



# TRAFFIC SAFETY AMONG LATINO POPULATIONS IN CALIFORNIA:

Current Status and Policy Recommendations





The mission of the UC Berkeley Traffic Safety Center is to reduce traffic fatalities and injuries through multi-disciplinary collaboration in education, research, and outreach. Our aim is to strengthen the capability of state, county, and local governments, academic institutions, and local community organizations to enhance traffic safety through research, curriculum and material development, outreach, and training for professionals and students.

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# TRAFFIC SAFETY AMONG LATINO POPULATIONS IN CALIFORNIA:

## Current Status and Policy Recommendations

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We also convened a group of statewide stakeholders in order to review and make recommendations for interventions based on the statistical data gathered, as well as the input from the community forums. Stakeholders included:

Merry Banks, California State Automobile Association

Kate Bernacki, California Department of Health Services

Jack Champlin, National Highway Traffic Safety Administration

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**“Many people tend to do the same here [that they’ve done in Mexico] and they don’t know you must fasten kids’ seat belts to protect them in crashes.”**

**“Drivers’ lack of responsibility when transporting people to the fields worries me. They have no idea of the responsibility implied in carrying people.”**

Members of two primarily Latino communities poignantly expressed these and many other thoughts at community forums held in spring 2004 in the small agricultural community of Huron, California, in Fresno County, and in urban East Los Angeles.

The forums were convened as part of the statewide Latino Traffic Safety Project (LTSP) of the Traffic Safety Center at the University of California, Berkeley and the Tomás Rivera Policy Institute at the University of Southern California. The goal of the forums was to solicit views from Latino community members in order to better understand their perspective on traffic safety, and to learn more about the social, cultural and socioeconomic environment in which they live. By improving our understanding of their perspective and the context that shapes it, we hope to be better able to develop traffic safety interventions that will reduce traffic injuries and fatalities, and raise awareness of traffic safety in California’s Latino communities.

The Latino Traffic Safety Project included statistical data analysis, consultation with expert stakeholders in Latino health and traffic safety throughout California, as well as literature reviews about risk and best practices.

The changing demographics of California paint a picture that demands attention and motivates this project. According to long-range projections by the California Department of Finance (DOF) the population of California will grow by 20 million people over the next 50 years. In 2000, California became the first state in which non-white ethnic and racial groups constitute the majority population. Although white, non-Hispanics remain the largest single racial group, the Hispanic population is expected to grow rapidly; the DOF forecasts that Latinos will become the state’s majority population by 2040.

The implications of such population trends are being explored in housing, employment, education and other arenas. However, the impact that this demographic shift will have on the health and safety of Latinos in California is yet to be fully appreciated. By looking at the demographic characteristics of today’s Latino population we can predict some of the challenges the state will face in reducing traffic injury risk in this population.

Forum participants were asked about how they perceived traffic risk, and to articulate such risk in a number of areas:

- **Alcohol and Traffic Safety:** Drinking and driving has been shown to be more prevalent among Latinos than among other groups. Young male Latino drivers, in particular, are at a disproportionately higher risk than other groups of being killed in alcohol-related collisions, or arrested for driving under the influence [DUI].

- **Seat Belt Use:** Although findings on seat belt use among Latinos have been inconsistent, Latinos are more likely than non-Latinos to have been unrestrained in fatal collisions.
- **Child Passenger Safety:** Studies have found that Latino children involved in collisions are less likely to be restrained than white, non-Hispanic children.
- **Pedestrian Injury:** Latino children are at high risk for pedestrian fatalities. Lack of access to medical care compounds the severity of injuries.
- **Licensing:** Drivers who have never been licensed are more likely to be involved in a fatal collision. Latino drivers in fatal crashes have been shown to be more likely than other groups to be unlicensed.
- **Agricultural Communities:** Drivers on rural roads are at a higher risk for fatal crashes than those driving in urban areas. Rural Latinos have been shown to have a disproportionate risk of being killed in a motor vehicle crash.

In light of the risk Latinos face in these areas, a focused set of interventions should be implemented. The following recommendations, identified through forums, the project's Stakeholders and Advisory Committees, and the literature, fall in the general areas of education and outreach, enforcement, transportation engineering and planning, policy and community organization. While some interventions are specific to particular issues, others cut across several of the areas. It is important to note that none of these approaches works by itself. They should be seen as components of a comprehensive spectrum of activities.

- **Education and Outreach:** Develop sustained education and outreach approaches that are culturally sensitive, and family and community-oriented. Campaigns should not rely primarily on the printed word and should respect traditional Latin American gender roles without resorting to stereotypes.
- **Enforcement:** Develop enforcement approaches that are sustained and effective without creating racial profiling.<sup>1</sup> Build on existing models that combine enforcement and outreach to increase compliance.
- **Transportation Engineering and Planning:** Ensure equitable distribution of resources for transportation engineering and planning for Latino communities. Traffic calming and creating open space and public parks make communities more pleasant and safer for walking, biking, driving and playing.
- **Policy:** Review traffic safety-related policies with respect to Latino communities to ensure such policies account and provide for safety in these communities. Policy provides the muscle for health and safety efforts and should be explored on local, state and national levels.
- **Community Organization:** Encourage existing coalitions and other groups in Latino areas and populations to develop partnerships with public health and transportation practitioners, law enforcement, local business groups and agencies, to advocate for increased traffic safety measures in their communities.

## Purpose of this Report

This report summarizes the information gained from the two community forums. It provides an analysis of trends in injury and demographic data and reviews best practices for increasing safety and preventing injury in Latino populations. It highlights pressing traffic safety needs and presents recommendations. It is our goal that this report will serve as a prototype for policy, enforcement and program development to address traffic safety issues for Latinos in California.

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<sup>1</sup> Increased enforcement was underscored by community forum participants, as well as in the literature, as an effective means of reducing risky driving; e.g., DUI, not wearing seat belts, speeding. While this report advocates increased enforcement, it does not propose what has been identified as racial profiling or arbitrarily targeting enforcement activities at Latinos.



# INTRODUCTION

In spring 2004, two groups of Latino residents gathered at local community centers in the agricultural community of Huron in Fresno County and in urban East Los Angeles to talk about the traffic safety issues that are important to Latinos.

These forums were convened as part of the Latino Traffic Safety Project (LTSP) of the Traffic Safety Center at University of California, Berkeley and the Tomás Rivera Policy Institute at the University of Southern California, with funding from the California Office of Traffic Safety. The goal of the forums was to solicit views from Latino community members in order to better understand their perspective on traffic safety and to learn more about the social, cultural and socioeconomic environment in which they live. By improving our understanding of their perspective and the context that shapes it, we hope to be better able to develop traffic safety interventions that will reduce traffic injuries and fatalities and raise awareness of traffic safety in California's Latino communities.

Each forum was facilitated and conducted in Spanish, and provided an opportunity for participants to highlight issues of concern to them, their families and their communities. A total of 42 people participated in the forums. The Huron forum consisted primarily of Mexican farmworkers. The East Los Angeles forum attracted people working in a variety of occupations, who came from Mexico and various Central and South American countries. A small number of community leaders also attended each forum.

**“Not having a driver license also means you don’t have car insurance. If you are in a crash, sometimes you try and arrange it by paying the injured person directly.”**

—Huron forum participant

**“There were some commercials about seat belts, but I don’t know if they ran out of funds or what happened — they just stopped showing them.”**

—Huron forum participant

Several issues emerged in Huron, a city of approximately 6,300 people:

- Licensing and knowledge of laws
- Inability to afford insurance
- Drinking and driving
- Transportation of agricultural workers.

Other concerns included child passenger safety, seat belts, substantial increases in traffic at harvest time, and farmworker exploitation; e.g., by employers who use uncertified vehicles and drivers to transport workers to their fields.



Participants in the East Los Angeles forum were most concerned about:

- The unsafe conditions that exist for pedestrians and bicyclists in their community due to the driving-oriented streets and intersections, and driver behavior (e.g., speeding, not giving right-of-way to pedestrians)
- Drinking and driving in their neighborhoods
- Excessive speeding in their neighborhoods
- Lack of, and incorrect use of, child safety seats
- Inadequate public transportation.

**“In East LA, people walk more [than in other parts of Los Angeles], and I see people crossing the street without paying any attention to the traffic lights...I also see that we drivers are always impatient towards pedestrians, even if they have the right of way. Many cars don’t stop at the crosswalks. There’s no safety ensured for pedestrians.”**

—East Los Angeles forum participant

While some issues were unique to either rural Huron or urban East Los Angeles, others emerged that were common to both areas:

- Participants at both forums expressed concern about drinking and driving, saying that drinking after a long day at work and drinking as a social activity were common activities among community members. Both groups mentioned the need for ongoing media programs in Spanish addressing the dangers of drinking and driving (in contrast to short-term intervention programs and public service announcements, which, they asserted, cannot produce long-term results).
- Both groups were concerned about the lack of public space in which children can safely play, as well as inadequate sidewalks and crosswalks.
- Both cited the high cost of, and limited access to, public transportation.
- Lack of seat belt use was a concern at both forums. Participants cited the discomfort of wearing seat belts and the lack of awareness about the consequences of not wearing them.
- Participants at both forums expressed the belief that society does not make the Latino community’s traffic safety a priority because its citizens are poor, Latino and comprised of a great number of immigrants. Huron participants added that the lack of attention to traffic safety in their community was an example of the low value placed on farmworkers.

California’s Latino population is heterogeneous and can only be effectively understood by taking into account the diverse experience of its multiplicity of communities and groups. Some of these communities and groups may face unique and disproportionate traffic safety risks. This report seeks to identify and understand those risks. It examines specific areas of concern and speaks to each one individually with recommendations regarding the implementation of policies, programs and activities. It summarizes the information gained from community forums, provides an analysis of trends in injury and demographic data, and reviews best practices for increasing safety and preventing injury. We hope it will serve as a prototype for policy and program development that will address traffic safety issues for Latinos in California.



