (control)	4%	-1%	NA
Sample sizes			
Norman (program)	545	521	353
Broken Arrow (control)	449	353	307
Joplin (program)	475	435	380
Cape Girardeau (control)	364	343	313

Table 7. Changes in Attitudinal Outcome Measures

Note: Differences in **bold** are statistically significant at the 0.05 level using a chi-squared test of independence (d.f. = 1).

In examining the four measures of community support for traffic safety enforcement in Norman and Joplin, only two changes from baseline to mid-program or baseline to the end of the program were statistically different from zero. In Norman, the percentage of residents who indicated that police spent too little time enforcing traffic safety laws increased by 6 percent points from baseline to mid-program, but it returned to baseline by program end. In Joplin, the percentage of residents believing that catching drunk drivers should be a high priority decreased by 6 percent points from baseline to mid-program. Overall, the results do not support the hypotheses that the programs increased community support. In examining the effect of the programs on increasing the perceived risk of traffic safety enforcement, none of the changes from baseline were statistically significant in Norman or Joplin.

The analysis above provides examples to illustrate the lack of change in the attitudinal outcomes. However, there are additional questions and other ways to categorize the responses. Appendices A, B, C, and D provide summary tables of responses to each survey question, for each of the four data collection waves in Norman, Broken Arrow, Joplin, and Cape Girardeau. The tables can be used to calculate other statistics and perform additional tests.

Table 8 summarizes the change in observed belt use in Norman versus Broken Arrow. As seen in the table, observed seat belt use in Norman increased a statistically significant 2 percentage points (p<0.05) from baseline to mid-program, but the observed seat belt use increased by the same amount in Broken Arrow. This suggests that the increase in Norman was due to something affecting the entire State, and thus both communities, rather than due to program implementation. Perhaps more concerning is that observed seat belt use showed a small but not statistically significant increase in Norman comparing baseline to post-intervention, but the control site experienced an almost 4-percentage-point increase.

	Baseline (Pre- intervention 2)	Change Baseline to Mid- Intervention	Change Baseline to Post- Intervention
Norman	88.6%	+1.9%	-1.0%
Broken Arrow	84.6%	+2.3%	+3.9%
Difference		-0.4%	-4.9%

 Table 8. Comparison of Changes in Observed Seat Belt Use

Appendixes E and F present detailed findings of the seat belt use observations collected in Norman and Broken Arrow by observation period, driver or front-seat passenger, age group, sex, and vehicle type, as well as the results of chi-square analyses of comparisons between the baseline observation and the observations at mid- and post-intervention.

To test whether Norman's increase in seat belt use at mid-program was significantly greater than its control site, the team constructed a mixed effects logit model using a general linear model package and the binary family of log links. Considering the slopes of the predicted probabilities of restraint use across the study phases and between drivers in Broken Arrow and Norman, as well as the convergence in belt use post-intervention, it appears that Norman's *Buckle Up Like a Champion Today* program did not impart a unique effect on restraint use. Instead, it is more likely that either a statewide belt use campaign influenced driver behavior in both towns over the study period, belt use "regressed toward the mean" over the study period, or both. The model and regression outcomes are presented in Appendix G. Also, as discussed above, a similar type of analysis was not possible for the impaired-driving program because there was no attempt to observe or measure the number of alcohol-impaired drivers on the road.

Discussion

Community Partnerships

NPD initiated community engagement by holding a series of four pre-intervention meetings with community stakeholders who were interested in the program and showed interest in collaborating to plan public outreach and enforcement. Initial plans involved activities for the schools, health care systems, insurance companies, and auto clubs; OHSO expressed interest in assisting. Norman required its NPD to control all public outreach relating to the enforcement effort. The PIO was well-organized and encouraged community partner involvement from the initial meeting. Community stakeholders had the opportunity to disseminate general seat belt safety messages to the community, but they were prohibited by city regulations from distributing NPD's program messages.

NPD met with the community partners throughout the program, but partner attendance diminished toward mid-program and never recovered. Some community partner disengagement likely occurred as stakeholders realized the amount of effort required to carry out public outreach and barriers to carrying out planned activities, including school sensitivity to law enforcement presence on campus, no space in school curricula for student participation, and city restrictions on police messaging police. The hospital system circulated the seat belt message using its visitor monitors and social media. OHSO aided in data sharing and funding for additional coordinated seat belt enforcement efforts with regional law enforcement agencies.

JPD held two pre-intervention meetings with community representatives. However, while community partners initially expressed interest in the impaired driving enforcement program, community partner attendance dropped once the program began. While the JPD remained active throughout the program period, the only community participants who remained active throughout the program period were two hospitals; they displayed the program message on their hospital's closed-circuit screens in the waiting rooms throughout holiday periods.

Communications

NPD disseminated continuous press releases and social media postings. The PIO led the NPD enforcement and public outreach messaging to the community. Social media appeared to complement traditional public outreach methods and to play a role in a traffic safety and enforcement programs by providing law enforcement agencies with a method to quickly broadcast traffic safety messages, raising awareness of enforcement activity, and providing community-related information to interested followers. The PIO complemented the social media with traditional public outreach to broaden the community audience base. Earned media during the program period included local news outlets sharing the NPD posts with their followers and publicizing the increased enforcement through news broadcasts and articles. There were more than two dozen earned media posts and articles relating to the NPD program that included seat belt use reminder messages.

In Joplin, the program used social media and variable message boards to address the public. JPD and the Chief actively posted program messages on social media throughout the program, resulting in more than 20,000 "reactions" over the course of the program. At the program's midpoint, a social media company boosted the posts to reach key target groups (21- to 34-year-old

males). Local news outlets shared JPD posts with their followers and publicized the increased enforcement through news broadcasts and articles. There were 584 earned media posts and articles about the JPD program that included impaired driving safety reminder messages — especially during holiday and special event periods — as well as descriptions of impaired driving enforcement activity and impaired driving-related arrests and crashes.

Enforcement

NPD engaged in scheduled enforcement events each month, using OHSO grant funding for overtime enforcement. NPD maintained high-visibility enforcement and alerted the public using enforcement zone signs and a variable message board that was moved to locations across the city with high crime and traffic incidents. NPD also engaged in regional seat belt enforcement task force efforts during the first half of the program, increasing visibility of enforcement. NPD showed substantial increases in warnings, but not citations, for all occupant protection laws, compared to the pre-program period.

JPD engaged in impaired driving enforcement events during holidays and other periods associated with drinking (e.g., Saint Patrick's Day and Cinco de Mayo). Two dedicated impaired driving officers routinely enforced impaired driving laws. Over the course of the program, JPD issued 386 traffic citations and made 227 arrests for impaired driving. While JPD increased average monthly impaired driving citations by 4% in the program period compared to the average of the 3 previous years, the number of arrests decreased by 23%.

Community Attitudes and Awareness

Public intercept surveys measured support for traffic safety laws and their enforcement through multiple questions administered at various locations throughout the community. Responses to each question remained similar, or were not in the expected direction, for both program and control sites across the four data collection waves.

For those in Norman who saw or heard about these special efforts by police to issue tickets to unbelted drivers, the largest percentage of respondents obtained this information via social media at post-program, with the largest increase from pre- to post-program being the variable message board. This points to the utility of VMBs in raising public awareness of enforcement efforts. For comparison, the largest proportion of those in Broken Arrow identified the television as their source of information about special efforts by police to issue tickets to unbelted motorists, and only one respondent mentioned VMBs as the source at post-program.

Approximately 7 out of 10 respondents in Joplin and Cape Girardeau, for each data collection wave, said that police officers were spending "about the right of time" enforcing traffic laws. Across all four data collection waves, much higher percentages of Joplin respondents than Cape Girardeau respondents indicated having seen or heard of special efforts in the past 30 days by police in their communities to arrest drunk drivers. However, in Joplin the change was not in the expected direction. The percentage of those who reported having heard about the efforts *declined* from 41% at pre-intervention to both mid- and post-intervention waves (32% and 30%, respectively).

Another interesting finding is the consistency in the responses to the question about the biggest traffic safety problem in the community. At each data collection wave, most respondents in all four sites said they felt "drivers on cell phones" was their communities' biggest traffic safety problem. The estimated percentage over all 16 administrations of the survey (four times in four communities) ranged from 69% to 76%.

Seat Belt Use

Norman's seat belt use rate at the pre-program observation was 88.6%. This was 3 percentage points higher than Oklahoma's 2018 and only 1 percentage point below the national rate that year. Norman's seat belt use rate increased by 1.9 percentage points between the pre-program to the mid-program observation but fell below the pre-program rate by 1 percentage point by program end. Several factors may account for Norman's decrease in the second half of the program, including regression to the mean, and fewer hours on data targeted details from mid- to post-program. While the program included high-visibility seat belt enforcement messages, the slogan *Buckle Up Like a Champion Today* did not mention enforcement, which may have limited the program's effectiveness. In comparison, the Broken Arrow control site, which started with a seat belt use rate 4 percentage points lower than Norman's, showed a 2.3 percentage point increase between pre- and mid-program. By the post-program observation, its seat belt use rate was 3.9 percentage points higher than it was at the first observation. Broken Arrow's increase likely resulted from seat belt enforcement funded by OHSO throughout Norman's program period. Statewide enforcement may have also contributed to Norman's increase at mid-program.

Conclusions

Results from Norman indicate that the 15-month, high-visibility seat belt enforcement program in high crash- and crime areas with high seat belt law infraction rates and a large proportion of unbelted, crash-involved occupants was not effective in increasing seat belt use rates. The program also had no effect on community attitudes toward seat belt law enforcement. In Joplin the process evaluation found there was not enough program activity to increase community support for sustained impaired-driving law enforcement.

