

TRAFFIC SAFETY AND ACTIVE TRANSPORTATION

2/6/2014

Traffic Safe Communities Network

Santa Clara County
**PUBLIC
HEALTH**

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Objective

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- To provide data on traffic safety, active transportation, and air quality in Santa Clara County to inform the planning and practices of the Traffic Safe Communities Network

Overview

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- ▣ Traffic safety
- ▣ Active transportation
- ▣ Air quality

Timeline

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- ▣ **February 6:** Present preliminary data at the TSCN Full Network Meeting
- ▣ **February 28:** Provide brief to the TSCN Steering Committee

Methods

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- ▣ Existing data
 - ▣ Emergency Medical Services (EMS)
 - ▣ Emergency room (ER) visits
 - ▣ Death Statistical Master File (Vital Statistics)
 - ▣ Statewide Integrated Traffic Records System (SWITRS)
 - ▣ California Healthy Kids Survey (CHKS)
 - ▣ California Health Interview Survey (CHIS)
 - ▣ American Community Survey (ACS), CA Department of Finance
 - ▣ Existing Conditions Report, Health Element (General Plan)
 - ▣ Web-based Injury Statistics Query and Reporting System (WISQARS)

Methods

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- ❑ Injury data is generally presented here as counts, percentage and rates
- ❑ Counts: the total number of events that occur in a defined period of time
- ❑ Rates: the count divided by the population at risk , and multiplied by a standard number (e.g., 100,000) to show the number affected for each X number of people
 - ❑ Used to compare two different populations or trends over time
 - ❑ Sometimes age adjusted to account for different age profiles between different populations or time periods

TRAFFIC SAFETY

Overview

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▣ Collisions

- ▣ SWITRS
- ▣ EMS transports
- ▣ ER visits
- ▣ Deaths
- ▣ Special issues
 - ▣ Bicyclists, pedestrians
 - ▣ Children 0-15, seniors (65+)

▣ Factors

- ▣ Distracted driving
- ▣ Speeding
- ▣ Alcohol
- ▣ Seatbelts
- ▣ Helmet use
- ▣ Location: near public schools

Significance

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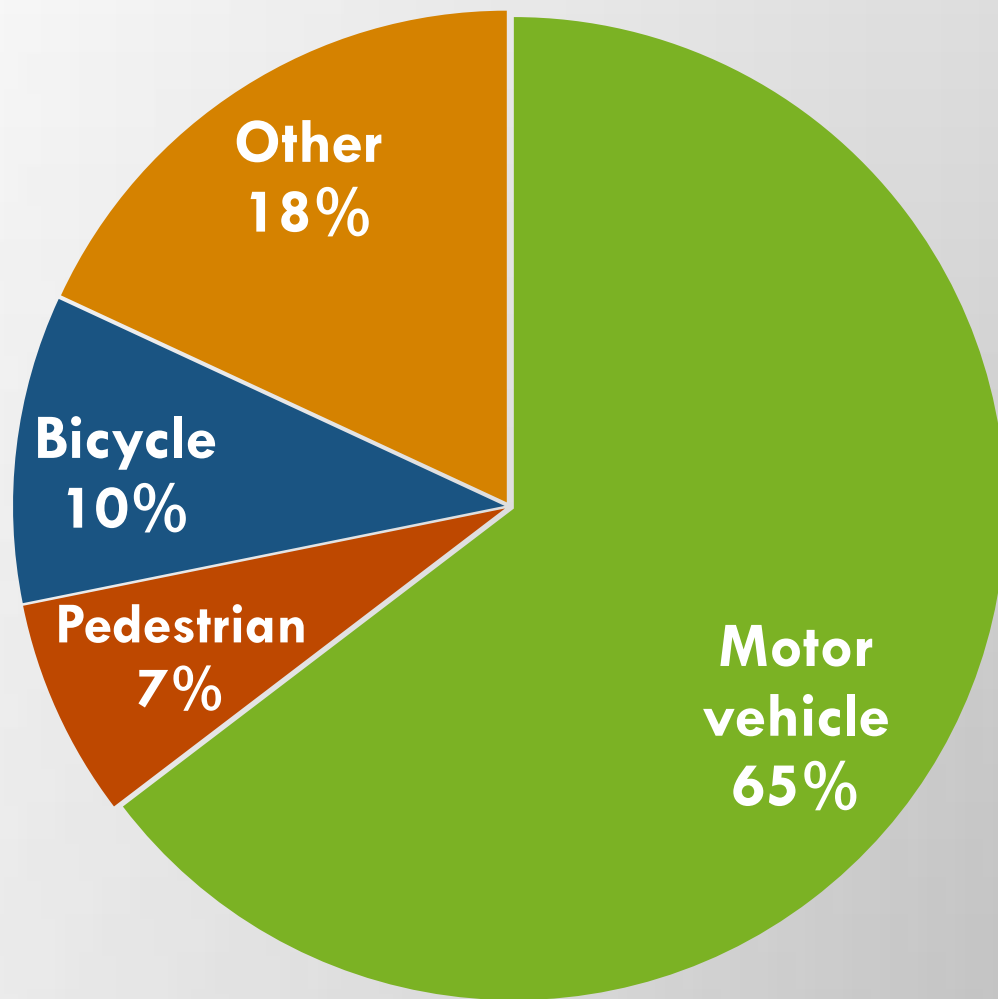
- In the U.S., unintentional motor vehicle (MV) traffic collisions are one of the leading causes of death
- An estimated 2.6 million MV occupants of all ages were treated in ERs for nonfatal injuries in the U.S. in 2012
- Deaths from MV collisions in California cost more than 4.5 billion dollars in medical expenses and work loss in 2012¹
- MV injuries identified as a “winnable battle” by the CDC