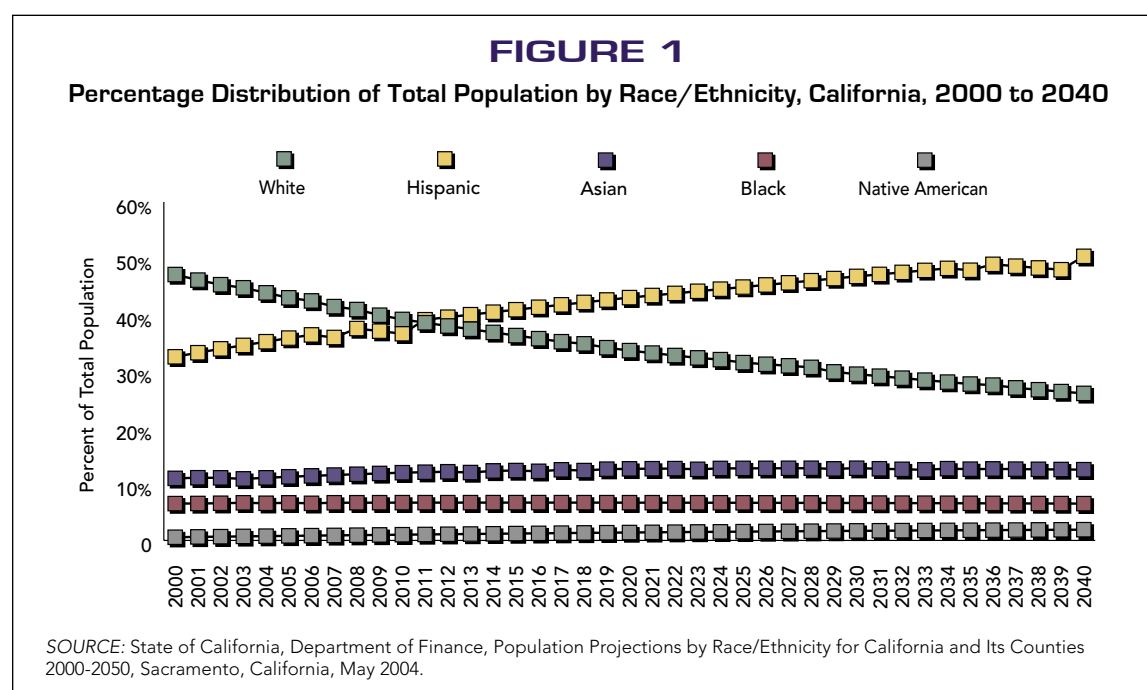
## Use of the Terms “Hispanic” and “Latino”

For this report, we use “Hispanic” when referring to research that describes data using this term (e.g., data derived from sources such as the U.S. Census Bureau, hospitals and police officers). We use “Latino” when referring to the population itself; it is the more appropriate term because it is viewed as more self-chosen in California than “Hispanic.” We use white, non-Hispanic in this report to include people who select their race as white and indicate that their origin is not one of these Hispanic-origin subgroups: Mexican, Puerto Rican, Cuban, or Central or South American.<sup>2</sup>

## Demographics

The changing demographic of California paints a picture that demands attention. According to long-range projections by the California Department of Finance (DOF), the population of California will grow by 20 million people over the next 50 years (Figure 1). The Latino population is expected to comprise two-thirds of the state’s growth.<sup>3</sup>

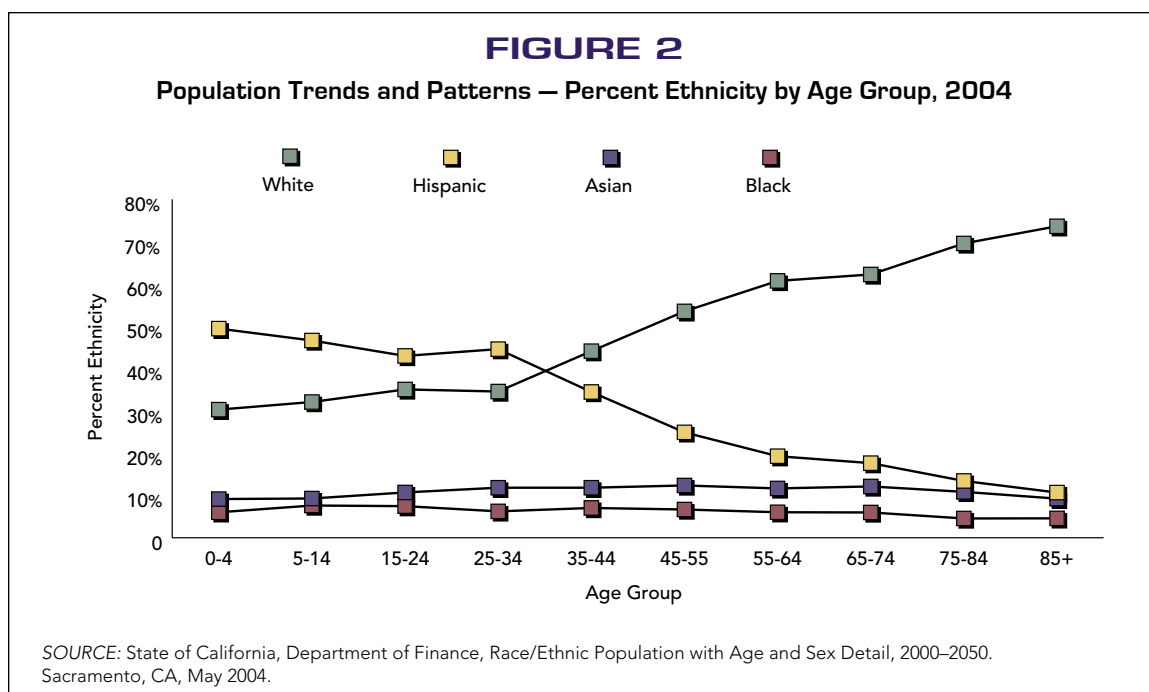
In 2000, California became the first state in the U.S. in which non-white ethnic and racial groups constitute the majority population. However, whites remain the largest single racial group. The Latino population is expected to grow rapidly, while the white, non-Hispanic population is expected to decline. It is anticipated that Latinos will become the largest single ethnic group by 2020 and the state’s majority population by 2040.<sup>4</sup>



<sup>2</sup> In U.S. Census Bureau, Current Population Survey: Definitions and Explanations <http://www.census.gov/population/www/cps/cpsdef.html>.

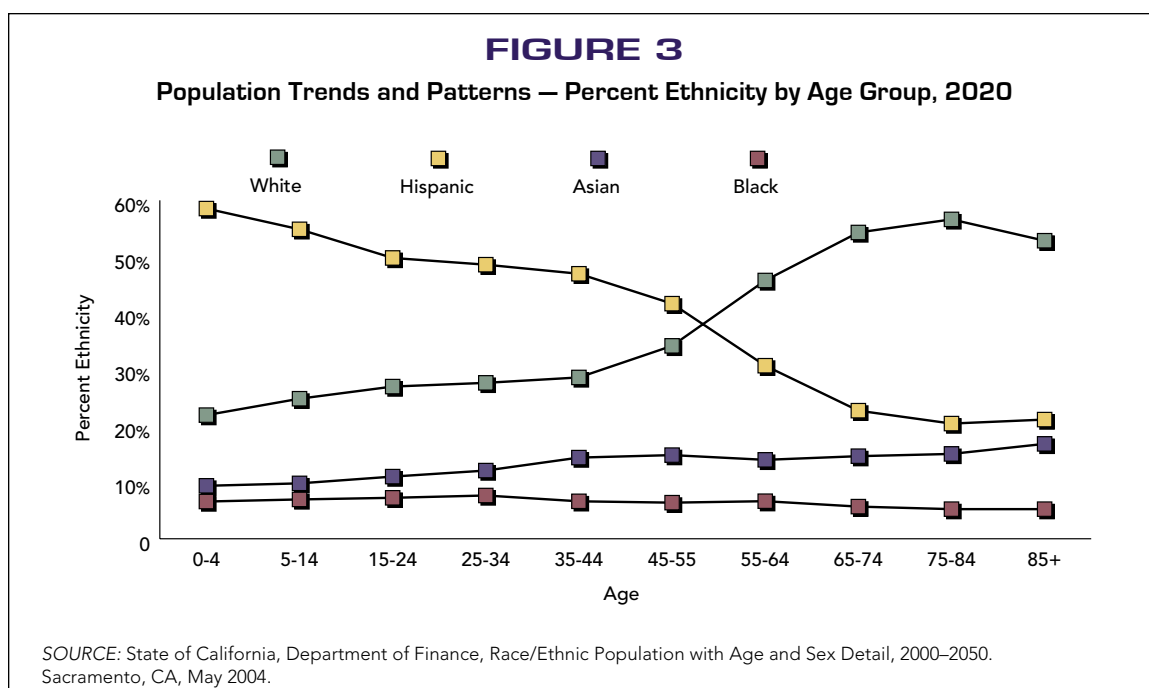
<sup>3</sup> Housing California’s Latino Population in the 21st Century: The Challenge Ahead, Tomás Rivera Policy Institute, 2002.

<sup>4</sup> State of California, Department of Finance, *Population Projections by Race/Ethnicity for California and Its Counties 2000-2050*, Sacramento, California, May 2004.



Currently (2004), white, non-Hispanics constitute by far the majority of the population age 35 and above (Figure 2). However, for age groups 25-34 and below, Hispanics are already the majority. This pattern will continue in the future (Figure 3); in 2020, Hispanics will be the largest group among all groups age 54 and below.

The implications of such population trends are being explored in housing, employment, education and other arenas. The impact that this demographic shift will have on the health and safety of Latinos in California is yet to be fully appreciated. By looking at the demographic characteristics of today's Latino population we can identify some of the potential challenges the state will face in reducing traffic injury risk among Latinos.



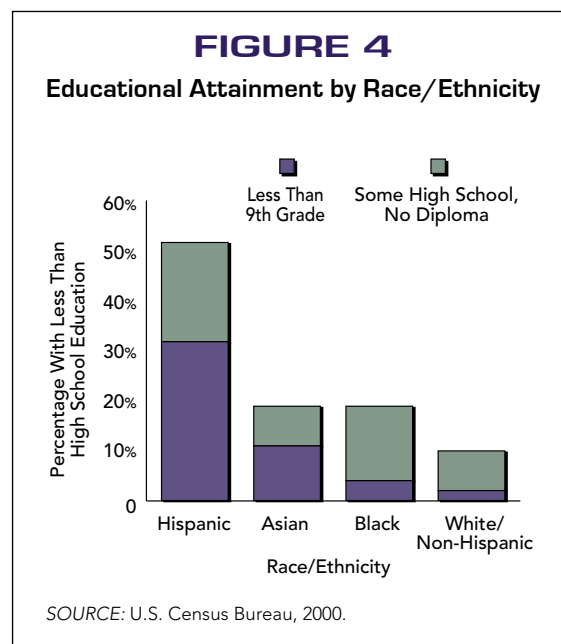
## National Origin, Immigration, and Citizenship Status

Based on the 2000 U.S. census, 11 million people in California — 32 percent of the population — identify themselves as Hispanic. In terms of national origin, about three-quarters of Latinos are from Mexico or are of Mexican descent. Approximately 5 percent are South American and 1.5 percent is Central American. In terms of immigration and citizenship status, more than half of all Latinos in the state report that they are native citizens born in the U.S., while another 26 percent have become naturalized citizens.