References

- Decina, L. E., Alonge, M. A., Alonge, C., Drobnick, A., & Mastromatto, T. (Unpublished/a). Evaluating combined occupant protection and speed mini-grants, International Association of the Chiefs of Police (IACP) in Arkansas and Rhode Island. USDOT/NHTSA Contract No. DTNH22-09-D-00135.
- Decina, L. E., Alonge, M. A., Alonge, C., Drobnick, A., & Mastromatto, T. (Unpublished/b). Evaluating combined occupant protection and speed mini-grants, National Sheriffs' Association (NSA) in Arkansas, Kentucky, and Wisconsin. USDOT/NHTSA Contract No. DTNH22-09-D-00135.
- Richard, C. M., Magee, K., Bacon-Abdelmoteleb, P., & Brown, J. L. (2018, April). *Countermeasures that work: A highway safety countermeasure guide for State Highway Safety Offices, 9th edition* (Report No. DOT HS 812 478). National Highway Traffic Safety Administration. Available at <u>www.nhtsa.gov/sites/nhtsa.gov/files/documents/812478_countermeasures-that-work-ahighway-safety-countermeasures-guide-.pdf</u> [Note, the 10th edition was published while the present study was in progress.]

	Pre-		Р	re-	Mid-Inte	rvention	Post-	
	Intervention 1		Interv	ention 2	10/31-11	/1/2018	Intervention	
	6/28-30/2017		4/11-13/2018		(<i>n=5</i>	21)	8/14-15/2019	
	(<i>n=</i> 3	14)	(<i>n</i> =	545)			(<i>n</i> =	355)
	n	%	n	%	n	%	Ν	%
Q1. In your opinion, which of the follo	owing is the	e biggest j	oroblem	in [com	nunity]?			
Drivers on cell phones	215	69%	392	72%	394	76%	254	72%
Drunk driving	24	8%	51	9%	34	7%	30	9%
People not wearing seat belts	5	2%	17	3%	11	2%	12	3%
Speeding	45	14%	91	17%	78	15%	70	20%
Other	49	16%	59	11%	64	12%	37	10%
No response	7	2%	5	1%	3	1%	2	1%
Q2. Do you think police officers in [co	mmunity]	are spend	ing too	much tim	ne, too little	e time, or	about t	he
right amount of time enforcing traffic	laws?	Q 0/	40	00/	20	Q 0/	20	Q 0/
	20	0%	49 50	9% 10%	39	0%	29	0% 1,0%
100 little time	34 160	520/	32 291	10% 52%	82 250	10%	37 195	10% 52%
About the right amount of time	01	32%	201	32%	230	48%	102	32%
Don't know	91	29%	159	29%	147	28%	102	29%
No response	• •	0%		1%	3	1%	2	1%
Q3. In your opinion, how big a proble	m is people	e not wear	ring seat	belts in	communit	y]?	20	90/
A big problem	30	10%	35	6%	40	8%	29	8%
A moderate problem	54	17%	131	24%	111	21%	77	22%
A small problem	11	25%	134	25%	132	25%	95	27%
Not a problem	46	15%	73	13%	61	12%	42	12%
Don't know	106	34%	171	31%	175	34%	109	31%
No response	1	0%	1	0%	2	0%	3	1%
Q4. In your opinion, how likely is it th ticket?	at drivers	in [comm	unity] w	ho DON	'T wear sea	at belts wi	ill recei	ve a
Very likely	64	20%	100	18%	74	14%	61	17%
Somewhat likely	83	26%	156	29%	157	30%	103	29%
Not very likely	85	27%	159	29%	160	31%	106	30%
Don't know	82	26%	128	24%	130	25%	85	24%
No response	0	0%	2	0%	0	0%	0	0%
Q5. How much do you agree with the	following s	tatement	? Police	in [comn	unity] are	writing n	nore sea	at belt
tickets than they were a few months a	go.	504	01	40/	22	10/	14	40/
Strongly agree	16	5%	21	4%	23	4%	14	4%
Somewhat agree	36	12%	56	10%	42	8%	53	15%
Somewhat disagree	15	5%	42	8%	34	7%	15	4%
Strongly disagree	3	1%	11	2%	11	2%	5	1%
Don't know	244	78%	410	75%	408	78%	267	75%
No response	0	0%	5	1%	3	1%	1	0%
Q6. In the past 30 days, have you seen tickets to drivers who are not wearing	or heard of seat belts?	of any spe ?	cial effo	rts by po	lice in [con	nmunity]	to issue	;
Yes	39	12%	66	12%	53	10%	56	16%

Appendix A: Norman Public Intercept Survey Responses by Wave

No	270	86%	471	86%	463	89%	291	82%
No response	5	2%	8	2%	5	1%	8	2%
If Yes (to Q6), where did you see or he	ear about i	t?						
Newspaper	0	0%	5	8%	10	19%	7	13%
Radio	4	10%	14	21%	8	15%	12	21%
TV	14	36%	14	21%	17	32%	13	23%
Brochure	0	0%	0	0%	0	0%	1	2%
Family/friend	14	36%	17	26%	13	25%	15	27%
Social media	5	13%	20	30%	14	26%	18	32%
Community meeting	1	3%	3	5%	0	0%	2	4%
Billboard	3	8%	10	15%	3	6%	5	9%
Electronic message boards	4	10%	0	0%	7	13%	10	18%
Q7. In your opinion, should catching I	people who	o don't we	ar seat l	oelts be a	high prior	ity, a med	lium pr	iority,
or a low priority for police in [commu	nity]?	100/	02	170/	07	100/	(7	100/
High priority	60	19%	92	17%	97	19%	6/	19%
Medium priority	128	41%	228	42%	218	42%	144	41%
Low priority	112	36%	191	35%	180	35%	128	36%
Don't know	14	5%	29	5%	21	4%	15	4%
No response	0	0%	5	1%	5	1%	1	0%
Q8. How much do you agree or disagr encourage seat belt use.	ee with thi	is stateme	nt? Poli	ce in [con	nmunity] s	hould do	more to)
Strongly agree	104	33%	174	32%	163	31%	98	28%
Somewhat agree	116	37%	206	38%	213	41%	153	43%
Somewhat disagree	38	12%	78	14%	56	11%	40	11%
Strongly disagree	20	6%	30	6%	17	3%	16	5%
Don't know	33	11%	51	9%	68	13%	44	12%
No response	3	1%	6	1%	4	1%	4	1%
Q9. How often do you wear a seat belt	?							
All of the time	280	89%	455	84%	475	91%	319	90%
Most of the time	26	8%	57	11%	29	6%	27	8%
Some of the time	3	1%	15	3%	7	1%	5	1%
Rarely	2	1%	6	1%	5	1%	0	0%
Never	2	1%	5	1%	2	0%	2	1%
No response	1	0%	7	1%	3	1%	2	1%
Q10. How often do you see police offic	ers in you	r commur	nity?					
Often	193	62%	336	62%	324	62%	228	64%
Sometimes	92	29%	162	30%	149	29%	97	27%
Rarely	24	8%	35	6%	44	8%	23	7%
Never	4	1%	6	1%	1	0%	3	1%
No response	1	0%	6	1%	3	1%	4	1%
Q11. In the past 6 months, have you b following reasons?	een in cont	tact with t	the local	police in	[communi	ity] for an	y one o	f the
Reported a crime	22	7%	29	5%	45	9%	32	9%
Asked an officer for information or advice	22	7%	30	6%	39	8%	30	9%

Stopped for a traffic violation	18	6%	40	7%	27	5%	32	9%
Casual conversation with an on-duty	40	13%	90	17%	78	15%	47	13%
police officer		224	-	201		2.24		0.01
Car crash	8	3%	8	2%	14	3%	8	2%
Working with police to solve specific problems	9	3%	11	2%	18	4%	6	2%
Was involved in a community activity/meeting/event that involved	19	6%	32	6%	25	5%	15	4%
the police		5 0/	20	5 0/	21	<i></i>	10	
Other	22	7%	38	7%	31	6%	19	5%
None of the above	194	62%	328	60%	304	58%	222	63%
No response	15	5%	22	4%	30	6%	12	3%
Q12. In the past 6 months, what activ	ities have y	ou seen p	olice cor	nducting	in [commu	nity]?	1	
Talking with residents	73	23%	171	31%	141	27%	100	28%
Talking with business owners	26	8%	67	12%	43	8%	41	12%
Attending community meetings	32	10%	76	14%	79	15%	53	15%
Enforcing traffic laws	197	63%	383	70%	364	70%	231	65%
Getting involved with kids through recreational or school activities	47	15%	99	18%	118	23%	65	18%
Other	30	10%	49	9%	52	10%	23	7%
None of the above	60	19%	94	17%	64	12%	55	16%
No response	14	5%	24	4%	28	5%	14	4%
Q13. In the past 6 months, have you h	eard about	t any mee	tings in	[commun	ity] to talk	about se	at belts	?
Yes	4	1%	17	3%	4	1%	14	4%
No	298	95%	504	93%	481	92%	330	93%
No response	12	4%	24	4%	36	7%	11	3%
If Yes (to Q13) have you attended any	of these m	eetings?						
Yes	0	0%	4	24%	0	0%	1	7%
No	3	75%	13	77%	4	100%	13	93%
No response	1	25%	0	0%	0	0%	0	0%
Q14. How much work are police doing	g with the	residents	of [comr	nunity] to	o increase s	seat belt u	ise?	
A lot	15	5%	20	4%	16	3%	20	6%
Some	33	11%	68	13%	60	12%	50	14%
Very little	15	5%	20	4%	51	10%	14	4%
Nothing at all	5	2%	11	2%	10	2%	4	1%
Don't know	230	73%	400	73%	355	68%	254	72%
No response	16	5%	26	5%	29	6%	13	4%
Recruitment Sites	I							
Tag Center/License Renewal	114	36%	165	30%	205	39%	149	42%
DPS Driver Exam Center	92	29%	107	20%	0	0%	0	0%
Public Library	62	20%	218	40%	131	25%	130	37%
Grocery Store	43	14%	55	10%	185	36%	76	21%
Hotel/Motel	2	1%	0	0%	0	0%	0	0%
Sex								
Male	126	40%	114	39%	212	39%	182	41%

