

PROTOCOL

Protocol Title: Distracted driving practices among patients of Los Angeles County Department of Public Health (LACDPH) clinics

Principal Investigator: Lisa V. Smith, MS, DrPH

Key Personnel: Jennifer Piron, MPH; Tony Kuo, MD, MSHS; Amy Chan, MPH; Matthew Redelings, MPH, Patti Culross, MD, MPH, Phoebe Luong, MPH(c), Dalia Bedair, MPH, Mirna Ponce, MPH, Gloria Y. Kim, MPH; Patricia Cummings, MPH, Margaret Shih, MD, PhD, Loren Lieb, MPH, Sun Lee, MPH, Steven Teutsch, MD, MPH, Jacqueline Valenzuela, MPH, CHES, David Caley, RN, BSN, PHN, MPA(c), Deborah Davenport, PHN

Division/Program: Office of Health Assessment and Epidemiology (reporting to the Chief Science Officer); Injury and Violence Prevention Program, Office of Senior Health, and Research & Evaluation for the Division of Chronic Disease and Injury Prevention

Program Director: Frank Sorvillo, PhD

Key Terms:

Distracted Driving - any non-driving activity a person engages in while operating a motor vehicle. Such activities have the potential to distract the person from the primary task of driving and increase the risk of crashing.

I. Background and Status of the Problem

According to a 2009 traffic safety report by the National Highway Traffic Safety Administration's (NHTSA) National Center for Statistics and Analysis (NCSA) and data from the Fatality Analysis Reporting System (FARS), driver distraction was involved in 16 percent of all fatal crashes and 21 percent of injury crashes in 2008.¹ One study found that the risk of collision while talking on a cell phone during driving was four times that of an undistracted driver and equivalent to the risk of driving while intoxicated.² Youth drivers carry the highest incidence of cell phone use-related crashes and even frequently intentionally create distracting and dangerous driving situations for humor.^{3,4}

Personal electronic devices, including cellular phones, MP3 players and laptop computers, have become ubiquitous items and their use within a vehicle is now commonplace. Along with the electronic items that are brought into the car, rapidly increasing in-vehicle technology, such as navigation systems and audio players, provide another means of distractive tasks for drivers. Studies show that other visual, manual and cognitive distractions—such as eating and drinking, vehicle passengers, and adjusting car controls—also contribute to collisions and traffic accidents.^{5,6}

Increasing public awareness and concern for distracted driving has encouraged state legislators and governments to take action, including recent bans on cell phone use while driving. As of July 2010, eight states have laws prohibiting all drivers from using handheld cell phones while driving and 30 states have banned text messaging. While the enactment of cell phone use regulations for drivers is expected to reduce crashes and other motor vehicle accidents across the country, it is important to focus on all forms of preventable driver distractions to make the greatest impact on increasing drivers' safety.

In order to accurately assess and address distraction-related driving, it is necessary to account for various forms of distracting activities, as well as the frequency of occurrences. We propose to collect survey data on 1,550 patients attending Los Angeles County's sexually transmitted disease (STD), tuberculosis (TB), and immunization clinics. Surveys will collect basic demographic information and will ask patients about their driving history and practices. Information collected from this survey will be used to develop targeted interventions directed at patients attending our public health clinics.

Sources:

- ¹ National Highway Traffic Safety Administration. An Examination of Driver Distraction as Recorded in NHTSA Data. September 2009; 1-12.
- ² Strayer DL, Drews FA, Crouch DJ. A Comparison of the Cell Phone Driver and the Drunk Driver. *Human Factors: The Journal of the Human Factors and Ergonomics Society* 2006; 48:381-391.
- ³ Neyens DM, Boyle LN. The effect of distractions on the crash types of teenage drivers. *Accident Analysis and Prevention* 2007; 39:206-212.
- ⁴ Heck KE, Carlos RM. Passenger distractions among adolescent drivers. *Journal of Safety Research* 2008; 39:437-443.
- ⁵ Stutts J, Feaganes J, Reinfurt D, Rodgman E, Hamlett C, Gish K, Staplin L. Driver's exposure to distractions in their natural driving environment. *Accident Analysis and Prevention* 2005; 37:1093-1101.
- ⁶ Kass SJ, Beede KE, Vodanovich SJ. Self-reported measures of distractibility as correlates of simulated driving performance. *Accident Analysis and Prevention* 2010; 42:874-880.

II. Study Design/Methods

A) Purpose and hypotheses to be tested

This study will use a rapid assessment survey to investigate common beliefs about distracting tasks that may occur while driving. The survey will be distributed to patients (ages 16 years and older) attending STD, TB, and immunization clinics in Los Angeles County's Department of Public Health (LACDPH) centers.

Primary hypotheses:

1. A high percentage (we hypothesize nearly 50%) of clinic patients who drive motor vehicles engage in some sort of distracted driving.
2. A person who drives more frequently is more likely to report participating in distracted driving.
3. Younger, inexperienced drivers will report more activities believed to be driving distractions than older, more experienced drivers.