Understanding the nativity and national origin of a potential intervention's target population is critical to its effectiveness. For example, Mexican Americans have higher alcohol-involved fatality rates than whites; however, Puerto Rican Americans, Cuban Americans and Central/South Americans have the same or lower rates of alcohol-related fatalities as whites.<sup>5</sup> Also, Hispanics born in the U.S. are approximately three times more likely to drink and drive than are Hispanics born in other countries.<sup>6,7</sup> These distinctions are important when designing interventions.

## Socioeconomic Status

Studies have suggested that socioeconomic status, which is usually measured by education and income level, plays a substantial role in determining public health outcomes, such as traffic crashes (Figure 4). Injury fatality rates have been shown to be associated with lower per-capita income;<sup>8</sup> Latinos as a group have lower income levels and, therefore, may be at higher risk for traffic injuries.<sup>9</sup> In California, 22 percent of Latinos live below the poverty level, compared with about 8 percent of white, non-Hispanics. More than half of all adult Latinos in the U.S. have not finished high school, and about one-third completed the ninth grade.



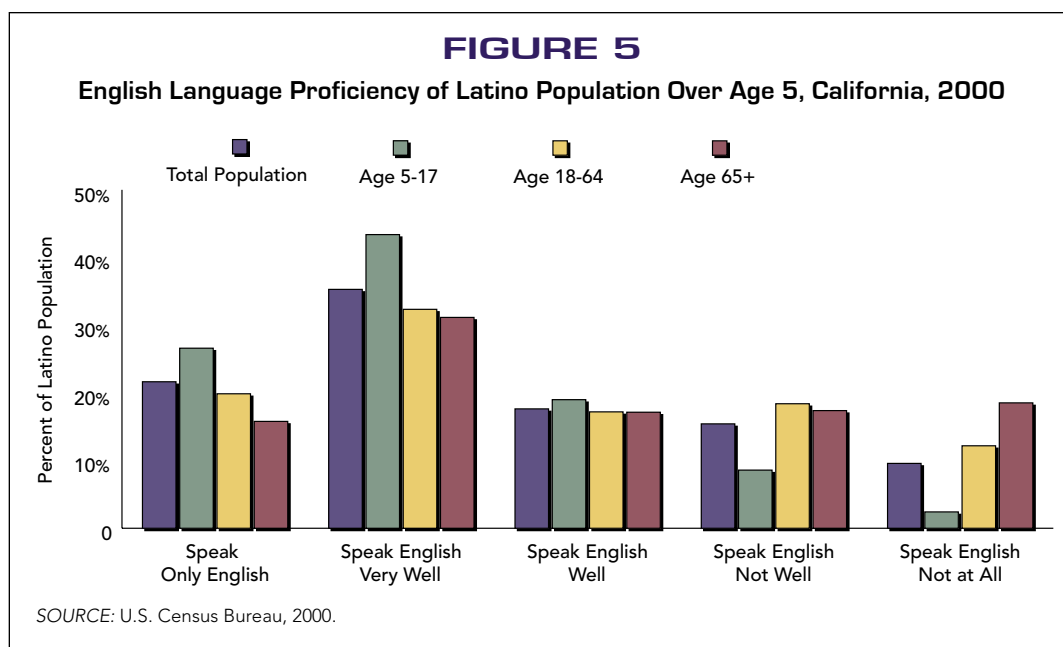
<sup>5</sup> Voas RB, T.A., Fisher DA., *Ethnicity and Alcohol-Related Fatalities: 1990 to 1994*. National Traffic Safety Administration. 2000.

<sup>6</sup> National Highway Traffic Safety Administration. *Facts about Drinking and Driving and Hispanics*, 2002.

<sup>7</sup> Caetano, R., Clark, C., "Hispanics, Blacks and Whites Driving under the Influence of Alcohol: Results from the 1995 National Alcohol Survey," *Accident Analysis and Prevention*. 3, 57-64. 2000.

<sup>8</sup> Baker, SP, O'Neill, B., Ginsburg, MJ, Li, G, 1992. *The Injury Fact Book*, 2nd Edition. Oxford University Press, New York.

<sup>9</sup> Braver, E. Race, Hispanic Origin, and socioeconomic status in relation to motor vehicle occupant death rates and risk factors among adults. *Accident Analysis and Prevention*. 35, 295-309. 2003.



## Language

A look at the Latino population's use of spoken English and Spanish by age group reveals that young Latinos are far more likely to speak only English or speak English very well than older generations (see Figure 5). About 70 percent of Latinos between age 5 and 17 fall into these two categories. In 2000, only about 2 percent of Latinos in the youngest age group did not speak any English at all. Understanding the language patterns and acculturation level of the target audience is key, for example, to determining if educational and outreach campaigns aimed at traffic safety should be in English and/or Spanish.

## Risk

Much of the data in this report describe risk per population. A study by Baker et al., however, highlights that, because Hispanics drive less than the non-Hispanic population, their exposure risk; i.e., risk per mile driven, is greater than their risk as described per population.<sup>10</sup> Exposure data is not widely available, however. It is possible, therefore, that the population-based data underreports the actual risk Latinos face.

<sup>10</sup> Baker SP, Braver ER, Chen L, Pantula JF, Massie D. "Motor vehicle occupant deaths among Hispanic and Black children and teenagers." *Arch Pediatr Adolesc Med.* 152:1209-12. 1998.





# ALCOHOL AND TRAFFIC SAFETY

One of the major themes to emerge in the community forums was that of drinking and driving, especially among young males. “I’ve had several friends who were killed in traffic accidents by drunk drivers,” one participant in East L.A. said. Many participants claimed they knew adults who were willing to purchase alcohol for their children. “The younger ones who cannot buy alcohol for themselves always have an older guy buy it for them. There are places where ID is not even required,” one respondent said. “We are always working, and kids have to take care of themselves,” one Huron farmworker, who often works 10- to 12-hour days, acknowledged. In both Huron and Los Angeles, participants talked about how teenagers, with nothing else to do, “get together and hang out... and go to parties” and too often drink and drive.

The National Highway Traffic Safety Administration (NHTSA) reports that drinking and driving is consistently cited as the most pressing traffic safety problem in Hispanic communities.<sup>11</sup> A study in Colorado comparing white, non-Hispanic drivers with Hispanic drivers killed in traffic crashes found that Hispanic drivers had a higher crash fatality rate overall.<sup>12</sup> The California Behavioral Risk Factor Survey (1995, <http://www.ccrca.org/brfs95/brfs95.pdf>) revealed that the prevalence of drinking and driving, as well as chronic drinking, are higher among Latino males than among males of any other ethnicity (*Latino Traffic Safety*, presented by the University of California Center for Trauma and Injury Prevention Research, Department of Emergency Medicine, October 14, 2004, Sacramento CA).

Research has shown a connection between the presence of alcohol outlets and alcohol-related driving problems in Latino and non-Latino communities. In a study of four communities, Gruenewald, et al.,<sup>13</sup> found a significant relationship between alcohol outlets and alcohol-related collisions. A study conducted by the University of California Irvine Center for Trauma and Injury Prevention Research found that the city of Santa Ana, the ninth largest city in California and 75 percent Hispanic, had the highest density of DUI collisions *and* alcohol outlets in Orange County.

## Young Males at Risk

Alcohol-involved driver fatalities are higher among males age 20-24 than among all other age groups (Figure 6). The rate for drivers killed in alcohol-involved collisions is highest among Latino males in several age groups, including 20-24, 25-34 and over 55. Research is needed to determine the extent to which alcohol-involved driver fatalities among young Latino males are associated with other risk factors, for example, speeding, seat belt use, vehicle type.

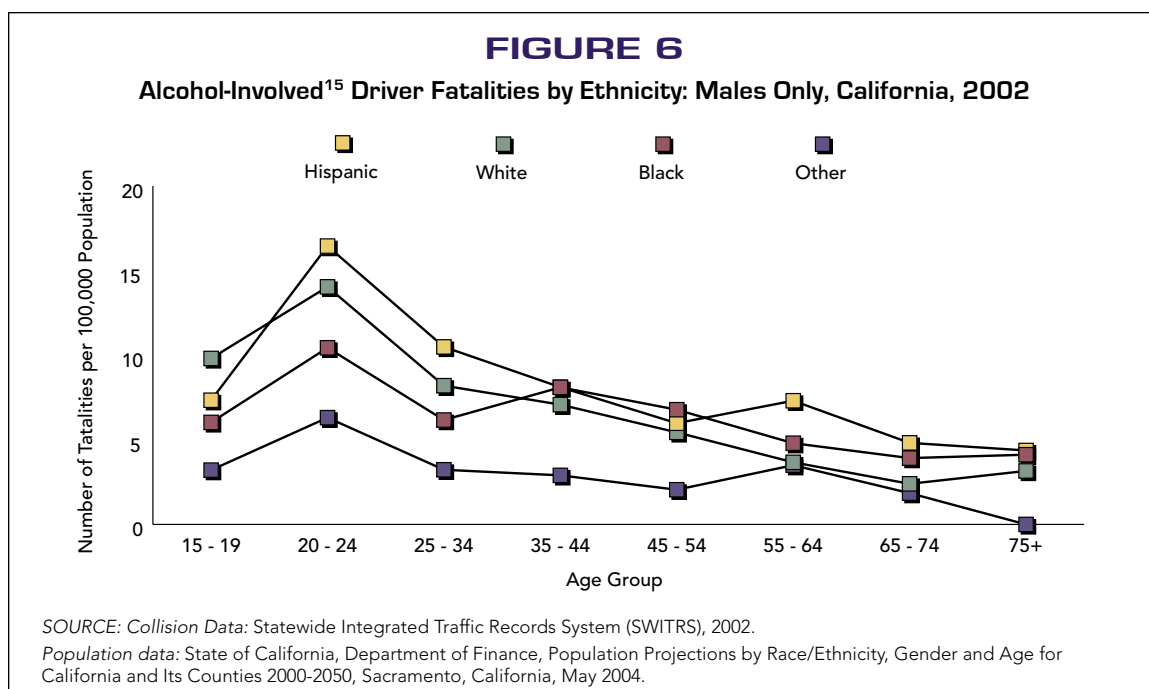
DUI arrest data compiled by the California Division of Motor Vehicles show that the DUI arrest rate for Hispanic males is higher than other race/ethnic groups in several age categories; it is most pronounced among 21- to 30-year-olds (Figure 7, page 11). Conviction rates among those arrested for DUI, however, are approximately equal across ethnic and racial groups. In other words, young Hispanic drivers are disproportionately arrested for DUI, but are not disproportionately convicted once they have been arrested.<sup>14</sup>

<sup>11</sup> “Highway Traffic Safety Need of U.S. Hispanic Communities: Issues and Strategies.” National Highway Traffic Safety Administration, DOT 808 373, Sep 1995.