Female	168	54%	156	53%	299	55%	252	56%
No Response	20	6%	23	8%	34	6%	15	3%
Age Group								
Under 20	14	4%	29	10%	16	3%	19	4%
21 to 34	71	23%	78	27%	158	29%	69	15%
35 to 49	105	33%	101	34%	145	27%	126	28%
50 to 64	65	21%	48	16%	114	21%	105	23%
65 and over	46	15%	19	6%	85	16%	118	26%
No response	13	4%	18	6%	27	5%	12	3%
Race								
White	209	67%	177	60%	383	70%	335	75%
Black	25	8%	29	10%	26	5%	23	5%
American Indian or Alaskan Native	20	6%	13	4%	23	4%	12	3%
Asian	14	4%	17	6%	22	4%	13	3%
Native Hawaiian or Pacific Islander	0	0%	0	0%	1	0%	4	1%
Another race	9	3%	13	4%	19	3%	18	4%
More than one race	18	6%	15	5%	27	5%	24	5%
No response	19	6%	29	10%	44	8%	20	4%
Ethnicity								
Hispanic	22	7%	32	11%	44	8%	33	7%
Non-Hispanic	274	87%	237	81%	462	85%	390	87%
No Response	18	6%	24	8%	39	7%	26	6%

Appendix B: Broken Arrow Public Intercept Survey Responses by Wave

	Pr Interv 6/26-30 (n=2	e- rention 1 0/2017 293)	Pr Interve 4/9-10 (<i>n</i> =	re- ention 2)/2018 449)	Mie Interve 10/29-3 (<i>n=3</i>	d- ention 0/2018 53)	Pos Interve 8/12-13 (n=3	st- ention 3/2019 307)	
	n	%	n	%	n	%	n	%	
Q1. In your opinion, which of the follow	ving is the	biggest p	roblem i	n [comm	unity]?			-	
Drivers on cell phones	210	72%	343	76%	258	73%	223	73%	
Drunk driving	28	10%	20	5%	18	5%	15	5%	
People not wearing seat belts	5	2%	14	3%	3	1%	6	2%	
Speeding	43	15%	76	17%	75	21%	68	22%	
Other	20	7%	42	9%	40	11%	25	8%	
No response	5	2%	6	1%	4	1%	6	2%	
Q2. Do you think police officers in [community] are spending too much time, too little time, or about the right amount of time enforcing traffic laws?									
Too much time	30	10%	11	2%	15	4%	16	5%	
Too little time	33	11%	45	10%	41	12%	35	11%	
About the right amount of time	124	42%	243	54%	188	53%	154	50%	
Don't know	104	36%	149	33%	106	30%	100	33%	
No response	2	1%	1	0%	3	1%	2	1%	
Q3. In your opinion, how big a problem	is people	not weari	ng seat b	elts in [c	ommunity	·]?			
A big problem	39	13%	55	12%	27	8%	18	6%	
A moderate problem	62	21%	103	23%	84	24%	75	24%	
A small problem	50	17%	83	19%	76	22%	75	24%	
Not a problem	30	10%	47	11%	46	13%	40	13%	
Don't know	110	38%	161	36%	119	34%	99	32%	
No response	2	1%	0	0%	1	0%	0	0%	
Q4. In your opinion, how likely is it that ticket?	t drivers in	n [commu	nity] wh	o DON'I	wear sea	t belts wi	ll receive	a	
Very likely	63	22%	72	16%	57	16%	40	13%	
Somewhat likely	96	33%	119	27%	111	31%	106	35%	
Not very likely	54	18%	138	31%	86	24%	77	25%	
Don't know	79	27%	120	27%	97	28%	82	27%	
No response	1	0%	0	0%	2	1%	2	1%	
Q5. How much do you agree with the fo tickets than they were a few months ago	llowing st	atement?	Police in	[commu	nity] are v	writing m	iore seat	belt	
Strongly agree	15	5%	15	3%	21	6%	11	4%	
Somewhat agree	42	14%	52	12%	36	10%	38	12%	
Somewhat disagree	10	3%	37	8%	27	8%	11	4%	
Strongly disagree	7	2%	13	3%	4	1%	5	2%	
Don't know	217	74%	328	73%	262	74%	240	78%	
No response	2	1%	4	1%	3	1%	2	1%	
Q6. In the past 30 days, have you seen o to drivers who are not wearing seat belt	or heard of s?	f any spec	ial effort	s by poli	ce in [com	munity] (to issue t	ickets	

Yes	49	17%	56	13%	47	13%	35	11%
No	232	79%	380	85%	290	82%	265	86%
No response	12	4%	13	3%	16	5%	7	2%
If Yes (to Q6), where did you see or hea	r about it?	?	•	•		•		
Newspaper	4	8%	6	11%	2	4%	2	6%
Radio	11	22%	11	20%	10	21%	10	29%
TV	21	43%	27	48%	11	23%	14	40%
Brochure	0	0%	0	0%	0	0%	0	0%
Family/friend	8	16%	7	13%	11	23%	3	9%
Social media	9	18%	9	16%	14	30%	8	23%
Community meeting	2	4%	1	2%	2	4%	2	6%
Billboard	9	18%	7	13%	4	9%	3	9%
Electronic message boards	6	12%	3	5%	3	6%	1	3%
Q7. In your opinion, should catching pe	eople who	don't wea	r seat be	lts be a h	igh priorit	y, a med	ium pric	ority,
or a low priority for police in [commun	ity]?	240/	100	220/	70	200/	70	240/
High priority	/1	24%	100	22%	12	20%	12	24%
Medium priority	97	33% 29%	1/0	39%	140	41%	115	38%
Low priority	110	38%	154	34%	110	53%	106	35%
Don't know	15	5%	18	4%	18	5%	10	3%
No response	0	0%	1 19 Dallar	0%	1	0%	4	1%
Q8. How much do you agree or disagre encourage seat belt use.	e with this	statemen	t? Police	in [com	nunity] sn		nore to	
Strongly agree	87	30%	150	33%	115	33%	97	32%
Somewhat agree	115	39%	191	43%	137	39%	113	37%
Somewhat disagree	30	10%	36	8%	48	14%	43	14%
Strongly disagree	14	5%	13	3%	11	3%	19	6%
Don't know	43	15%	57	13%	41	12%	33	11%
No response	4	1%	2	0%	1	0%	2	1%
Q9. How often do you wear a seat belt?			1				1	1
All of the time	238	81%	402	90%	306	87%	271	88%
Most of the time	39	13%	34	8%	33	9%	21	7%
Some of the time	7	2%	5	1%	5	1%	6	2%
Rarely	5	2%	5	1%	3	1%	5	2%
Never	3	1%	1	0%	3	1%	2	1%
No response	1	0%	2	0%	3	1%	2	1%
Q10. How often do you see police office	rs in your	communi	ty?	•		•		
Often	154	53%	241	54%	197	56%	181	59%
Sometimes	101	35%	159	35%	116	33%	96	31%
Rarely	30	10%	43	10%	32	9%	26	9%
Never	7	2%	2	0%	4	1%	3	1%
No response	1	0%	4	1%	4	1%	1	0%
Q11. In the past 6 months, have you be	en in conta	ect with th	e local p	olice in [communit	y] for an	y one of	the
following reasons?	10	<u> </u>	10	40/	16	50/	14	50/
keported a crime	10	6%	19	4%	10	5%	14	3%