Source: Centers for Disease Control and Prevention (CDC)

¹Costs expressed in 2010 California prices

Type of collisions

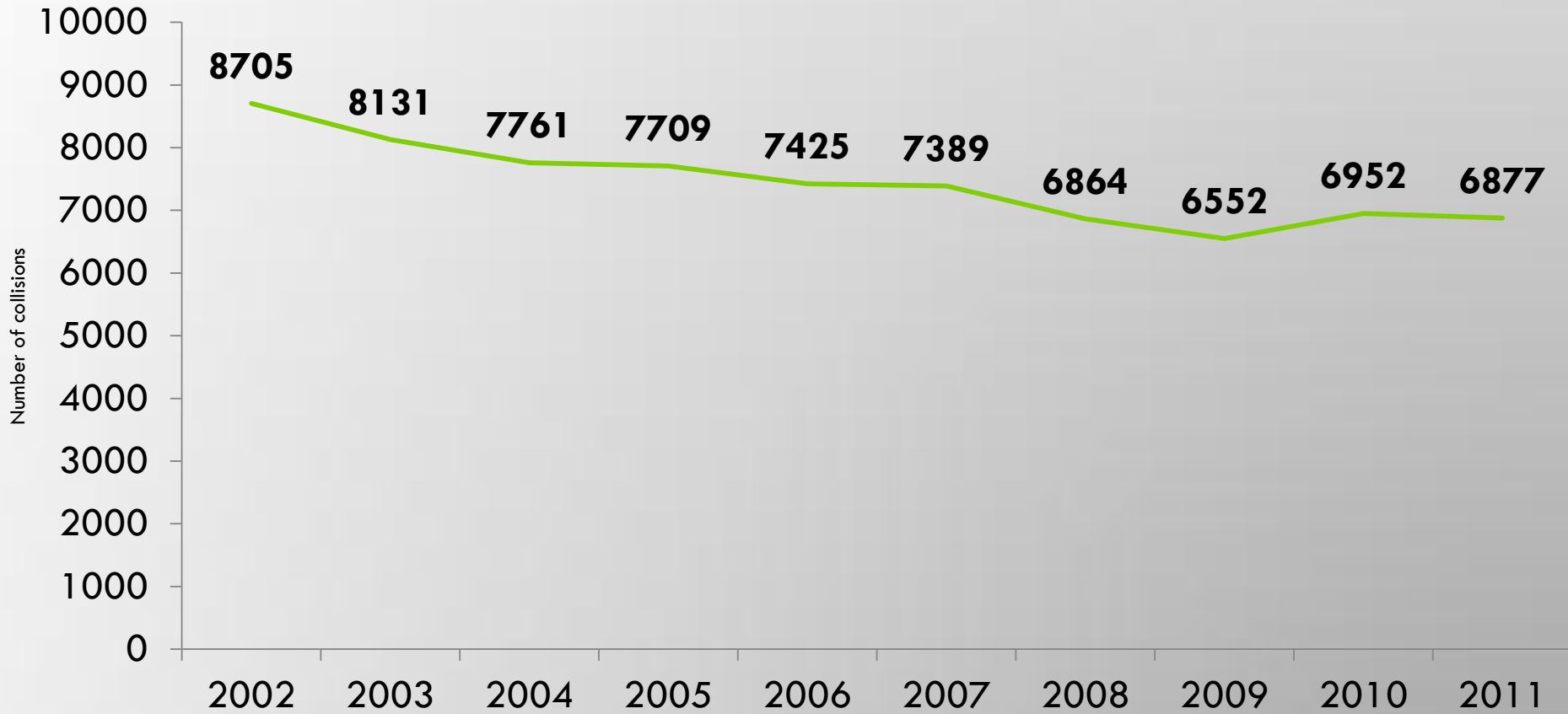
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- ❑ 1% of collisions are fatal
- ❑ 33% involve severe injuries