<sup>12</sup> Harper, J., Marine, W., Lezotte, D., Lowenstein, S. “Motor Vehicle Crash Fatalities: A Comparison of Hispanic and Non-Hispanic Motorists in Colorado.” *Annals of Emergency Medicine*. 36 (6), 589-96. 2000.

<sup>13</sup> Gruenewald PJ, Millar AB, Treno AJ, Yang Z, Ponicki WR, Roeper P. The geography of availability and driving after drinking. *Addiction*. 91(7):967-83. Jul 1996.

<sup>14</sup> Annual Report of the California DUI Management Information System. Jan 2004.



Information from our forums provides some insight into why young Latino males are at increased risk for driving under the influence of alcohol. In the Huron forum, DUI issues specific to agricultural communities included:

- The sale of alcohol to laborers by farm supervisors at the end of the day.
- The consumption of alcohol by van and bus drivers prior to transporting workers.
- The increase in the population of young single male workers during harvest season.
- The lack of recreational opportunities for young people resulting in drinking and driving.

The Los Angeles forum highlighted issues pertaining to:

- The lack of activities for teenage children outside of school contributing to their presence on the streets and involvement in dangerous activities, such as drunk driving.
- Lack of public transportation options along certain routes, or in the early morning or late night hours, means that people rely on vehicles.

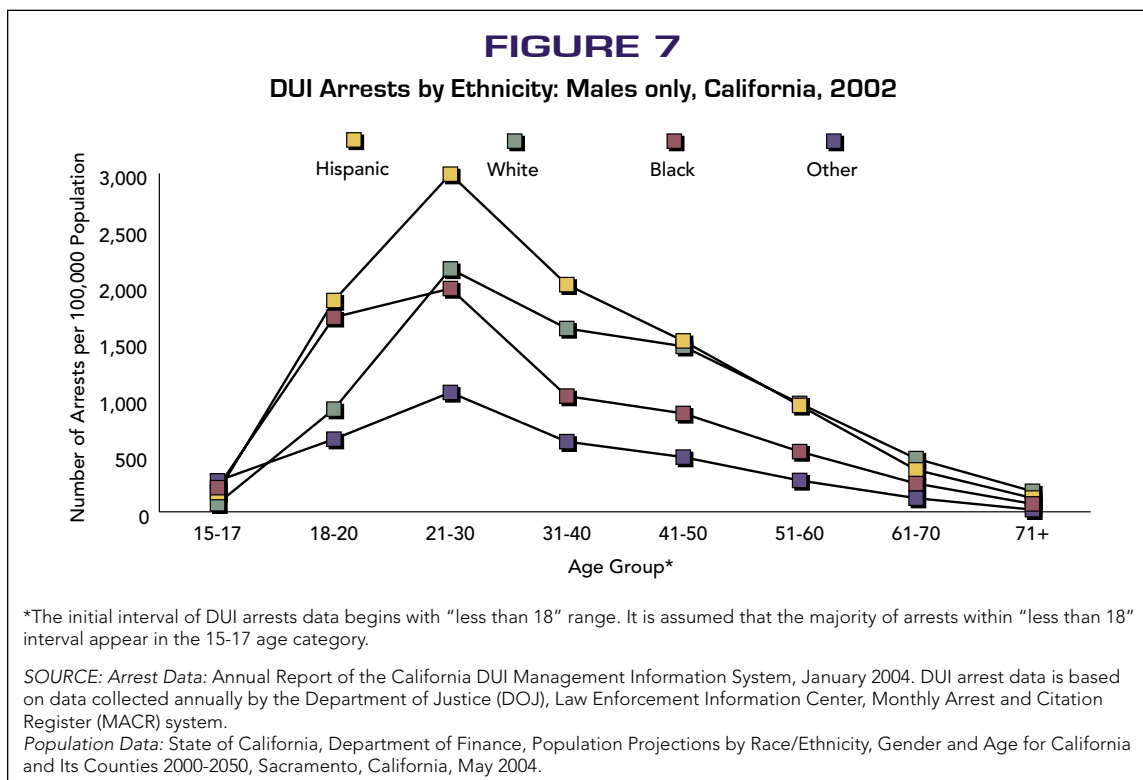
Hispanic focus group participants in NHTSA's 1995 study<sup>16</sup> articulated the following:

- Drinking alcohol projects an image of manhood. Men and women both said pride can prevent a man from saying he is too drunk to drive or giving up the keys to the car.
- Some people think they drive better after one or two drinks.

<sup>15</sup> The variable "Party Sobriety" from the SWITRS 2002 file has three values related to DUI: "Had Been Drinking, Under Influence;" "Had Been Drinking, Not Under Influence;" "Had Been Drinking, Impairment." The "Had Been Drinking" value was used for analyzing alcohol-involved traffic death rates (Fig.6).

<sup>16</sup> Highway Safety Needs of U.S. Hispanic Communities: Issues and Strategies. National Highway Traffic Safety Administration. DOT HS 808 373. Sep 1995.

- Designated drivers can drink as long as they keep drinking to a minimum.
- Some people think the impact of drinking beer is different from hard liquor.
- The lack of recreational opportunities for young people, especially in rural or border towns, results in drinking becoming a main activity.
- The prevalence of bars and alcohol outlets that don't check for identification make it easy for teenagers to purchase alcohol.
- The alcohol industry targets minority communities.
- Laws regarding drinking and driving are lenient and not consistently enforced.



In a 2002 telephone survey sponsored by the California Office of Traffic Safety, the vast majority of young adult respondents age 19-25 said it is somewhat or very easy for underage drinkers to obtain alcohol. Underage respondents reported that the last time they drank they got alcohol from a party or from friends or acquaintances. The survey also revealed that, while most respondents reported that they always wore seat belts, those who consumed alcohol were less likely to use them, underscoring data showing the association between drinking and driving and lack of seat belt use. While the survey did not target Latinos specifically, surveys were delivered in Spanish and English.<sup>17</sup>

<sup>17</sup> UC Berkeley Traffic Safety Center quarterly newsletter. Summer 2003. Accessed online <http://www.tsc.berkeley.edu/html/newsletter/Summer03/Survey.html>

## RECOMMENDATIONS

- **Interventions to highlight the dangers of drinking and driving should be comprehensive and coordinated.** Literature consistently highlights the importance of implementing a range of interventions simultaneously. Mobilizing the community, increasing local enforcement of laws related to drinking and driving, and limiting access to purchasing alcohol have shown promise in reducing self-reported consumption of alcohol, nighttime injury crashes, and drinking and driving crashes.<sup>18</sup>
- **Programs should address drinking in private homes.** There is currently a focus on training servers in bars. It is important, though, to pay attention to studies of Mexican American drinking and driving which show that, prior to arrest, drinking primarily takes place at a private home rather than a bar or other public location.<sup>19, 20, 21</sup> However, given the general connection between alcohol outlets and alcohol-related crashes, it would be worthwhile to conduct server training in both English and Spanish in bars and restaurants that serve Latinos or in Latino communities.
- **Programs should target underage drinkers.** Forum participants identified interventions to engage teenage drivers and reduce their likelihood of getting involved in dangerous behaviors: after-school programs; public awareness campaigns in Spanish; increased patrols and better enforcement of DUI laws, particularly around drinking establishments and alcohol outlets; and pressuring vendors to demand identification from those seeking to purchase alcohol.
- **Drinking and driving prevention and outreach programs should utilize friends and relatives.** Most NHTSA focus group participants said that sober friends or relatives are the best way to prevent driving after drinking. Respondents suggested that DUI prevention campaigns include family scenes and messages emphasizing the consequences of DUI. Again, outreach efforts should be sustained and include culturally acknowledged media, such as *fotonovelas* (picture books), television and radio.
- **Programs should be culturally sensitive.** The presence of police authorities might be threatening to immigrants who have had negative experiences with police corruption and/or oppression. Police outreach efforts that use non-uniformed officers to provide safety education have attracted attention. Involving community leaders and churches, and integrating DUI information at fairs, parties and events is a way to conduct education in coordination with local activities.

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<sup>18</sup> Holder, HD et al. "Effect of community-based interventions on high-risk drinking and alcohol-related injuries." *JAMA*. 284:2341-2347. 2000.

<sup>19</sup> Caetano R, Raspberry KJ "DUI-arrest characteristics among white and Mexican-American DUI offenders mandated for treatment" *Stud Alcohol*. 62(6):750-3. 2001.

<sup>20</sup> Alcohol, Tobacco, & Other Drug Use Prevalence: 2002 Survey of Orange County Adults, Orange County Health Care Agency. 2002.

<sup>21</sup> Ferguson SA, Burns MM, Fiorentino D, Williams A, Garcia J. Drinking and driving among Mexican American and white, non-Hispanic males in Long Beach, California. *Accident Analysis & Prevention*. 34: 429-437. 2002.



Although participants in both forums said they encourage the use of seat belts, they said many in the Latino community do not use them, partly because they are unaware of the law. The main reasons cited for not using seat belts were not understanding how seat belts can save lives and feeling that they are uncomfortable nuisances. However, one respondent also added, “We are not being honest with ourselves, and we don’t want to obey the rules. That’s why [media] campaigns are so important.” They agreed that drivers should ensure that all passengers fasten their seat belts. As one respondent said, “It’s everyone’s obligation.”

According to Huron forum participants, many agricultural workers are required to travel to and from work in overcrowded employer-operated vans and pick-up trucks that often do not have enough seat belts and whose drivers are often untrained. The California Highway Patrol has been effective in enforcing regulated transportation and driver certification in the last few years, yet proper certification remains an issue for operators who cannot afford it or whose employers choose not to certify their transportation service.

Research has indicated that use of lap/shoulder safety belts reduces the risk of fatal injury to drivers and passengers by 45 percent and the risk of serious injury by 50 percent.<sup>22</sup> People who live at low socioeconomic levels are less likely to wear seat belts.<sup>23</sup> Hispanics, with lower average socioeconomic status, were found in a 2000 study to be more likely than non-Hispanics to have been unrestrained in fatal crashes.<sup>24</sup> It is important to note that there is not a consensus among researchers about the rate of safety restraint use among Latinos. Several studies have suggested lower use rates than non-Hispanics, while others have demonstrated similar usage once factors such as age, gender, socioeconomic status, country of origin, and acculturation level are considered.<sup>25, 26, 27</sup> Country of origin has been shown to affect seat belt use: Mexicans reportedly have lower belt use than other Latino groups.<sup>28</sup> A 1998 study from the University of California at Davis found that Hispanic drivers at migrant farmworker camps have much lower seat belt use rates compared to the national average.<sup>29</sup>

Whether or not these rates are lower than other groups, there is still, given disproportionate risk overall, a need to increase the rate of seat belt use among Latinos. Despite inconsistent findings among research studies, there are cultural and social factors that may have an impact on nonuse of safety restraints among Latino populations. Reasons cited in the literature for nonuse reflect the comments made by participants in the Huron and Los Angeles forums. For instance, as NHTSA discovered in its 1995 focus group study, many recent immigrants are unaware of U.S. seat belt laws and the risks involved in nonuse because the laws in Mexico are different or are less rigorously enforced.<sup>30</sup> In addition, those living at lower socioeconomic levels

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<sup>22</sup> “Traffic Safety Facts 2003: Occupant Protection.” U.S. Department of Transportation, National Highway Traffic Safety Administration. DOT HS 809 765. 2003.