Asked an officer for information or	11	4%	15	3%	17	5%	9	3%
advice								
Stopped for a traffic violation	16	6%	15	3%	7	2%	7	2%
Casual conversation with an on-duty police officer	21	7%	33	7%	36	10%	31	10%
Car crash	9	3%	10	2%	11	3%	2	1%
Working with police to solve specific problems	6	2%	4	1%	7	2%	4	1%
Was involved in a community activity/meeting/event that involved the police	6	2%	13	3%	13	4%	7	2%
Other	10	3%	21	5%	14	4%	15	5%
None of the above	211	72%	343	76%	253	72%	233	76%
No response	19	7%	11	2%	14	4%	12	4%
Q12. In the past 6 months, what activit	ies have yo	u seen po	lice cond	ucting in	[commun	ity]?		1
Talking with residents	53	18%	78	17%	77	22%	74	24%
Talking with business owners	19	7%	29	7%	38	11%	29	9%
Attending community meetings	16	6%	39	9%	40	11%	28	9%
Enforcing traffic laws	152	52%	256	57%	211	60%	166	54%
Getting involved with kids through recreational or school activities	36	12%	54	12%	56	16%	45	15%
Other	18	6%	39	9%	24	7%	12	4%
None of the above	93	32%	127	28%	85	24%	85	28%
No response	22	8%	10	2%	98	28%	16	5%
i to response		070	10	270	70	2070	10	570
Q13. In the past 6 months, have you he	ard about	any meeti	ngs in [c	ommuni	ty] to talk a	about sea	at belts?	570
Q13. In the past 6 months, have you he Yes	ard about	any meeti 4%	ngs in [c	ommuni 4%	ty] to talk a	about sea	at belts?	3%
Q13. In the past 6 months, have you he Yes No	ard about 12 260	any meeti 4% 89%	ngs in [c 16 423	2% ommuni 4% 94%	ty] to talk a 7 331	about sea 2% 94%	10 at belts? 10 285	3% 93%
Q13. In the past 6 months, have you he Yes No No response	ard about 12 260 21	any meeti 4% 89% 7%	ngs in [c 16 423 10	2%	ty] to talk a 7 331 15	about sea 2% 94% 4%	10 at belts? 10 285 12	3% 93% 4%
Q13. In the past 6 months, have you he Yes No No response If Yes (to Q13) have you attended any o	ard about 12 260 21 of these me	any meeti 4% 89% 7% eetings?	ngs in [c 16 423 10	2%	ty] to talk a 7 331 15	2% 2% 94% 4%	10 10 285 12	3% 93% 4%
Q13. In the past 6 months, have you he Yes No No response If Yes (to Q13) have you attended any o Yes	ard about 12 260 21 of these me 3	any meeti 4% 89% 7% eetings? 25%	ngs in [c 16 423 10	00000000000000000000000000000000000000	y] to talk : 7 331 15 0	23% about sea 2% 94% 4%	10 at belts? 10 285 12 0	3% 93% 4%
Q13. In the past 6 months, have you he Yes No No response If Yes (to Q13) have you attended any Yes No	12 260 21 of these me 3 7	any meeti 4% 89% 7% eetings? 25% 58%	ngs in [c 16 423 10 1 1 13	2% ommuni 4% 94% 2% 6% 81%	y] to talk a 7 331 15 0 6	2% about sea 2% 94% 4% 0% 86%	10 at belts? 10 285 12 0 9	3% 3% 93% 4% 0% 90%
Q13. In the past 6 months, have you he Yes No No response If Yes (to Q13) have you attended any o Yes No No response	ard about 12 260 21 of these me 3 7 2	any meeti 4% 89% 7% eetings? 25% 58% 17%	10 ngs in [c 16 423 10 1 13 2	2% 4% 94% 2% 6% 81% 13%	y] to talk : 7 331 15 0 6 1	2% about sea 2% 94% 4% 0% 86% 14%	10 at belts? 10 285 12 0 9 1	3% 93% 4% 0% 90% 10%
Q13. In the past 6 months, have you he Yes No No response If Yes (to Q13) have you attended any o Yes No No response Q14. How much work are police doing	ard about 12 260 21 of these me 3 7 2 with the reference	any meeti 4% 89% 7% eetings? 25% 58% 17% esidents of	10 ngs in [c 16 423 10 1 13 2 f [commuted]	2% ommuni 4% 94% 2% 6% 81% 13% unity] to	y] to talk a 7 331 15 0 6 1 increase se	23% about sea 2% 94% 4% 0% 86% 14% eat belt u	10 at belts? 10 285 12 0 9 1 se?	3% 93% 4% 0% 90% 10%
Q13. In the past 6 months, have you he Yes No No response If Yes (to Q13) have you attended any o Yes No No response Q14. How much work are police doing A lot	ard about 12 260 21 of these me 3 7 2 with the re 21	any meeti 4% 89% 7% eetings? 25% 58% 17% esidents of 7%	10 ngs in [c 16 423 10 1 13 2 f [commuted of the second	2% 4% 94% 2% 6% 81% 13% unity] to 3%	y to talk : 7 331 15 0 6 1 increase se 12	2% about sea 2% 94% 4% 0% 86% 14% eat belt u 3%	10 at belts? 10 285 12 0 9 1 se? 11	3% 93% 4% 0% 90% 10%
Q13. In the past 6 months, have you he Yes No No response If Yes (to Q13) have you attended any o Yes No No response Q14. How much work are police doing A lot Some	ard about 12 260 21 of these me 3 7 2 with the ro 21 3	any meeti 4% 89% 7% 25% 58% 17% esidents of 7% 13%	10 ngs in [c 16 423 10 1 13 2 f [common 15 71	2% ommuni 4% 94% 2% 6% 81% 13% 13% inity] to 3% 16%	7 331 15 0 6 1 increase se 12 54	23% about sea 2% 94% 4% 0% 86% 14% eat belt u 3% 15%	10 at belts? 10 285 12 0 9 1 se? 11 39	3% 3% 93% 4% 0% 90% 10% 4% 13%
Q13. In the past 6 months, have you he Yes No No response If Yes (to Q13) have you attended any o Yes No No response Q14. How much work are police doing A lot Some Very little	ard about 12 260 21 of these me 3 7 2 with the re 21 39 9	any meeti 4% 89% 7% 25% 58% 17% esidents of 7% 3%	10 ngs in [c 16 423 10 1 13 2 f [commution] 15 71 38	2% ommunit 4% 94% 2% 6% 81% 13% mity] to 3% 16% 9%	7 331 15 0 6 1 increase se 12 54 17	2% about sea 2% 94% 4% 0% 86% 14% eat belt u 3% 15% 5%	10 at belts? 10 285 12 0 9 1 se? 11 39 13	3% 93% 4% 0% 90% 10% 4% 13% 4%
Q13. In the past 6 months, have you he Yes No No response If Yes (to Q13) have you attended any o Yes No No response Q14. How much work are police doing A lot Some Very little Nothing at all	ard about 12 260 21 of these me 3 7 2 with the re 21 39 9 2	any meeti 4% 89% 7% 25% 58% 17% esidents of 7% 13% 3% 1%	10 ngs in [c 16 423 10 1 13 2 f [commution] 15 71 38 3	2% ommuni 4% 94% 2% 6% 81% 13% mity] to 3% 16% 9% 1%	y to talk : 7 331 15 0 6 1 increase set 12 54 17 2 2	23% about sea 2% 94% 4% 0% 86% 14% at belt u 3% 15% 5% 1%	10 at belts? 10 285 12 0 9 1 se? 11 39 13 3	3% 93% 4% 0% 90% 10% 4% 13% 4% 1%
Q13. In the past 6 months, have you he Yes No No response If Yes (to Q13) have you attended any o Yes No No response Q14. How much work are police doing A lot Some Very little Nothing at all Don't know	ard about 12 260 21 of these me 3 7 2 with the ro 21 39 9 2 199	any meeti 4% 89% 7% 25% 58% 17% esidents of 7% 13% 3% 1% 68%	10 ngs in [c 16 423 10 1 13 2 f [commution] 15 71 38 3 309	2% ommuni 4% 94% 2% 6% 81% 13% 13% 16% 9% 1% 69%	y to talk : 7 331 15 0 6 1 increase set 12 54 17 2 257	2% about sea 2% 94% 4% 0% 86% 14% eat belt u 3% 15% 5% 1% 73%	10 at belts? 10 285 12 0 9 1 se? 11 39 13 3 226	3% 93% 4% 90% 10% 4% 13% 4% 1% 74%
Q13. In the past 6 months, have you he Yes No No response If Yes (to Q13) have you attended any o Yes No No No response Q14. How much work are police doing A lot Some Very little Nothing at all Don't know No response	ard about 12 260 21 of these me 3 7 2 with the re 21 39 9 2 199 23	any meeti 4% 89% 7% 25% 58% 17% esidents of 7% 13% 3% 1% 68% 8%	10 ngs in [c 16 423 10 1 13 2 f [commution] 15 71 38 3 309 13	2% ommuni 4% 94% 2% 6% 81% 13% 13% 13% 16% 9% 16% 9% 1% 69% 3%	y to talk : 7 331 15 0 6 1 increase set 12 54 17 2 257 11	25% about sea 2% 94% 4% 0% 86% 14% at belt u 3% 15% 5% 1% 73% 3%	10 at belts? 10 285 12 0 9 1 se? 11 39 13 3 226 15	3% 93% 4% 0% 90% 10% 4% 13% 4% 1% 74% 5%
Q13. In the past 6 months, have you he Yes No No response If Yes (to Q13) have you attended any o Yes No No response Q14. How much work are police doing A lot Some Very little Nothing at all Don't know No response Recruitment Sites	ard about 12 260 21 of these me 3 7 2 with the re 21 39 9 2 199 23	any meeti 4% 89% 7% 25% 58% 17% esidents of 7% 13% 3% 1% 68% 8%	10 ngs in [c 16 423 10 1 13 2 f [commution] 15 71 38 3 309 13	2% ommunit 4% 94% 2% 6% 81% 13% unity] to 3% 16% 9% 1% 69% 3%	7 331 15 0 6 1 increase se 12 54 17 2 257 11	2% about sea 2% 94% 4% 0% 86% 14% eat belt u 3% 15% 5% 1% 73% 3%	10 at belts? 10 285 12 0 9 1 se? 11 39 13 3 226 15	3% 3% 93% 4% 10% 4% 13% 4% 5%
Q13. In the past 6 months, have you he Yes No No response If Yes (to Q13) have you attended any o Yes No No response Q14. How much work are police doing A lot Some Very little Nothing at all Don't know No response Recruitment Sites DPS Driver License Exam Center	ard about 12 260 21 of these me 3 7 2 with the re 21 39 9 2 199 23 248	any meeti 4% 89% 7% 25% 58% 17% esidents of 7% 13% 3% 1% 68% 8%	10 ngs in [c 16 423 10 1 13 2 f [commution] 15 71 38 3 309 13 186	2% ommuni 4% 94% 2% 6% 81% 13% mity] to 3% 16% 9% 1% 69% 3%	y to talk : 7 331 15 0 6 1 increase set 12 54 17 2 257 11 172	2% about sea 2% 94% 4% 0% 86% 14% eat belt u 3% 15% 5% 1% 73% 3%	10 at belts? 10 285 12 0 9 1 se? 11 39 13 3 226 15 162	3% 3% 93% 4% 10% 4% 13% 4% 5% 53%
Q13. In the past 6 months, have you he Yes No No response If Yes (to Q13) have you attended any o Yes No No response Q14. How much work are police doing A lot Some Very little Nothing at all Don't know No response Recruitment Sites DPS Driver License Exam Center Public Library	ard about 12 260 21 of these me 3 7 2 with the ro 21 39 9 2 199 23 248 0	any meeti 4% 89% 7% eetings? 25% 58% 17% esidents of 7% 13% 3% 1% 68% 8% 85% 0%	10 ngs in [c 16 423 10 1 13 2 f [common 15 71 38 3 309 13 186 74	2% ommuni 4% 94% 2% 6% 81% 13% 13% 16% 9% 1% 69% 3% 41% 17%	7 331 15 0 6 1 increase set 12 54 17 2 257 11 172 4	23% about sea 2% 94% 4% 0% 86% 14% seat belt u 3% 15% 5% 1% 73% 3% 49% 1%	10 at belts? 10 285 12 0 9 1 se? 11 39 13 3 226 15 162 6	3% 3% 93% 4% 10% 4% 13% 4% 5% 53% 2%
Q13. In the past 6 months, have you he Yes No No response If Yes (to Q13) have you attended any o Yes No No response Q14. How much work are police doing A lot Some Very little Nothing at all Don't know No response Recruitment Sites DPS Driver License Exam Center Public Library Grocery Store	ard about 12 260 21 of these me 3 7 2 with the re 21 39 9 2 199 23 248 0 0	any meeti 4% 89% 7% 25% 58% 17% esidents of 7% 13% 3% 1% 68% 8% 0% 0% 0%	10 ngs in [c 16 423 10 1 13 2 f [common 15 71 38 3 309 13 186 74 189	2% ommuni 4% 94% 2% 6% 81% 13% 13% 16% 9% 16% 9% 1% 69% 3% 41% 17% 42%	y to talk : 7 331 15 0 6 1 increase set 12 54 17 2 257 11 172 4 177	23% about sea 2% 94% 4% 0% 86% 14% 5% 15% 5% 15% 5% 1% 73% 3% 49% 1% 50%	10 at belts? 10 285 12 0 9 1 se? 11 39 13 3 226 15 162 6 139	3% 3% 93% 4% 10% 4% 13% 4% 5% 53% 2% 45%
Q13. In the past 6 months, have you he Yes No No response If Yes (to Q13) have you attended any o Yes No No response Q14. How much work are police doing A lot Some Very little Nothing at all Don't know No response Recruitment Sites DPS Driver License Exam Center Public Library Grocery Store Hotel/Motel	ard about 12 260 21 of these me 3 7 2 with the re 21 39 9 2 199 23 248 0 0 6	any meeti 4% 89% 7% 25% 58% 17% esidents of 7% 13% 3% 1% 68% 8% 0% 0% 2%	10 ngs in [c 16 423 10 1 13 2 f [commu 15 71 38 3 309 13 186 74 189 0	2% ommuni 4% 94% 2% 6% 81% 13% mity] to 3% 16% 9% 1% 69% 3% 41% 17% 42% 0%	y to talk : 7 331 15 0 6 1 increase set 12 54 17 2 257 11 172 4 177 0 0	23% about sea 2% 94% 4% 0% 86% 14% at belt u 3% 15% 5% 1% 73% 3% 49% 1% 50% 0%	10 at belts? 10 285 12 0 9 1 se? 11 39 13 3 226 15 162 6 139 0	3% 3% 93% 4% 0% 90% 10% 4% 13% 4% 5% 53% 2% 45% 0%