B) Description of target population

We plan to recruit 1,550 patients from five designated LACDPH centers (i.e., Central Health Center, Curtis Tucker Health Center, Hollywood-Wilshire Health Center, Pomona Health Center, and South Health Center). We plan to administer this survey at the LACDPH clinics in order to investigate the various activities related to distracted driving. The participants will be recruited in the clinic waiting rooms during pre-specified data collection periods. The recruitment procedures account for seasonal as well as daily variations in patient volume. Because the survey asks a question about sexual activity, eligible subjects under 18 years of age will be required to sign an assent form prior to being handed the survey. An "effective consent" script with an explanation of the purpose of the survey, the voluntary nature of the survey, the incentive that is available, and the confidentiality of the data is included at the beginning of the survey.

A systematic, serial sampling protocol (i.e. the first 310 patients visiting each of the five clinics on pre-determined dates) will be employed to screen for eligibility and for participation in the survey.

Inclusion and exclusion criteria:

Eligibility criteria included, at each health center: (i) patients of LACDPH's STD, TB and immunization clinics; (ii) must be at least 16 years of age; (iii) drivers of motor vehicles (car, motorcycle, moped) and (iv) individuals who speak English or Spanish. Participants will be excluded if they are unwilling to participate, if they are nondrivers, if less than 16 years old, if they do not speak English or Spanish, or if they are not receiving care at the public health center on the date of survey distribution.

C) *Data Collection*

Duration of data collection:

Three months, September 2010 – November 2010

Total duration of study including analyses:

Twelve months, September 2010 – August 2011

Trained, bilingual Data Collection & Analysis (DC&A) Unit staff will supervise distribution of a 3½-page self-administered survey to the first 1,550 patients prior to their exam at the five designated public health centers on pre-determined dates. The survey will be translated into Spanish by bilingual, bicultural LACDPH staff for cultural and linguistic relevance. DC&A Unit staff will be responsible for data collection, management and analyses. The survey will take participants approximately 10 to 15 minutes to complete.

The survey is divided into three parts:

1. Driving experience
2. List of activities related to distracted driving
3. Demographics

A low-fat granola bar (non-cash stipend valued at \$0.23) will be given to all consenting participants who complete the survey.

Software: Data from hard copies of survey will be entered in Microsoft Excel 2016 (V16.0) on a secure County laptop. The data file will be imported into SAS 9.4 for data cleaning and analysis (also on a County device).

D) *Data Analysis Plan*

Data analyses will involve various statistical procedures including frequency counts, cross-tabulations, scaling, and stratified analysis to examine beliefs regarding driving while distracted and frequency of driving while distracted. The study outcome/endpoints will be the completion of the questionnaire distribution at the LACDPH clinics and the tabulation and analysis of the survey data in aggregate form.

E) *Reading Ease and Reading Grade Level*

The Flesch-Kincaid Reading Level is the 7th grade and the Flesch Reading Ease is 61%.

III. Risks and Benefits

This study poses no more than minimal risk. To maintain participant anonymity, a unique identifier will be assigned to each survey. Due to the sensitive nature of some survey questions, there is a risk that respondents may experience distress while completing the survey. We will provide all survey respondents with information about support services that are available in the event that they are experiencing any distress related to their participation in the survey. Individual responses will not be shown to the participants or other DC&A Unit staff. The data will be entered into a secured database, and de-identified data will only be disseminated and/or reported in aggregate form.

Experimental Procedures: None

IV. Administrative Organization

This study will be led by the LACDPH, Office of Health Assessment and Epidemiology (Data Collection & Analysis Unit [DC&A]), in partnership with the Chronic Disease and Injury Prevention Program (Research and Evaluation Unit; and the Injury and Violence Prevention Program).

V. Privacy of Individuals and Confidentiality of Data

Data will be anonymous so there is no more than minimal risk due to breach of confidentiality. However, paper surveys will be destroyed after data have been entered into an electronic database. The electronic database will be stored on a secure server and accessed by a limited number of personnel needed for data and analysis. Any transfers of data will be completed using software which ensures that data is secured by an AES 256 compliant encryption during transit as well as at rest. Access to the data is only provided to authorized individuals on a need-to-know basis. After 3 years, electronic data will be deleted from the secure servers.

VI. Community Engagement and Sensitivity

An advisory group, including DPH patients, will be consulted to develop the survey. The survey will be pilot-tested on a convenience sample of community members to ensure accessibility and cultural sensitivity.

VII. Health Equity

While this progress will not address health equity directly, we will collect data including age, race/ethnicity, sexual orientation, gender identity, education level, disability status, and housing status. This data will help us identify communities that may be at high risk for distracted driving behaviors and unsafe driving practices.

VIII. Reporting/Dissemination of Findings

Results of the survey will be compiled into a summary report, which will be shared internally within the DPH Injury and Violence Prevention program to inform programmatic efforts. In addition, the summary report will be presented at various town hall meetings throughout the community.

IX. Attachments

Child assent form
Survey instrument including effective informed consent.
Budget