<sup>23</sup> Chu, M. “Characteristics of Persons who Seldom or Never Wear Seat Belts, 2002” Statistical Brief #62. Medical Expenditure Panel Survey. 2004.

<sup>24</sup> Harper JS, Marine WM, Garrett CJ, Lezotte D, Lowenstein SR. “Motor Vehicle Crash Fatalities: A Comparison of Hispanic and Non-Hispanic Motorists in Colorado” *Annals of Emergency Medicine* 36(6):589-596. Dec 2000.

<sup>25</sup> Hallmark SL, Mueller K, Veneziano D, “Evaluation of Racial Differences in Seat Belt and Child Restraint Use: A Review of Current Literature” Center for Transportation Research and Education, Iowa State University. January 2004.

<sup>26</sup> Harper, 2000.

<sup>27</sup> Braver, 2003.

<sup>28</sup> Voas, 2000.

<sup>29</sup> Stiles MC, Grieshop JI. Impacts of culture on driver knowledge and safety device usage among Hispanic farm workers. *Accident Analysis and Prevention*. 31(3):235-41. May 1999.

<sup>30</sup> NHTSA, 1995.



are more likely to drive older vehicles that may not have functioning safety restraints, or their vehicles may not have enough seat belts to accommodate all passengers, a problem especially prevalent among those with large families.<sup>31, 32, 33</sup>

## RECOMMENDATIONS

- **Conduct sustained educational campaigns.** Campaigns about seat belt use should emphasize the safety of one's family as opposed to the risk to one's own safety or the potential fine or punishment for not obeying the law. Forum participants said campaigns should tell stories of real people's lives, rather than report on data, a perspective echoed by other focus groups.<sup>34</sup> Further, campaigns should not be temporary, but have a sustained presence in the community.
- **Combine education efforts with enforcement campaigns.** This kind of collaboration has already proven to be successful.<sup>35</sup> In focus groups of Latinos exploring patterns and perception of seat belt use, Arce and Dinh-Zarr found that respondents knew of seat belt laws and reported that they chose to wear seat belts to avoid being stopped by law enforcement.<sup>36</sup> In communities with large recent Latin American immigrant populations, education campaigns should stress the differences between U.S. and Latin American seat belt laws.
- **Use both Spanish and English in educational materials.** Materials indicating proper seat belt use should be in English, and in Spanish, when appropriate.
- **Pay attention to seat belt laws in labor-related transportation.** Enhance the enforcement of vehicle regulations for labor transportation. Stress the importance of the legal requirements around vehicle certification among employers and the penalties for noncompliance.

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<sup>31</sup> Ucles, Jose Alberto. "NHTSA Launches Successful Campaign to Promote Seat Belt Use Among Hispanics." NHTSA Now, Vol. 7, No. 7, 14, pp. 1, 3. Jun 2001.

<sup>32</sup> NHSTA, 1995.

<sup>33</sup> Harper, 2000.

<sup>34</sup> Arce, 2004.

<sup>35</sup> Lund AK, Stuster J, Fleming A. Special publicity and enforcement of California's belt use law: making a "secondary" law work. *J Criminal Justice* 17:329–341.1989.

<sup>36</sup> Arce, C, Dinh-Zarr, TB. Seat Belt use Among Mexican-Born Immigrants in the U.S. Executive Summary. 2004.



# CHILD PASSENGER SAFETY

“Many people tend to do the same here [that they’ve done in Mexico], and they don’t know you must fasten kids’ seat belts to protect them in crashes,” a participant in the Huron community forum said. Several respondents in the Los Angeles forum knew couples whose children had been fatally injured because they didn’t properly use seat belts or car seats. Respondents generally agreed that nonuse of child safety seats was due to an inability to afford them, no tradition of using them in their native country, and a lack of knowledge about how to properly install and use the seats even when they have them.

Research on the effectiveness of child safety seats indicates that fatal injuries are reduced by 71 percent for infants and 54 percent for toddlers in passenger cars when they are used.<sup>37</sup> In the last 20 years, the U.S. has made a concerted effort to promote child passenger safety laws, best practice guidelines, multidisciplinary coordination, outreach and training — and the data reveal successes. In 1984, 54 percent of children nationwide were unrestrained in vehicles, while in 2001, only 9 percent were unrestrained.<sup>38, 39</sup> Not surprisingly, during that time motor vehicle fatalities among infants and toddlers decreased by almost 26 percent and 15 percent respectively.<sup>40</sup>

However, not all groups have benefited. Latinos are among the racial and ethnic groups in the country showing lower rates of restraint use and higher occupant fatality rates than the general population (along with African Americans and Native Americans). In studies conducted by Baker et al., Hispanic children who were involved in motor vehicle collisions were one-fourth as likely to be restrained as white, non-Hispanic children.<sup>41</sup> This study is particularly important because it looks at the risk Hispanic (and African-American) children face per mile driven. Fatality rates have also been shown to be higher among low-income child passengers.<sup>42</sup>

## Barriers to Use

In the past 10 years, health and traffic safety practitioners have learned a great deal about barriers to the use of child restraints among Latinos, as well as the types of outreach that have worked to increase use. Broad, national media campaigns publicizing laws and best practices, training programs and car seat clinics have all contributed to increasing use of child restraints among the general population. However, as safety benefits lag in certain populations, outreach campaigns must now reach high-risk populations and adapt their messages to incorporate what is known about these communities, whether they are Latino or another racial/ethnic group.

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<sup>37</sup> *Traffic Safety Facts 2003: Occupant Protection* U.S. Department of Transportation, National Highway Traffic Safety Administration. DOT HS 809 765. 2003.

<sup>38</sup> Arbogast, KB., Durbin, DR. Cornejo, RA. Kallan, M.J. Winston F.K.. “An Evaluation of the Effectiveness of Forward Facing Child Restraint Systems.” *Accident Analysis and Prevention*. 36, 585-589. 2004.

<sup>39</sup> Kahane, C.J. An Evaluation of Child Passenger Safety: The Effectiveness and Benefits of Safety Seats. NHTSA, U. S. Department of Transportation, [www.nhtsa.dot.gov/cars/rules/regrev/evaluate/ChildSeat/CSS.html](http://www.nhtsa.dot.gov/cars/rules/regrev/evaluate/ChildSeat/CSS.html). Undated. Accessed Online August 15, 2004.

<sup>40</sup> Report from the 2003 Child Passenger Safety Summit. <http://www.actsinc.org/Acrobat/CPSSummitReport.pdf>. Accessed July 20, 2004.

<sup>41</sup> Baker SP, Braver ER, Chen L, Pantula JF, Massie D. “Motor vehicle occupant deaths among Hispanic and Black children and teenagers.” *Arch PediatrAdolesc Me*. 152:1209–12. 1998.

<sup>42</sup> National Safe Kids Campaign. “Report to the Nation: Trends in Unintentional Childhood Injury Mortality, 1987-2000.” [http://www.safekids.org/content\\_documents/nsw03\\_report.pdf](http://www.safekids.org/content_documents/nsw03_report.pdf), May 2003.

A number of barriers to using child restraints were identified through the literature and in the community forums. Some of these barriers include:

- Older cars have fewer “user-friendly” rear shoulder belts (or none at all), greatly affecting secure installation of car seats.<sup>43, 44</sup> Child safety seats also can take up too much room in a vehicle.<sup>45</sup>
- Lack of familiarity with airbags and the risks they pose to children seated in the front.
- People who do not own cars or who regularly combine multiple modes of transit (cars, buses, walking) must install and re-install car seats and carry them on buses or while walking. Even with one child, this effort can be arduous.
- Lack of English fluency has been associated with lack of knowledge about child restraints, as well as seating children in the front seat of vehicles with airbags (which places children at high risk for injury in case of airbag deployment).<sup>46</sup>
- Lack of understanding of child passenger safety laws.
- Affordability of car seats. Car seats are expensive, and large families have a particularly difficult time affording appropriate car seats for the children who need them.
- New immigrants may be unaccustomed to car seats and see them as an uncaring or risky way to transport infants and children.
- Child resistance to car seats was articulated as a barrier to use in focus groups of people cited for safety seat violations.<sup>47</sup>

## RECOMMENDATIONS

- **Reach underserved populations through comprehensive ongoing outreach and educational efforts.** Specifically target parents and guardians of children in Latino communities.<sup>48, 49</sup> *Fotonovelas* (picture books) and *telenovelas* (soap operas) may provide a culturally familiar way to communicate with Latino communities. Educational campaigns should address, for example, the consequences of holding babies in one’s lap. They should also focus on age-appropriate restraint use and the existing child passenger safety laws.
- **Address cost.** Addressing cost through providing vouchers, free or low cost seats can help reduce economic factors for low-income families.<sup>48</sup> Further, make funding available for programs that disseminate restraints to low-income families.
- **Conduct hands-on workshops at public hospitals (emergency departments and health care centers), churches, daycare centers, botánicas (herbal or homeopathic shops), and community centers.**<sup>49, 50</sup> Workshops and outreach on child passenger safety laws should be conducted in Spanish when appropriate, and should speak to multiple traffic safety issues, including general transportation,

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<sup>43</sup> Cooper, JF “Keeping Children Safe in Cars.” Access Number 24, pp 16-24. Spring 2004.

<sup>44</sup> Agran PF, Anderson CL, Winn DG. “Violators of a Child Passenger Safety Law.” *Pediatrics*. Vol. 114, No. 1. pp 109-115. Jul 2004.

<sup>45</sup> Ibid.

<sup>46</sup> Vaca F, Anderson CL, Agran P, Winn D, Cheng G. Child safety seat knowledge among parents utilizing emergency services in a level I trauma center in Southern California. *Pediatrics*. 110(5):e61. Nov 2002.

<sup>47</sup> Agran, 2004.

<sup>48</sup> Ibid.

<sup>49</sup> Vaca, 2002.