Car Dealership	24	8%	0	0%	0	0%	0	0%
Mall/Shopping Center	5	2%	0	0%	0	0%	0	0%
Sex								
Male	114	39%	212	39%	182	41%	216	41%
Female	156	53%	299	55%	252	56%	266	51%
No Response	23	8%	34	6%	15	3%	39	7%
Age Group								
Under 20	29	10%	16	3%	19	4%	10	2%
21 to 34	78	27%	158	29%	69	15%	123	24%
35 to 49	101	34%	145	27%	126	28%	129	25%
50 to 64	48	16%	114	21%	105	23%	103	20%
65 and over	19	6%	85	16%	118	26%	126	24%
No response	18	6%	27	5%	12	3%	30	6%
Race								
White	177	60%	383	70%	335	75%	388	74%
Black	29	10%	26	5%	23	5%	20	4%
American Indian or Alaskan Native	13	4%	23	4%	12	3%	21	4%
Asian	17	6%	22	4%	13	3%	7	1%
Native Hawaiian or Pacific Islander	0	0%	1	0%	4	1%	4	1%
Another race	13	4%	19	3%	18	4%	16	3%
More than one race	15	5%	27	5%	24	5%	30	6%
No response	29	10%	44	8%	20	4%	35	7%
Ethnicity								
Hispanic	32	11%	44	8%	33	7%	21	4%
Non-Hispanic	237	81%	462	85%	390	87%	466	89%
No Response	24	8%	39	7%	26	6%	34	7%

	Pr	e-	Pre- Mid-		Post-			
	Intervention 1 Intervention		ention 2	Interve	ntion	Interve	ention	
	8/2-4/	2017	4/25-2	6/2018	1/30-31	/2019	9/11/-12	2/2019
	(<i>n=</i> 5	(<i>n</i> =540) (<i>n</i> =475) (<i>n</i> =435)		(<i>n=</i> 3	80)			
Q1. In your opinion, which of the follow	ving is the	biggest pı	oblem iı	ı [commı	ınity]?			
Drivers on cell phones	400	74%	345	73%	314	72%	262	69%
Drunk driving	54	10%	56	12%	42	10%	49	13%
People not wearing seat belts	26	5%	25	5%	16	4%	18	5%
Speeding	96	18%	60	13%	62	14%	54	14%
Other	52	10%	50	11%	48	11%	47	12%
No response	7	1%	7	2%	0	0%	8	2%
Q2. Do you think police officers in [con	nmunity] a	re spendi	ng too m	uch time	, too little (time, or a	about the	e right
amount of time enforcing traffic laws?	20	70/	24	70/	20	70/	26	70/
	39	/%	54	/%	50	/%	20	/%
	/5	14%	69	15%	62	14%	65	1/%
About the right amount of time	257	48%	232	49%	227	52%	173	46%
Don't know	160	30%	136	29%	2	26%	112	30%
No response	9	2%	4	1%	3	1%	4	1%
Q3. In your opinion, now big a problem					76	1.00/	76	2004
A big problem	/8	14%	94	20%	/6	18%	/6	20%
A moderate problem	223	41%	186	39%	195	45%	155	40%
A small problem	12	13%	53	11%	49	11%	45	12%
Not a problem	20	4%	9	2%	100	2%	6	2%
Don't know	141	20%	130	27%	2	24%	97	20%
No response	0 t dnivona ir	1%) nitul wh	1%	Z d too mua	1%) de will be	1%
caught by police?	t univers n	i [commu	inty] wi	o nave na	iu ioo muc	II to ui II		,
Very likely	75	14%	63	13%	61	14%	56	15%
Somewhat likely	265	49%	209	44%	195	45%	162	43%
Not very likely	110	20%	116	24%	105	24%	88	23%
Don't know	82	15%	83	18%	70	16%	70	18%
No response	8	2%	4	1%	4	1%	4	1%
Q5. How much do you agree with the fe	ollowing sta	atement:	Police in	[commu	nity] are a	rresting	more dru	ınk
drivers than they were a few months ag	30?	F 0/				594		504
Strongly agree	28	5%	23	5%	26	6%	21	6%
Somewhat agree	121	22%	99	21%	98	23%	80	21%
Somewhat disagree	42	8%	36	8%	36	8%	38	10%
Strongly disagree	12	2%	7	2%	14	3%	7	2%
Don't know	329	61%	305	64%	257	59%	228	60%
No response	8	2%	5	1%	4	1%	6	2%
Q6. In the past 30 days, have you seen of drunk drivers?	or heard of	any spec	al effort	s by poli	ce in [comi	nunity] (to arrest	
Yes	155	29%	193	41%	141	32%	115	30%
No	367	68%	276	58%	281	65%	250	66%

Appendix C: Joplin Public Intercept Survey Responses by Wave

No response	18	3%	6	1%	13	3%	15	4%
If Yes (to Q6), where did you see or hea	r about it?	?	I.				I.	
Newspaper	29	19%	32	17%	22	16%	22	19%
Radio	31	20%	38	20%	36	26%	26	23%
TV	73	47%	73	38%	46	33%	45	39%
Brochure	1	1%	1	1%	2	1%	0	0%
Family/friend	16	10%	18	9%	16	11%	12	10%
Social media	60	39%	110	57%	76	54%	44	38%
Community meeting	4	3%	1	1%	0	0%	2	2%
Billboard	4	3%	6	3%	8	6%	4	4%
Electronic message boards	7	5%	9	5%	10	7%	6	5%
Q7. In your opinion, should catching d	runk drive	rs be a hig	gh priori	ty, a meo	lium prior	ity, or a l	low prio	rity
for police in [community]?	250	650/	227	710/	202	650/	256	670/
Madium priority	127	05%	337 103	71%	282	03%	230	0/%
L ou priority	137	23%	105	22%	0	21%	91	24%
Don't know	10 25	5%	10	2 %	9 20	2 %0	10	4%
No response	23	20%	10	20%	20	104	5	J 70
O8 How much do you agree or disagree	o o with this	2 70	7 t? Doligo	2 70	0 munity] ch	1 70 ould do r	noro to c	1 70
drunk driving.	e with this	statemen	t: I once	in [com	inumty] sn	oulu uo i		toh
Strongly agree	195	36%	198	42%	160	37%	149	39%
Somewhat agree	190	35%	151	32%	148	34%	125	33%
Somewhat disagree	36	7%	34	7%	39	9%	35	9%
Strongly disagree	13	2%	4	1%	6	1%	7	2%
Don't know	95	18%	75	16%	71	16%	55	15%
No response	11	2%	13	3%	11	3%	9	2%
Q9. In the past month, have you driven	a motor v	ehicle wit	hin 2 hou	urs of dri	inking any	alcoholi	c bevera	ges?
Yes	45	8%	44	9%	36	8%	33	9%
No	483	89%	426	90%	386	89%	343	90%
No response	12	2%	5	1%	13	3%	4	1%
Q10. How often do you see police office	rs in your	communi	ty?					
Often	259	48%	233	49%	226	52%	171	45%
Sometimes	196	36%	163	34%	132	30%	138	36%
Rarely	65	12%	62	13%	58	13%	54	14%
Never	11	2%	10	2%	7	2%	11	3%
No response	9	2%	7	2%	12	3%	6	2%
Q11. In the past 6 months, have you be	en in conta	et with th	e local p	olice in [communit	y] for any	y one of	the
Tollowing reasons?	58	11%	46	10%	35	8%	24	6%
Asked an officer for information or	35	7%	25	5%	28	6%	25	7%
advice	55	770	23	570	20	0,0	23	770
Stopped for a traffic violation	35	7%	16	3%	14	3%	16	4%
Casual conversation with an on-duty	43	8%	31	7%	47	11%	39	10%
police officer	10	/10/	12	30/	0	20/	7	2.04
Car crash	19	4%	12	3%	ð	2%	/	2%