<sup>50</sup> Istre, 2002.

parenting skills, licensing issues, seat belts, DUI and immigration issues.<sup>51, 52</sup> Programs reaching out to Latinos should use existing and trusted outreach models. For example, recruiting and training *promotoras* (Latino health outreach workers). Community leaders can also play an important educational role at community events.

- **Integrate information about child passenger safety laws into Latino health care delivery systems and continuing education efforts.** Setting up protocols in health care systems and hospitals clearly establishes this as a part of regular health care and health education services. Integrating age appropriate information into continuing education for health professionals multiplies the chance that parents and guardians will learn about updated research. Further, educate providers about the most serious kinds of misuse.<sup>53</sup>
- **Hold culturally appropriate classes for people with child safety seat violations.** Courses that provide training on how to use safety seats, as well as parenting skills and transportation barriers have shown promise for improving child restraint use.<sup>54</sup>
- **Provide more consistent enforcement of child passenger safety laws.** Increase the level and consistency of enforcement, and provide culturally appropriate classes for violators.<sup>55</sup>

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<sup>51</sup> Agran, 2004.

<sup>52</sup> Istre, 2002.

<sup>53</sup> Cooper, J.F., MacLeod, K.E., Ragland, D.R. "Evaluation of the California Child Passenger Safety Initiative". U.C. Berkeley Traffic Safety Center. Paper UCB-TSC-RR-2004-17. Nov 2004. <http://repositories.cdlib.org/its/tsc/UCB-TSC-RR-2004-17>.

<sup>54</sup> Agran, 2004.

<sup>55</sup> Agran, 2004.



In the East Los Angeles forum, participants said unsafe conditions exist for pedestrians and bicyclists on their streets. One respondent observed, "In East L.A. people walk more [than in other parts of Los Angeles] and I see people crossing the street without paying any attention to the traffic lights...I also see that we drivers are always impatient towards pedestrians even if they have the right of way. Many cars don't stop at the crosswalks. There's no safety ensured for pedestrians." Another respondent added, "Traffic safety issues worry me [because many] kids cross the street at the corner [where I work as a crossing guard]." This respondent witnessed both children and motorists committing frequent infractions and practicing unsafe behaviors that she felt could lead to injury or death.

According to the participants, a lack of appropriate traffic signs and signals, sidewalks, designated bicycle lanes, footpaths, and public spaces created dangers for pedestrians and cyclists. When discussing traffic signals and signs, they felt that stoplights often changed too quickly for pedestrians to safely cross an intersection or street, and that it was particularly dangerous for older people, who walk slowly and take longer to cross. Addressing the issue of inequity, they noted that a busy street in an affluent city had recently installed yellow crosswalk lights at wide intersections, while an even busier crosswalk in a nearby poor Latino neighborhood did not have one.

Community members in both forums raised the problem of not having enough public spaces, such as parks and recreation centers. They said many Latino children and adults have resorted to treating the streets as public space, thus putting them in danger from automobiles and other vehicles. They also commented that the lack of sidewalks and crosswalks presented a dangerous situation for pedestrians, making them even more vulnerable to inattentive motorists.

Speeding surfaced as a problem for communities in both East Los Angeles and Huron. They were concerned about small side streets near homes, where children least expect to encounter cars traveling at high speed. In the Huron forum, respondents were concerned about fast and constant vehicle traffic, as well as the general lack of travel corridors for pedestrians and bicycles, which put pedestrians and bicyclists on the main highway that passes through town.

The literature provides data confirming the fears expressed in the forums: Latinos face significant risk of pedestrian injury. A Colorado study of fatal traffic crashes showed Latinos to be more likely than whites to be killed as pedestrians.<sup>56</sup> Studies from Washington D.C., Atlanta, and California echo this problem.<sup>57</sup> In California, while Latinos represented 30 percent of the state's population in 1998, they accounted for 37 percent of the state's hospitalized pedestrian fatalities and injuries that year.<sup>58</sup> Fatalities from pedestrian crashes, including hit-and-run deaths, are heaviest in communities with large black and Latino populations, such as South and Southeast Los Angeles.<sup>59</sup> Pedestrian exposure plays an important role in crash risk. Exposure is correlated with income level, as people from low-income areas have been shown to walk more

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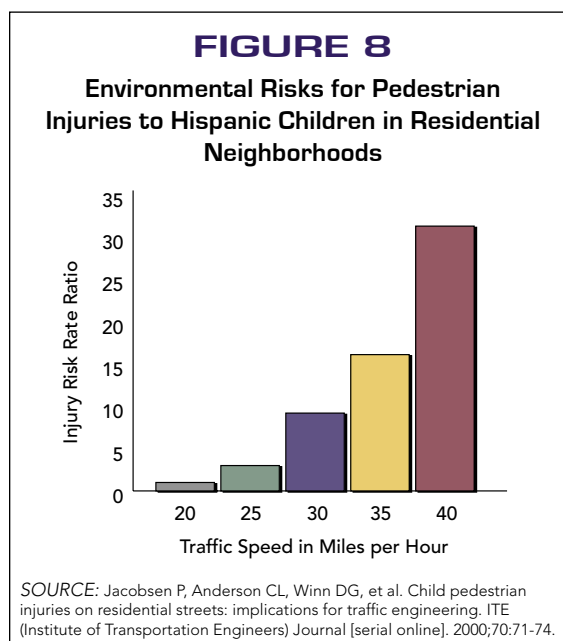
<sup>56</sup> Harper JS, Garrett CJ, Lezotte D, Lowenstein SR. "Motor vehicle crash fatalities: a comparison of Hispanic and non-Hispanic motorists in Colorado." *Annals of Emergency Medicine*, 36: 589-596. 2000.

<sup>57</sup> Ohland G, Corless, J. *Dangerous by Design: Pedestrian Safety in California*. Surface Transportation Policy Project. California. Sacramento, CA. 2000.

<sup>58</sup> Ibid.

<sup>59</sup> Martin, H. Moore, M. "Inequities in pedestrian deaths. Times study finds Latinos, seniors at highest risk. LA County leads in walker fatalities." *Los Angeles Times*. Aug 19, 2002.





frequently and are more exposed to areas that are dangerous for pedestrians.<sup>60</sup> In a national survey of walking behavior, NHTSA found that Hispanics walked more frequently in the previous month (to the survey) than other racial or ethnic groups.<sup>61</sup> Alcohol may also be a factor in pedestrian deaths among Latinos. In a study of pedestrian fatalities, blood alcohol levels among pedestrians killed in urban areas was 6 percentage points higher for Hispanic males than for white, non-Hispanic males.<sup>62</sup>

Children face particular risk. One study conducted in Orange County, California found that Hispanic children had higher rates of injuries requiring hospitalization for pedestrian injuries compared to white, non-Hispanic children.<sup>63</sup> Speed has been documented as a risk to Hispanic children in residential neighborhoods. In “Child Pedestrian

Injuries on Residential Streets: Implications for Traffic Engineering,” Jacobsen et al., found that, controlling for multi-family housing, vehicle volume, presence of parked vehicles and total number of pedestrians, an increase in the average speed from 20 to 30 miles per hour increased injury risk eight times. An increase from 20 to 40 miles per hour increased injury risk by about 30 times<sup>64</sup> (Figure 8).

Density of youth population is also an issue. In Long Beach, California, researchers found that pedestrians were more frequently hit by moving vehicles in census tracts with a larger number of families, indicating higher household density. While mid-block collisions occurred more often on narrower streets (less than 35 feet wide), intersection collisions occurred on streets over 70 feet wide,<sup>65</sup> which are associated with relatively higher vehicular speed. While this study did not focus on Latinos, Latino communities in California tend to have larger families and live in more dense housing.

In a study of the relationship between schools and child pedestrian injury collisions, LaScala et al., found that the number of injuries was greater in communities with a high density of youth population, low-income households and high traffic volume.<sup>66, 67</sup> Though this study did not focus on Latinos, the socio-demographic characteristics they studied were similar to those in East Los Angeles.

<sup>60</sup> “Pedestrian Safety in California: Five Years of Progress & Pitfalls.” Surface Transportation Policy Project. Aug 2002.

<sup>61</sup> National Survey of Pedestrian and Bicyclist Attitudes and Behaviors, 2002. National Highway Traffic Safety Administration (NHTSA) and Bureau of Transportation Statistics (BTS).

<sup>62</sup> Campos-Outcalt D, Bay C, Dellapenna A, Cota MK. Pedestrian Fatalities by Race/Ethnicity in Arizona, 1990–1996. *Am J Prev Med*. 23(2). 2002.

<sup>63</sup> Agran PF, Winn DG, Anderson CL, Del Valle CP. “Pediatric injury hospitalization in Hispanic children and white, non-Hispanic children in Southern California.” *Arch Pediatr Adolesc Med*. 150:400–6. 1996.

<sup>64</sup> Jacobsen P, Anderson CL, Winn DG, et al. Child pedestrian injuries on residential streets: implications for traffic engineering. *ITE (Institute of Transportation Engineers) Journal* [serial online]. 70:71-74. 2000.

<sup>65</sup> Lightstone AS, Dhillon PK, Peek-Asa C, Kraus JF A geographic analysis of motor vehicle collisions with child pedestrians in Long Beach, California: comparing intersection and midblock incident locations. *Injury Prevention* 7:155-60. 2001.

<sup>66</sup> LaScala EA, Gruenewald PJ An ecological study of the locations of schools and child pedestrian injury collisions. *Accident Analysis and Prevention*. 36(4):569-76. 2004.

<sup>67</sup> LaScala EA, Gerber D, Gruenewald PJ Demographic and environmental correlates of pedestrian injury collisions: a spatial analysis. *Accident Analysis and Prevention*. 32:651-658. 2000.

## RECOMMENDATIONS

- **Slow traffic in residential neighborhoods and thoroughfares with high pedestrian traffic.** Examples of traffic calming include lowering vehicle speeds, narrowing street width/reducing number of lanes, and installing speed humps. Studies of traffic calming projects have found a wide range of results after implementation of such improvements. For example, injuries decreased from 14-85 percent.<sup>68</sup> Enforcement also plays a key role, and should be enhanced in especially high-risk areas.<sup>69, 70</sup>
- **Improve pedestrian facilities.** Enhanced street lighting, sidewalks and barriers that separate vehicles from pedestrians, medians at intersections with multiple lanes of traffic, and more accessible transit stops can make walking a safer option. Implementing engineering treatments to improve visibility of crosswalks and to help motorists anticipate pedestrians,<sup>71</sup> especially child pedestrians, is a promising option. Reducing street parking can also make residential streets less hazardous for children.<sup>72</sup>
- **Promote and encourage community planning efforts.** Residents know their communities and can help to design and advocate for walkability and pedestrian safety. Therefore, they should be involved in community planning processes, creating safe routes to school events,<sup>73</sup> and identifying public spaces for recreation, play and socializing. This could result in minimizing the number of children playing on the streets. Reaching adults to promote child safety is critical. Education related to child pedestrian safety should be directed primarily toward parents, caregivers, bus drivers and community leaders, and should take place along with improvements to pedestrian facilities.<sup>74</sup> Outreach programs should help parents understand the developmental limits of their children; e.g., the level of maturity needed to cross the street safely without an adult.<sup>75</sup>
- **Create prevention programs and materials that are culturally appropriate for Latino audiences.** It is important to develop messages using radio and television, rather than solely relying on written documents, such as brochures.<sup>76</sup>
- **Pay attention to inequities around planning.** Resources for promoting traffic calming and more walkable areas need to be allocated equally so lower-income areas, including rural and inner city areas, receive attention. When improving downtown areas, ensure that revitalization efforts do not result in low-income residents being priced out of homes and neighborhoods.

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<sup>68</sup> Jacobsen P, 2000.

<sup>69</sup> Campos-Outcalt D, 2002.

<sup>70</sup> LaScala, EA Johnson, FW Gruenewald, PJ "Neighborhood Characteristics of Alcohol-Related Pedestrian Injury Collisions: A Geostatistical Analysis" *Prevention Science*, Vol. 2, No. 2. 2001.

<sup>71</sup> Ibid.

<sup>72</sup> Jacobsen P, Anderson CL, Winn DG, et al. Child pedestrian injuries on residential streets: implications for traffic engineering. *ITE (Institute of Transportation Engineers) Journal* [serial online]. 2000;70:71-74 AND Agran, PA, Winn DG, Anderson CL Tran C, Del Valle CP. "The role of the physical and traffic environment in child pedestrian injuries." *Pediatrics* 98:1096-1103.

<sup>73</sup> Safe Routes to Schools is a program that promotes walking and biking to school <http://www.saferoutestoschools.org/>.

<sup>74</sup> LaScala, 2004.

<sup>75</sup> EPICgram, California Department of Health Services May 2002 Report No. 5.

<sup>76</sup> Agran PA, Winn DG, Anderson, CL, Del Valle C. "Family, social, and cultural factors in pedestrian injuries among Hispanic children." *Injury Prevention*. 4:188-193. 1998.



“Many people don’t have a driver’s license and, therefore, are not aware of the rules,” one forum participant in Huron said. “And this is a general problem, not only in this area, in cities too.”

Participants were concerned that many drivers are unlicensed, often due to their immigration status, and have not received adequate driver training in the United States. Lack of knowledge about the rules and customs of California roads and driving without a driver’s license were major themes at the Huron forum. Not learning the basic information required to get a license, including information about DUI, seat belts or child restraints, and not learning the basic rules of the road regarding speed, stoplights and right-of-way, they reported, increases risk. Forum participants said there has been no effective outreach by government agencies or other community-based efforts to educate and train undocumented laborers.

In 1998, interviews with Latino farmworkers living in labor camps in California found that 21 percent of the laborers did not have a driver’s license.<sup>77</sup> Of these unlicensed drivers, 60 percent drove more than five days per week and more than 90 percent reported having adult and child passengers while driving.<sup>78</sup> Most strikingly, 40 percent of the unlicensed drivers who were interviewed had been issued a citation, and 40 percent had been involved in a collision in the previous three years.<sup>79</sup>

Since 1993, California has required “lawful presence” (legal immigration status) as a prerequisite for obtaining a driver’s license, a policy which prevents unauthorized immigrants from obtaining a California license.<sup>80</sup> Ten states do not require lawful presence to obtain a license. These include Oregon, Washington, Maryland, Montana, New Mexico, Minnesota, Hawaii, North Carolina, Utah, and Wisconsin.

Research on the general driving population shows that issuance of a driver’s license is important in improving operator safety and that of other roadway users. Never-licensed drivers are 4.9 times more likely to be involved in a fatal crash than licensed drivers.<sup>81</sup> Drivers with suspended and revoked licenses are 3.7 times more likely to be involved in a fatal crash than licensed drivers.<sup>82</sup> In Colorado, Hispanic drivers fatally injured in motor vehicle crashes were more likely than non-Hispanics to be unlicensed, even after adjusting for age, gender and rural locale.<sup>83</sup>

However, when looking at the data on licensing, it is important to separate data on drivers who have lost their license (through license suspension or revocation) from drivers who never obtained a license due to their undocumented status.

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<sup>77</sup> Stiles, M., Grieshop, J. Impacts of culture on driver knowledge and safety device usage among Hispanic farm workers. *Accident Analysis and Prevention*, 31:235-241. 1999.

<sup>78</sup> Ibid.

<sup>79</sup> Ibid.

<sup>80</sup> “Estimates of the Unauthorized Immigrant Population residing in the United States: 1990 to 2000.” United States of America Office of Immigration Statistics. Jan 2003. <http://uscis.gov/graphics/shared/aboutus/statistics/2000ExecSumm.pdf>

<sup>81</sup> Scopatz, R., Hatch, C., DeLucia, B., Tays, K. “Unlicensed to kill: The sequel.” AAA Foundation for Traffic Safety, Jan 2003.

<sup>82</sup> Ibid.

<sup>83</sup> Harper JS, Marine WM, Garrett CJ, Lezotte D, Lowenstein SR. “Motor vehicle crash fatalities: A comparison of Hispanic and non-Hispanic motorists in Colorado” *Annals Emergency Medicine*. 36(6):589-96. Dec 2000.

A new study presents the idea that undocumented/unlicensed Hispanics may focus intently on driving safely so as not to attract attention. Through focus groups of adults born in Mexico and living in the Los Angeles area, researchers have learned that, while most of the participants had little or no driving experience in Mexico, they were regular drivers in the U.S. About three-quarters of the study participants did not have a driver's license, and said they drove "*con la licencia de Dios*" or "with God's license;" i.e., they tried to be "... as invisible as possible to other drivers and to law enforcement." They reported that they maintained their vehicles, used seat belts (although they had little exposure to seat belts in Mexico) and paid attention to which travel routes they took in order to avoid attention of law enforcement.<sup>84</sup>

## RECOMMENDATIONS

- **Study the effect of the lawful-presence requirement for driver's licenses.** Compare collision rates in California to collision rates in states that do not require lawful presence. In particular, focus on the collision rate in the Latino population. Current policy debates about licensing undocumented residents are occurring in the absence of adequate data.
- **Study collision rates among those who have lost their license and those who never obtained a license.** This data can contribute to policy development.
- **Improve relations between California Highway Patrol and other enforcement agency field officers and immigrants.** Establish venues where Latinos can safely obtain information without the threat of deportation, such as outreach activities or community events sponsored or attended by law enforcement.
- **Conduct traffic safety programs in concert with farm employers.** For example, traffic safety programs can offer employers safety education materials to share with their employees.
- **Reach out through Spanish language media.** Educational programs can be conducted through the Spanish media to reach new immigrants.

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<sup>84</sup> Arce, C, Dinh-Zarr, TB, Sherrets, D. Driving with God's License: An Exploration of Mexican Immigrant Drivers' Attitudes and Behavior with a Focus on Belt Use. Poster Presentation, 132nd Annual Meeting of American Public Health Association. Washington DC. Nov 2004.



# AGRICULTURAL COMMUNITIES

While the vast majority of Latinos reside in California's urban centers, in some agricultural communities of the state the population is almost entirely Latino.<sup>85</sup> The Huron forum identified many issues unique to agricultural communities, particularly for Latinos. In communities like Huron, which is 98 percent Latino, the population can double with the arrival of Mexican migrant workers during harvest season, placing an extreme burden on an underdeveloped transportation infrastructure and making the traffic on rural roads heavier (with regard to both number and weight of trucks) and more dangerous. Participants in the Huron forum expressed concern over the insufficient number of street lights and stop signs to accommodate the increase in traffic, as well as the poor condition of roads, overcrowded streets and the lack of bicycle and pedestrian accommodations.

Participants were also concerned that those who drive others for a living are not well trained or well informed about traffic laws and unsafe behaviors. "Truck drivers' lack of responsibility when transporting people to the fields worries me," one respondent said. "They have no idea of the responsibility implied in carrying people in their trucks."

Californians in rural areas have been shown to be at higher risk for fatal traffic crashes than those in urban areas largely due to higher speeds, more single car crashes, DUI (with all three exacerbated by nonuse of seat belts) and longer emergency response times. In 2001, fatal rural crashes made up about 60 percent of all traffic fatalities nationwide.<sup>86</sup> Californians traveling on the Central Valley's rural roads are three times more likely to be involved in a fatal collision than on higher traffic urban roads.<sup>87</sup>

According to 1995 data, Latinos make up only 30 percent of the population of the Central Valley but are involved in about 45 percent of the crashes and 60 percent of the DUI arrests.<sup>88</sup> In areas with a majority Latino population, risk factors such as DUI, possibly lower seat belt use, high numbers of unlicensed drivers and a lack of knowledge about driving laws and safe practices potentially contribute to higher traffic crashes and subsequent fatality rates.

In addition, rural dwellers are more likely to be of lower socioeconomic status. In 2001, poverty was 28 percent higher among rural residents than among those living in urban environments nationally.<sup>89</sup> While unemployment and underemployment largely determine poverty status, it is important to note that rural Latinos are more likely than urban Latinos and whites to hold jobs that keep them below the poverty line; 62 percent of rural Hispanics work in high-poverty occupations compared to 43 percent of whites.<sup>90</sup>

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<sup>85</sup> Stiles, 1999.

<sup>86</sup> Traffic Safety Facts 2002, NHTSA, DOT HS 809 620, Jan 2004.

<sup>87</sup> Stiles, 1999.

<sup>88</sup> Ibid., Data from California Highway Patrol, 1995.

<sup>89</sup> Probst, JC Moore, CG Glover, SH Samuels, ME "Person and Place: The Confounding Effects of Race/Ethnicity on Rurality and Health." *American Journal of Public Health* Volume 94, No. 10. Oct 2004.

<sup>90</sup> Probst, 2004.