Working with police to solve specific	16	3%	8	2%	14	3%	13	3%
problems	• •							
Was involved in a community	28	5%	6	1%	15	3%	9	2%
police								
Other	32	6%	22	5%	12	3%	18	5%
None of the above	343	64%	333	70%	283	65%	253	67%
No response	23	4%	21	4%	0	0%	22	6%
Q12. In the past 6 months, what activit	ies have yo	u seen po	lice cond	ucting ir	[commun	ity]?		
Talking with residents	125	23%	106	22%	108	25%	110	29%
Talking with business owners	49	9%	42	9%	33	8%	35	9%
Attending community meetings	57	11%	55	12%	43	10%	27	7%
Enforcing traffic laws	340	63%	317	67%	263	61%	220	58%
Getting involved with kids through	112	21%	75	16%	70	16%	63	17%
recreational or school activities								
Other	36	7%	31	7%	14	3%	21	6%
None of the above	104	19%	97	20%	90	21%	91	24%
No response	35	7%	21	4%	0	0%	25	7%
Q13. In the past 6 months, have you he	ard about :	any meeti	ngs in [c	ommuni	ty] to talk a	about dru	unk driv	ing?
Yes	22	4%	31	7%	16	4%	24	6%
No	491	91%	417	88%	384	88%	335	88%
No response	27	5%	27	6%	35	8%	21	6%
If Yes (to Q13) have you attended any o	of these me	etings?						
Yes	1	5%	0	0%	0	0%	3	13%
No	20	91%	28	90%	15	94%	19	79%
No response	1	5%	3	10%	1	6%	2	8%
Q14. How much work are police doing	with the re	esidents of	f [comm	unity] to	stop drunk	driving	?	
A lot	44	8%	39	8%	44	10%	44	12%
Some	124	23%	118	25%	112	26%	79	21%
Very little	23	4%	29	6%	26	6%	28	7%
Nothing at all	8	2%	5	1%	7	2%	7	2%
Don't know	308	57%	258	54%	215	49%	199	52%
No response	33	6%	26	6%	31	7%	23	6%
Recruitment Sites:	I							
Tag Center/License Renewal	246	46%	247	52%	234	54%	221	58%
Dept. of Revenue Driver License Exam	36	7%	24	5%	29	7%	18	5%
Center								
Public Library	222	41%	204	43%	152	35%	141	37%
City Hall	21	4%	0	0%	20	5%	0	0%
Mall/Shopping Center	15	3%	0	0%	0	0%	0	0%
Sex								
Male	211	39%	197	42%	208	48%	163	43%
Female	301	56%	249	52%	191	44%	191	50%
No Response	28	5%	29	6%	36	8%	26	7%
Age Group								

Under 20	35	6%	29	6%	17	4%	13	3%
21 to 34	129	24%	122	26%	110	25%	85	22%
35 to 49	140	26%	111	23%	104	24%	88	23%
50 to 64	121	22%	97	20%	107	25%	81	21%
65 and over	90	17%	91	19%	66	15%	89	23%
No response	25	5%	25	5%	31	7%	24	6%
Race								
White	422	78%	390	82%	335	77%	293	77%
Black	14	3%	11	2%	8	2%	12	3%
American Indian or Alaskan Native	15	3%	12	3%	11	3%	9	2%
Asian	16	3%	4	1%	7	2%	0	0%
Native Hawaiian or Pacific Islander	1	0%	3	1%	1	0%	1	0%
Another race	16	3%	6	1%	12	3%	14	4%
More than one race	20	4%	13	3%	18	4%	18	5%
No response	36	7%	36	8%	43	10%	33	9%
Ethnicity								
Hispanic	18	3%	23	5%	13	3%	18	5%
Non-Hispanic	485	90%	420	88%	380	87%	327	86%
No Response	37	7%	32	7%	42	10%	35	9%

Appendix D: Cape Girardeau Public Intercept Survey Responses by Wave

	Pre- Intervention 1 Pre- Intervention 1 7/31-8/1/2017 4/23-23201 (n=470) (n=364)		re- ention 2 232018 364)	Mid- Intervention 1/28-29/2019 (n=343)		Post- Intervention 9/9-10/2019 (n=313)		
Q1. In your opinion, which of the follow	ving is the	biggest pi	oblem in	ı [comm	unity]?			
Drivers on cell phones	326	69%	254	70%	243	71%	233	74%
Drunk driving	47	10%	30	8%	26	8%	28	9%
People not wearing seat belts	14	3%	15	4%	13	4%	8	3%
Speeding	72	15%	44	12%	45	13%	49	16%
Other	53	11%	56	15%	35	10%	34	11%
No Response	4	1%	3	1%	11	3%	1	0%
Q2. Do you think police officers in [con amount of time enforcing traffic laws?	nmunity] a	re spendi	ng too m	uch time	, too little (time, or a	about the	e right
Too much time	32	7%	22	6%	24	7%	25	8%
Too little time	51	11%	48	13%	45	13%	44	14%
About the right amount of time	237	50%	179	49%	167	49%	144	46%
Don't know	148	32%	114	31%	105	31%	99	32%
No Response	2	0%	1	0%	2	1%	1	0%
Q3. In your opinion, how big a problem	n is drunk	driving in	[commu	nity]?				
A big problem	46	10%	43	12%	32	9%	42	13%
A moderate problem	168	36%	126	35%	131	38%	124	40%
A small problem	71	15%	63	17%	54	16%	43	14%
Not a problem	16	3%	11	3%	10	3%	9	3%
Don't know	166	35%	121	33%	113	33%	93	30%
No Response	3	1%	0	0%	3	1%	2	1%
Q4. In your opinion, how likely is it tha caught by police?	t drivers i	n [commu	nity] wh	o have h	ad too muc	ch to drii	nk will be	e
Very likely	55	12%	52	14%	49	14%	28	9%
Somewhat likely	234	50%	156	43%	149	43%	135	43%
Not very likely	81	17%	76	21%	75	22%	94	30%
Don't know	97	21%	78	21%	67	20%	56	18%
No response	3	1%	2	1%	3	1%	0	0%
Q5. How much do you agree with the fo drivers than they were a few months ag	ollowing sta 30?	atement:]	Police in	[commu	nity] are a	rresting	more dru	unk
Strongly agree	14	3%	15	4%	10	3%	11	4%
Somewhat agree	81	17%	36	10%	49	14%	41	13%
Somewhat disagree	17	4%	21	6%	19	6%	19	6%
Strongly disagree	7	2%	9	3%	6	2%	12	4%
Don't know	345	73%	281	77%	256	75%	228	73%

No response	6	1%	2	1%	3	1%	2	1%
Q6. In the past 30 days, have you seen of drunk drivers?	or heard of	any speci	al effort	s by poli	ce in [com	munity] (to arrest	
Yes	91	19%	64	18%	53	16%	76	24%
No	367	78%	293	81%	280	82%	232	74%
No response	12	3%	7	2%	10	3%	5	2%
If Yes (to Q6), where did you see or hea	r about it?							
Newspaper	27	30%	19	30%	12	23%	19	25%
Radio	6	7%	16	25%	7	13%	12	16%
TV	28	31%	15	23%	20	38%	23	30%
Brochure	1	1%	1	2%	0	0%	0	0%
Family/friend	19	21%	13	20%	5	9%	12	16%
Social media	32	35%	23	36%	17	32%	39	51%
Community meeting	1	1%	2	3%	1	2%	1	1%
Billboard	3	3%	3	5%	3	6%	3	4%
Electronic message boards	4	4%	6	9%	3	6%	4	5%
Q7. In your opinion, should catching du for police in [community]?	runk drive	rs be a hig	gh priori	ty, a mec	lium prior	ity, or a 🛛	low prior	rity
High priority	304	65%	244	67%	215	63%	211	67%
Medium priority	123	26%	94	26%	90	26%	81	26%
Low priority	11	2%	9	3%	18	5%	8	3%
Don't know	26	6%	15	4%	17	5%	11	4%
No response	6	1%	2	1%	4	1%	2	1%
Q8. How much do you agree or disagre drunk driving.	e with this	statemen	t? Police	in [com	nunity] sh	ould do r	nore to s	top
Strongly agree	147	31%	115	32%	100	29%	96	31%
Somewhat agree	166	35%	140	39%	134	39%	129	41%
Somewhat disagree	37	8%	15	4%	30	9%	12	4%
Strongly disagree	9	2%	11	3%	6	2%	6	2%
Don't know	99	21%	78	21%	69	20%	66	21%
No response	12	3%	5	1%	4	1%	4	1%
Q9. In the past month, have you driven	a motor v	ehicle wit	hin 2 hou	ırs of dri	nking any	alcoholi	c beveraş	ges?
Yes	42	9%	37	10%	39	11%	33	11%
No	420	89%	324	89%	300	88%	279	89%
No response	8	2%	3	1%	4	1%	1	0%
Q10. How often do you see police office	rs in your	communi	ty?					
Often	244	52%	206	57%	194	57%	168	54%
Sometimes	156	33%	112	31%	109	32%	102	33%
Rarely	52	11%	37	10%	32	9%	33	11%
Never	10	2%	5	1%	5	2%	7	2%
No response	8	2%	4	1%	3	1%	3	1%