## RECOMMENDATIONS:

- **Develop collaborative efforts to focus on effective rural outreach strategies.** Law enforcement, public health agencies, Latino community and labor organizations, and the media should collaborate on sustained public awareness television and radio campaigns, conducted in Spanish, about the proper use of seat belts and child safety seats, the DUI risk, and use of bicycle helmets. Awareness campaigns, in Spanish, should also focus on the financial and health costs, especially to the family, of DUI and traffic crashes in general. Culturally sensitive print campaigns using photos (e.g., *fotonovelas*) should demonstrate proper use of restraints. Forum participants said that greater outreach about traffic safety problems (seat belts, child passenger safety, DUI) from responsible governmental agencies, along with greater enforcement of the laws and more attention to the transportation infrastructure, would go far in increasing the safety of their community.
- **Enhance enforcement of traffic safety laws.** Enforcement of DUI laws, safety restraint laws, and compliance with labor vehicle regulations, in addition to outreach described above, is key.
- **Explore transportation options for farmworkers.** Increase screening of vehicle drivers and provide more safety training for these operators. Further, enforce the prohibition of alcohol consumption prior to transporting laborers. Pay more attention to the transportation infrastructure needs of communities where the population increases substantially on a seasonal basis.



Throughout the community forums, literature reviews and discussions with stakeholders, many recommendations for promoting traffic safety among Latinos emerged. The following recommendations fall in the general areas of education and outreach, enforcement, transportation engineering and planning, policy and community organization. Some interventions are specific to each area, while others cut across the specific issues. It is important to note that none of these approaches works by itself, but should be seen as parts of the whole — a comprehensive scope of activities.

- **Education and Outreach:** Develop sustained education and outreach approaches that are culturally sensitive and family- and community-oriented. Campaigns should not rely primarily on the printed word and should respect traditional Latin American gender roles without resorting to stereotypes.
- **Enforcement:** Develop enforcement approaches that are sustained and effective without creating racial profiling. Build on existing models targeting the enforcement of laws regulating speeding, DUI, seat belt and child passenger safety laws. Develop outreach programs to promote safety.
- **Transportation Engineering and Planning:** Ensure equitable distribution of resources for transportation engineering and planning for Latino communities. Traffic calming and the creation of open spaces and public parks make communities more pleasant and safer for walking, biking, driving and playing.
- **Policy:** Policies provide the muscle for health and safety efforts and should be explored on local, state and national levels. Local policies addressing transportation and land use planning and alcohol availability show promise.
- **Community Organization:** Encourage existing coalitions and other groups in Latino areas and populations to join partnerships with public health and transportation practitioners, law enforcement, local business groups and agencies to advocate for increased traffic safety measures.

## NEXT STEPS

In the winter of 2005, the second phase of the Latino Traffic Safety Project began, also with funding from the California Office of Traffic Safety. The purpose of this phase is to take the recommendations listed above and refine them in three focus groups in urban, suburban and rural parts of California. Briefings to policymakers and professionals will also take place. It is our vision that these recommendations will be integrated into policy, enforcement and program development and implementation efforts throughout the state.

# APPENDIX A: TRAFFIC SAFETY ETHNICITY DATA

Much of the research cited in this report has used information on ethnicity. Most data on traffic collisions and subsequent injury and fatality generally come from one of two sources: (i) public health sources including vital statistics (for deaths) and hospital discharge records (for non-fatal injury), and (ii) police collision reports (for collisions, injuries and deaths). Traditionally, the primary source of ethnicity data in traffic safety has been from public health sources. More recently, data from police-reported collisions have included ethnicity data. Each of these sources of data have advantages and disadvantages for the study of ethnicity and traffic safety.

## Public Health Sources of Traffic Deaths and Injuries

### Traffic Deaths

California maintains a database of all deaths occurring in the state (<http://www.dhs.ca.gov/hisp/chs/default.htm>). The National Center for Health Statistics maintains a database of all deaths occurring in the United States. Among all deaths, those that result from traffic collisions can be determined from the so-called E-Code (External Cause of Injury Code) included on the death certificate. The E-code reveals the role of the person injured in the traffic collision: motor vehicle occupant, pedestrian, bicyclist. The cause of death is recorded by the physician or medical examiner.

Hispanic ethnicity on death certificates is classified separately from race, both of which are determined by information provided by an informant (usually a family member) or by observation. Death certificate data can be used for studying the overall rate of traffic deaths by ethnicity. However, these data are not useful for studying causal factors because no information is available about the nature or cause of the collision.

In California, data on traffic fatalities derived from death certificates can be accessed at a site maintained by the California Department of Health Services EPIC unit (<http://www.applications.dhs.ca.gov/epicdata/default.htm>). EPIC uses death certificate data to describe California residents who die as a result of injury (that is, whose death certificate includes an external cause of injury). Population data with corresponding years and age groups can also be obtained on the EPIC website. (See Appendix B for more information on population data.)

### Traffic Injury

Traffic injury data is available from hospital discharge abstract databases, which in California is maintained by the Office of Statewide Health Planning and Development Patient Discharge Data. Hospital discharge abstracts include information on type of injury. The data set contains information on patients discharged from all non-Federal hospitals in California. As with death certificate data, injuries resulting from traffic collisions can be determined from the E-code, although the E-code may be sporadically coded.

Race and Hispanic ethnicity are classified separately in the hospital discharge data, however, ethnicity data may be sporadically coded. An advantage of using hospital discharge data is that it contains detailed information about the type of injury (or medical condition), but, as with death certificates, there is no information on the collision itself.

Data on traffic injuries derived from hospital discharge databases can also be accessed at the website maintained by EPIC.

## Police Reported Collisions

Police-reported collision reports include detailed information on the crash itself (type of crash, contributing factors), the vehicle (make and year), the driver (age, gender, injury) and the other occupants (age, gender, injury).

For California, the most relevant databases are California Highway Patrol (CHP) Statewide Integrated Traffic Records Systems (SWITRS), and the Fatality Analysis Reporting System (FARS). The latter is a national database, but California deaths can be separately identified. Ethnicity data has recently become available in both databases.

## Statewide Integrated Traffic Records System (SWITRS)

The California Highway Patrol (CHP) maintains the Statewide Integrated Traffic Reporting System (SWITRS), which includes data for all police-reported collisions in California. The CHP publishes an annual report, available at <http://www.chp.ca.gov/html/publications.html>.

Since 2002, data on race/ethnicity have been obtained in California police reports of collisions. These data are obtained only for drivers — ethnicity is not reported for passengers. As a result, SWITRS cannot be used to study total motor vehicle deaths and injuries by ethnicity, but can be used to study driver characteristics by ethnicity.

An advantage of using police-reported collision data for studying ethnicity and traffic collisions is that detailed information is available on the collision itself.

## Fatality Analysis Reporting System (FARS)

The National Highway Traffic Safety Administration (NHTSA), the federal agency with primary responsibility for traffic safety, maintains a database of all police-reported fatal crashes. The Fatality Analysis Reporting System (FARS) includes data about the collision and information about the driver and occupants. FARS is the source for most published data on traffic fatalities in the United States. A fuller description of FARS, as well as several methods for accessing the data, is available at <http://www-nrd.nhtsa.dot.gov/departments/nrd-30/ncsa/fars.html> or <http://www-fars.nhtsa.dot.gov>.

FARS data on ethnicity dates back to 1999. FARS now routinely links fatal crashes to the National Death Index (NDI), a database of all deaths in the United States. FARS is a limited source for traffic safety ethnicity data in that it only maintains information about fatally injured persons; it is not possible to summarize non-fatal motor vehicle injuries using FARS.

## Comparison of Ethnicity Data Across Data Sources

Description of ethnicity varies among the three data sources. Since 2002, FARS has included the following ethnic categories: White, Black, American Indian, Chinese, Japanese, Hawaiian, Filipino, Asian Indian, Korean, Samoan, Vietnamese, Guamanian, Other Asian or Pacific Islander, Islander (Multiple Races), and other unknown. Also, like the U.S. census, FARS has a separate “Hispanic/Non-Hispanic” variable (see Appendix B for an explanation of census ethnic/racial designations).

SWITRS has a much smaller list of ethnic categories and does not have a separate “Hispanic” variable. The SWITRS ethnicity/race categories are Asian, Black, Other, Hispanic, and White. Thus, a “Black, Hispanic” driver in the FARS data set might be listed as either “Black” or “Hispanic” (but not both) in the SWITRS database.

Although the injury and fatality data that EPIC uses classifies race and Hispanic ethnicity separately, EPIC combines the two fields into a single race/ethnicity field so that there are comparable groups both across time and between fatal and nonfatal data. The racial/ethnicity categories presented by EPIC are White, Black, Hispanic, Native American, Asian, and Other/Unknown.

Because the different sources of traffic safety data collect ethnicity in different ways, collision, injury or fatality counts may differ, depending on the researcher’s choice of data source. Because of this and the uncertainties associated with assigning race/ethnicity for each source, care should be taken in using race/ethnicity data in the study of traffic safety.

# APPENDIX B: POPULATION DATA

## Sources of Population Data

The population data in this report is used to provide basic demographic information on the Latino population in the state and to calculate arrest and fatality rates from the 2000 U.S. Census Bureau and the California Department of Finance Demographic Research Unit.

### U.S. Census

The U.S. Census Bureau conducts censuses and sample surveys in the areas of population, housing, manufacturing, business (wholesale trade, retail trade, services), mineral industries, construction, finance, transportation, governments and foreign trade. Detailed federal, state, county and local demographic data files, including population estimates by age, race and gender for past years and for years projected into the future, are accessible via the website, <http://www.census.gov>.

In 2000, the census allowed respondents to identify themselves as two or more races, as opposed to limiting their options to single, mutually exclusive racial categories. It also placed the Hispanic or Non-Hispanic question before the race question, which was a departure from the former method of only allowing people to choose between a race and an ethnicity and therefore keeping race and ethnicity mutually exclusive. Survey respondents in 2000 were able identify as both Hispanic and African-American, for example, instead of Hispanic or African-American. Because of these changes, census data on race for 1990 and prior is not directly comparable to the 2000 data. The implications of collecting racial and ethnic data using the two-question method have yet to be fully understood.

### California Department of Finance

The Demographic Research Unit of the California Department of Finance (DOF) is designated as the single official source of demographic data for state planning and budgeting. The unit's calculation of population projections through 2050 used census survey data, birth and death counts, driver's license changes, civilian labor force data, school enrollment, federal income tax returns, immigration data, Medicare/Medi-Cal information and other records provided by federal and state agencies. These and other data files are available on the DOF website <http://www.dof.ca.gov/HTML/DEMOGRAP/Druhpar.htm>. This site includes reports with tables and data files that can be downloaded for analysis (age, gender, ethnicity from 1970-2040).

The DOF data file was used in this report to calculate 2002 arrest and traffic fatality rates and to estimate the racial and ethnic distribution of California's population in 2004 and 2020. The racial categories in DOF estimates are mutually exclusive, meaning that Hispanic is treated as a racial category and that other races — White, Asian, etc. — include only those who identified as non-Hispanic. This is consistent with the racial categories in SWITRS, and is therefore useful as the denominator in calculating crash rates.