Q11. In the past 6 months, have you be following reasons?	en in conta	et with th	e local p	olice in [communit	y] for an	y one of t	the
Reported a crime	30	6%	36	10%	25	7%	39	13%
Asked an officer for information or advice	25	5%	16	4%	18	5%	23	7%
Stopped for a traffic violation	20	4%	14	4%	8	2%	16	5%
Casual conversation with an on-duty police officer	40	9%	45	12%	33	10%	27	9%
Car crash	14	3%	10	3%	12	4%	13	4%
Working with police to solve specific problems	14	3%	14	4%	10	3%	10	3%
Was involved in a community activity/meeting/event that involved the police	22	5%	18	5%	17	5%	16	5%
Other	26	6%	13	4%	21	6%	20	6%
None of the above	320	68%	226	62%	224	65%	187	60%
No response	11	2%	0	0%	23	7%	16	5%
Q12. In the past 6 months, what activit	ies have yo	u seen po	lice cond	ucting in	[commun	ity]?		
Talking with residents	129	27%	103	28%	81	24%	90	29%
Talking with business owners	50	11%	43	12%	43	13%	34	11%
Attending community meetings	55	12%	53	15%	46	13%	36	12%
Enforcing traffic laws	288	61%	223	61%	215	63%	190	61%
Getting involved with kids through recreational or school activities	81	17%	69	19%	51	15%	58	19%
Other	26	6%	21	6%	13	4%	23	7%
None of the above	107	23%	75	21%	70	20%	66	21%
No response	14	3%	0	0%	26	8%	19	6%
Q13. In the past 6 months, have you he	ard about a	any meeti	ngs in [c	ommuni	ty] to talk a	about dr	unk driv	ing?
Yes	21	5%	20	6%	7	2%	13	4%
No	435	93%	314	86%	314	92%	285	91%
No response	14	3%	30	8%	22	6%	15	5%
If Yes (to Q13) have you attended any o	of these me	etings?		-				
Yes	3	14%	3	15%	0	0%	2	15%
No	17	81%	15	75%	4	57%	11	85%
No response	1	5%	2	10%	3	43%	0	0%
Q14. How much work are police doing	with the re	esidents of	[comm	unity] to	stop drunk	driving	?	-
A lot	27	6%	23	6%	27	8%	13	4%
Some	103	22%	61	17%	65	19%	59	19%
Very little	19	4%	17	5%	19	6%	19	6%
Nothing at all	10	2%	3	1%	6	2%	6	2%
Don't know	300	64%	232	64%	201	59%	200	64%
No response	11	2%	28	8%	25	7%	16	5%

Q11. In the past 6 months, have you been in contact with the local police in [community] for any one of the
following reasons?

Recruitment Sites:								
Tag Center/License Renewal	177	38%	166	46%	192	56%	0	0%
Dept. of Revenue Driver License Exam Center	34	7%	25	7%	32	9%	24	8%
Public Library	224	48%	173	48%	119	35%	289	92%
City Hall	0	0%	0	0%	0	0%	0	0%
Mall/Shopping Center	35	7%	0	0%	0	0%	0	0%
Sex								
Male	179	38%	152	42%	136	40%	92	29%
Female	276	59%	185	51%	183	53%	203	65%
No Response	15	3%	27	7%	24	7%	18	6%
Age Group								
Under 20	18	4%	25	7%	11	3%	16	5%
21 to 34	125	27%	95	26%	80	23%	93	30%
35 to 49	133	28%	81	22%	83	24%	75	24%
50 to 64	105	22%	76	21%	74	22%	55	18%
65 and over	79	17%	60	17%	72	21%	59	19%
No response	10	2%	27	7%	23	7%	15	5%
Race								
White	359	76%	272	75%	253	74%	245	78%
Black	48	10%	33	9%	23	7%	31	10%
American Indian or Alaskan Native	0	0%	2	1%	3	1%	1	0%
Asian	14	3%	7	2%	14	4%	4	1%
Native Hawaiian or Pacific Islander	2	0%	0	0%	1	0%	1	0%
Another race	20	4%	13	4%	12	4%	9	3%
More than one race	10	2%	6	2%	7	2%	5	2%
No response	17	4%	31	9%	30	9%	17	5%
Ethnicity								
Hispanic	17	4%	8	2%	8	2%	7	2%
Non-Hispanic	433	92%	324	89%	305	89%	288	92%
No Response	20	4%	32	9%	30	9%	18	6%

Pre-Intervention 1 Norman, OK (Program Site) June 28-29, 2017								
Occupant	n	SB = Yes	SB = NO	% Restraint Use				
Total	3272	2898	374	88.6%				
Driver	2974	2640	334	88.8%				
Front-Seat Passenger	298	258	40	86.6%				
Female	1561	1396	165	89.4%				
Driver	1396	1252	144	89.7%				
Front-Seat Passenger	165	144	21	87.3%				
Male	1711	1502	209	87.8%				
Driver	1578	1388	190	88.0%				
Front-Seat Passenger	133	114	19	85.7%				
Age < 24	606	527	79	87.0%				
Driver	487	422	65	86.7%				
Front-Seat Passenger	119	105	14	88.2%				
Age 25-59	2355	2087	268	88.6%				
Driver	2211	1963	248	88.8%				
Front-Seat Passenger	144	124	20	86.1%				
Age 60+	311	284	27	91.3%				
Driver	276	255	21	92.4%				
Front-Seat Passenger	35	29	6	82.9%				
Passenger Car	1416	1258	158	88.8%				
Driver	1302	1157	145	88.9%				
Front-Seat Passenger	114	101	13	88.6%				
Pickup Truck	536	450	86	84.0%				
Driver	485	411	74	84.7%				
Front-Seat Passenger	51	39	12	76.5%				
SUV	1164	1049	115	90.1%				
Driver	1056	952	104	90.2%				
Front-Seat Passenger	108	97	11	89.8%				
Van	155	140	15	90.3%				
Driver	130	119	11	91.5%				
Front-Seat Passenger	25	21	4	84.0%				
Unknown Vehicle Type	1	1	0	100.0%				
Driver	1	1	0	100.0%				
Front-Seat Passenger	0	0	0					

Appendix E: Norman Seat Belt Observations by Wave

Noi	Pre-Intervention 2 Norman, OK (Program Site)							
	Apri	il 11-12, 20 1	18					
Occupant	n	SB = Yes	SB = NO	% Restraint Use				
Total	2746	2432	314	88.6%				
Driver	2573	2277	296	88.5%				
Front-Seat Passenger	173	155	18	89.6%				
Female	1352	1208	144	89.3%				
Driver	1247	1113	134	89.3%				
Front-Seat Passenger	105	95	10	90.5%				
Male	1394	1224	170	87.8%				
Driver	1326	1164	162	87.8%				
Front-Seat Passenger	68	60	8	88.2%				
Age < 24	668	576	92	86.2%				
Driver	591	510	81	86.3%				
Front-Seat Passenger	77	66	11	85.7%				
Age 25-59	1735	1541	194	88.8%				
Driver	1676	1487	189	88.7%				
Front-Seat Passenger	59	54	5	91.5%				
Age 60+	342	314	28	91.8%				
Driver	305	279	26	91.5%				
Front-Seat Passenger	37	35	2	94.6%				
Passenger Car	1204	1072	132	89.0%				
Driver	1136	1012	124	89.1%				
Front-Seat Passenger	68	60	8	88.2%				
Pickup Truck	479	392	87	81.8%				
Driver	450	367	83	81.6%				
Front-Seat Passenger	29	25	4	86.2%				
SUV	911	827	84	90.8%				
Driver	854	774	80	90.6%				
Front-Seat Passenger	57	53	4	93.0%				
Van	152	141	11	92.8%				
Driver	133	124	9	93.2%				
Front-Seat Passenger	19	17	2	89.5%				
Unknown Age	1	1	0	100.0%				
Driver	1	1	0	100.0%				
Front-Seat Passenger	0	0	0					

Mid-Intervention Norman, OK (Program Site) October 31, 2018 – November 1, 2018								
Occupant	n	SB = Yes	SB = NO	% Restraint Use				
Total	2557	2313	244	90.5%				
Driver	2405	2173	232	90.4%				
Front-Seat Passenger	152	140	12	92.1%				
Female	1273	1149	124	90.3%				
Driver	1165	1050	115	90.1%				
Front-Seat Passenger	108	99	9	91.7%				
Male	1284	1164	120	90.7%				
Driver	1240	1123	117	90.6%				
Front-Seat Passenger	44	41	3	93.2%				
Age < 24	702	631	71	89.9%				
Driver	632	567	65	89.7%				
Front-Seat Passenger	70	64	6	91.4%				
Age 25-59	1575	1429	146	90.7%				
Driver	1526	1383	143	90.6%				
Front-Seat Passenger	49	46	3	93.9%				
Age 60+	280	253	27	90.4%				
Driver	247	223	24	90.3%				
Front-Seat Passenger	33	30	3	90.9%				
Passenger Car	1092	99 0	102	90.7%				
Driver	1040	943	97	90.7%				
Front-Seat Passenger	52	47	5	90.4%				
Pickup Truck	405	356	49	87.9%				
Driver	379	333	46	87.9%				
Front-Seat Passenger	26	23	3	88.5%				
SUV	929	845	84	91.0%				
Driver	866	785	81	90.6%				
Front-Seat Passenger	63	60	3	95.2%				
Van	131	122	9	93.1%				
Driver	120	112	8	93.3%				
Front-Seat Passenger	11	10	1	90.9%				

Post-Intervention Norman, OK (Program Site) August 14-15, 2019								
Occupant	n	SB = Yes	SB = NO	% Restraint Use				
Total	2795	2448	307	87.6%				
Driver	2551	2273	278	89.1%				
Front-Seat Passenger	244	215	29	88.1%				
Female	1360	1235	125	90.8%				
Driver	1213	1103	110	90.9%				
Front-Seat Passenger	147	132	15	89.8%				
Male	1435	1253	182	87.3%				
Driver	1388	1170	168	84.3%				
Front-Seat Passenger	97	83	14	85.6%				
Age < 24	693	610	83	88.0%				
Driver	579	508	71	87.7%				
Front-Seat Passenger	114	102	12	89.5%				
Age 25-59	1891	1689	202	89.3%				
Driver	1793	1605	188	89.5%				
Front-Seat Passenger	98	84	14	85.7%				
Age 60+	211	189	22	89.6%				
Driver	179	160	19	89.4%				
Front-Seat Passenger	32	29	3	90.6%				
Passenger Car	1092	972	120	89.0%				
Driver	1007	901	106	89.5%				
Front-Seat Passenger	85	71	14	83.5%				
Pickup Truck	484	396	88	81.8%				
Driver	446	366	80	82.1%				
Front-Seat Passenger	38	30	8	78.9%				
SUV	1055	97 0	85	91.9%				
Driver	964	884	80	91.7%				
Front-Seat Passenger	91	86	5	94.5%				
Van	164	150	14	91.5%				
Driver	134	122	12	91.0%				
Front-Seat Passenger	30	28	2	93.3%				

Pre-I	ntervention 1: Broke	n Arro	w, OK (Co	ntrol Site)	June 26-27, 2017
	Occupant	n	SB = Yes	SB = NO	% Restraint Use
Total		2925	2484	441	84.9%
	Driver	2663	2273	390	85.4%
	Front-Seat Passenger	262	211	51	80.5%
Female		1471	1288	183	87.6%
	Driver	1301	1150	151	88.4%
	Front-Seat Passenger	170	138	32	81.2%
Male		1452	1194	258	82.2%
	Driver	1361	1122	239	82.4%
	Front-Seat Passenger	91	72	19	79.1%
Age < 24	ļ	159	121	38	76.1%
	Driver	93	74	19	79.6%
	Front-Seat Passenger	66	47	19	71.2%
Age 25-5	59	2486	2111	375	84.9%
	Driver	2331	1983	348	85.1%
	Front-Seat Passenger	155	128	27	82.6%
Age 60+		277	249	28	89.9%
	Driver	237	214	23	90.3%
	Front-Seat Passenger	40	35	5	87.5%
Passenge	er Car	1222	1048	174	85.8%
	Driver	1121	971	150	86.6%
	Front-Seat Passenger	101	77	24	76.2%
Pickup T	[ruck	506	389	117	76.9%
	Driver	466	359	107	77.0%
	Front-Seat Passenger	40	30	10	75.0%
SUV		1029	894	135	86.9%
	Driver	931	812	119	87.2%
	Front-Seat Passenger	98	82	16	83.7%
Van		168	153	15	91.1%
	Driver	145	131	14	90.3%
	Front-Seat Passenger	23	22	1	95.7%
Unknow	n Sex	2	2	0	100.0%
	Driver	1	1	0	100.0%
	Front-Seat Passenger	1	1	0	100.0%
Unknow	n Age	3	3	0	100.0%
	Driver	2	2	0	100.0%
	Front-Seat Passenger	1	1	0	100.0%

Appendix F: Broken Arrow Seat Belt Observations by Wave

Pre-Intervention 2: Broken Arrow, OK (Control Site April 9-10, 2018				
Occupant	n	SB = Yes	SB = NO	% Restraint Use
Total	2446	2070	376	84.6%
Driver	2291	1942	349	84.8%
Front-Seat Passenger	155	128	27	82.6%
Female	1309	1117	192	85.3%
Driver	1212	1035	177	85.4%
Front-Seat Passenger	97	82	15	84.5%
Male	1137	953	184	83.8%
Driver	1079	907	172	84.1%
Front-Seat Passenger	58	46	12	79.3%
Age < 24	154	121	33	78.6%
Driver	115	92	23	80.0%
Front-Seat Passenger	39	29	10	74.4%
Age 25-59	1970	1668	302	84.7%
Driver	1889	1601	288	84.8%
Front-Seat Passenger	81	67	14	82.7%
Age 60+	321	280	41	87.2%
Driver	286	248	38	86.7%
Front-Seat Passenger	35	32	3	91.4%
Passenger Car	987	829	158	84.0%
Driver	929	782	147	84.2%
Front-Seat Passenger	58	47	11	81.0%
Pickup Truck	379	301	78	79.4%
Driver	360	290	70	80.6%
Front-Seat Passenger	19	11	8	57.9%
SUV	911	791	120	86.8%
Driver	851	737	114	86.6%
Front-Seat Passenger	60	54	6	90.0%
Van	169	149	20	88.2%
Driver	151	133	18	88.1%
Front-Seat Passenger	18	16	2	88.9%
Unknown Age	1	1	0	100.0%
Driver	1	1	0	100.0%
Front-Seat Passenger	0	0	0	

Mid-Intervention: Broken Arrow, OK (Control Site) October 29-30, 2018				
Occupant	n	SB = Yes	SB = NO	% Restraint Use
Total	2328	2024	304	86.9%
Driver	2200	1918	282	87.2%
Front-Seat Passenger	128	106	22	82.8%
Female	1250	1107	143	88.6%
Driver	1167	1034	133	88.6%
Front-Seat Passenger	83	73	10	88.0%
Male	1078	917	161	85.1%
Driver	1033	884	149	85.6%
Front-Seat Passenger	45	33	12	73.3%
Age < 24	192	145	47	75.5%
Driver	146	105	41	71.9%
Front-Seat Passenger	46	40	6	87.0%
Age 25-59	1812	1594	218	88.0%
Driver	1759	1553	206	88.3%
Front-Seat Passenger	53	41	12	77.4%
Age 60+	324	285	39	88.0%
Driver	295	260	35	88.1%
Front-Seat Passenger	29	25	4	86.2%
Passenger Car	923	805	118	87.2%
Driver	877	765	112	87.2%
Front-Seat Passenger	46	40	6	87.0%
Pickup Truck	369	301	68	81.6%
Driver	351	290	61	82.6%
Front-Seat Passenger	18	11	7	61.1%
SUV	906	796	110	87.9%
Driver	856	754	102	88.1%
Front-Seat Passenger	50	42	8	84.0%
Van	130	122	8	93.8%
Driver	116	109	7	94.0%
Front-Seat Passenger	14	13	1	92.9%

Post-Intervention Broken Arrow, OK (Control Site) August 12-13, 2019					
Occupant	n	SB = Yes	SB = NO	% Restraint Use	
Total	2323	2055	268	88.5%	
Driver	2221	1961	260	88.3%	
Front-Seat Passenger	102	94	8	92.2%	
Female	1168	1046	122	89.6%	
Driver	1106	989	117	89.4%	
Front-Seat Passenger	62	57	5	91.9%	
Male	1155	1009	146	87.4%	
Driver	1115	972	143	87.2%	
Front-Seat Passenger	40	37	3	92.5%	
Age < 24	224	195	29	87.1%	
Driver	189	161	28	85.2%	
Front-Seat Passenger	35	34	1	97.1%	
Age 25-59	1896	1676	220	88.4%	
Driver	1857	1643	214	88.5%	
Front-Seat Passenger	39	33	6	84.6%	
Age 60+	203	184	19	90.6%	
Driver	175	157	18	89.7%	
Front-Seat Passenger	28	27	1	96.4%	
Passenger Car	852	767	85	90.0%	
Driver	820	737	83	89.9%	
Front-Seat Passenger	32	30	2	93.8%	
Pickup Truck	403	332	71	82.4%	
Driver	394	323	71	82.0%	
Front-Seat Passenger	9	9	0	100.0%	
SUV	920	817	103	88.8%	
Driver	872	773	99	88.6%	
Front-Seat Passenger	48	44	4	91.7%	
Van	148	139	9	93.9%	
Driver	135	128	7	94.8%	
Front-Seat Passenger	13	11	2	84.6%	

Appendix G: Binary Logit Model Depicting the Relative Odds of Drivers Using Seat Belts Under Various Conditions

The team constructed a mixed effects logit model using the binary family of log links. A random intercept was estimated for the observation Site Number, assuming within-site observations may be more closely correlated than between-site observations.

The dependent variable was a binary outcome reflecting whether drivers used seat belts across four distinct observation periods and two Oklahoma towns, Broken Arrow (control) and Norman (intervention). The independent variables included:

- Occupant type drivers or passengers,
- Vehicle type car, SUV, pickup truck (truck), or van,
- Sex female or male,
- Age Group -24 or less, 25 to 59, 60 or older,
- Town Broken Arrow or Norman, and
- Study Phase Pre-Intervention 1, Pre-Intervention 2, Mid-Intervention, or Immediate Post-Intervention.

The team regressed 21,386 unique observations of driver restraint use onto the categorical independent variables listed above and estimated a random intercept for the Site Number variable to account for within-site correlation among observations. Table G-1 reports odds ratios - log odds of a user wearing a seat belt rather than not wearing a seat belt.

	Odds Ratio	Standard Error	р
1.Occupant (ref = driver)	1.121	0.091	0.158
Vehicle Type			
Car	ref	ref	ref
SUV	1.101	0.055	0.056
Truck	0.604	0.035	0.000
Van	1.479	0.163	0.000
Sex (ref = female)	1.086	0.049	0.067
Age Group			
< 25	ref	ref	ref
25-59	1.356	0.082	0.000
60+	1.708	0.151	0.000
Study Phase x Town			
1, Broken Arrow	ref	ref	ref
1, Norman	1.497	0.117	0.000
2, Broken Arrow	0.952	0.073	0.527
2, Norman	1.537	0.127	0.000
3, Broken Arrow	1.171	0.095	0.051

Table G-1. Binary	Logit Model Results	Depicting the Relative	Odds of Drivers	Using Seat Belts
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3, Norman	1.875	0.165	0.000
4, Broken Arrow	1.387	0.116	0.000
4, Norman	1.624	0.135	0.000
Constant	3.016	0.380	0.000
Site Number (variance of	0.017	0.010	
conditional random effects)			

Intra-class correlations calculated after estimating the mixed effects model demonstrated a low within-site correlation among observations of driver restraint use, ICC = .0051, SE = .0029. Across both towns, restraint use averaged 87.7% with a variance of 10.8%. Restraint use varied significantly by:

- Age of driver. Compared with drivers ≤ 24 years old, drivers 25- to 59 years old and 60+ years old were 36% and 71% more likely to wear seat belts, respectively.
- *Type of vehicle*. Compared with car and SUV drivers, truck drivers were 40% less likely to wear seat belts, whereas van drivers were 48% more likely than car and SUV drivers to wear seat belts.

Across study phases, and relative to restraint use at Pre-Intervention 1 (baseline) in Broken Arrow:

- *Drivers in Broken Arrow* were more 39% more likely to wear seat belts at Post-Intervention.
- *Drivers in Norman* were 44% more likely to wear seat belts at Pre-Intervention 1, 46% more likely to wear seat belts at Pre-Intervention 2, 79% more likely at Mid-Intervention, and 54% more likely at Post-Intervention.

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