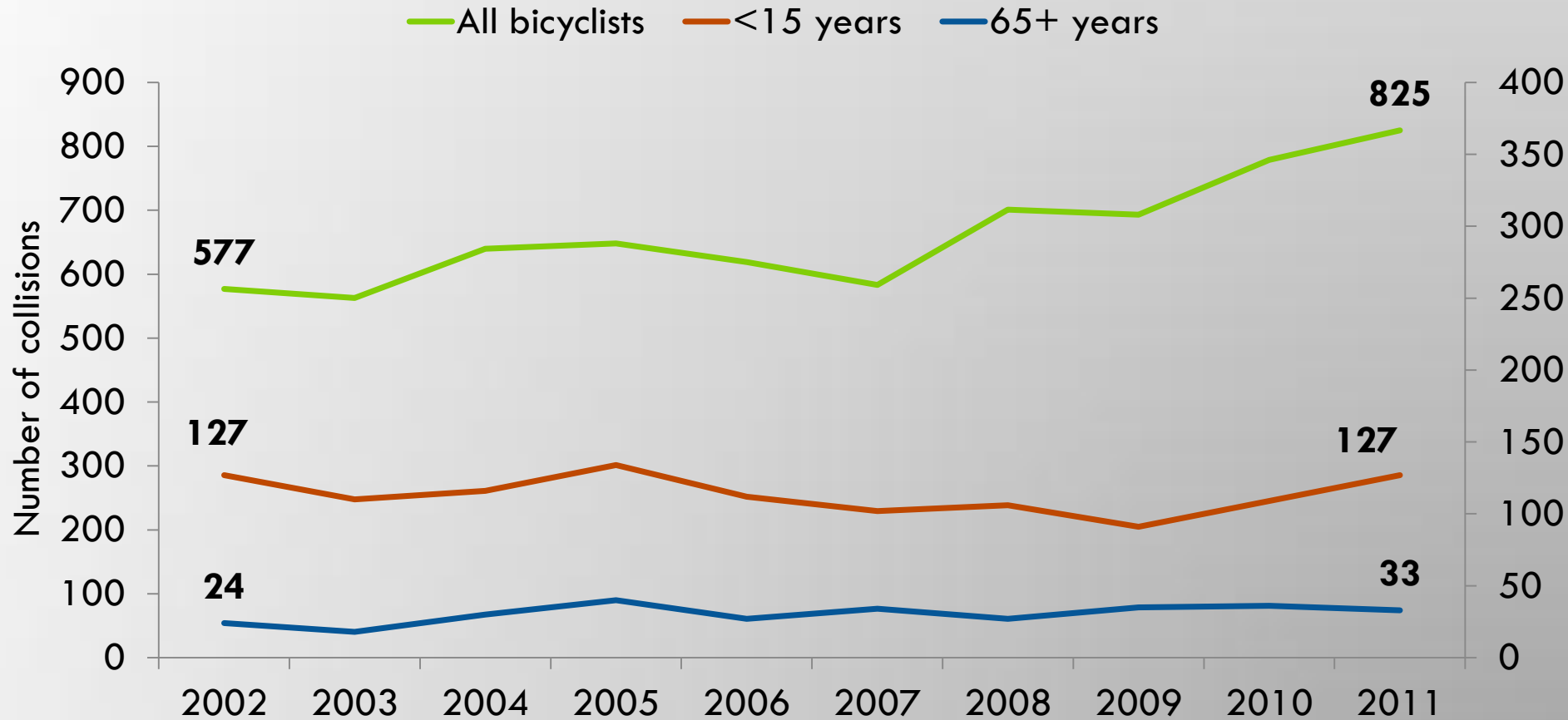
Number of motor vehicle collisions, 2002-2011

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Source: California Highway Patrol, Statewide Integrated Traffic Records Systems (SWITRS), 2002-2011

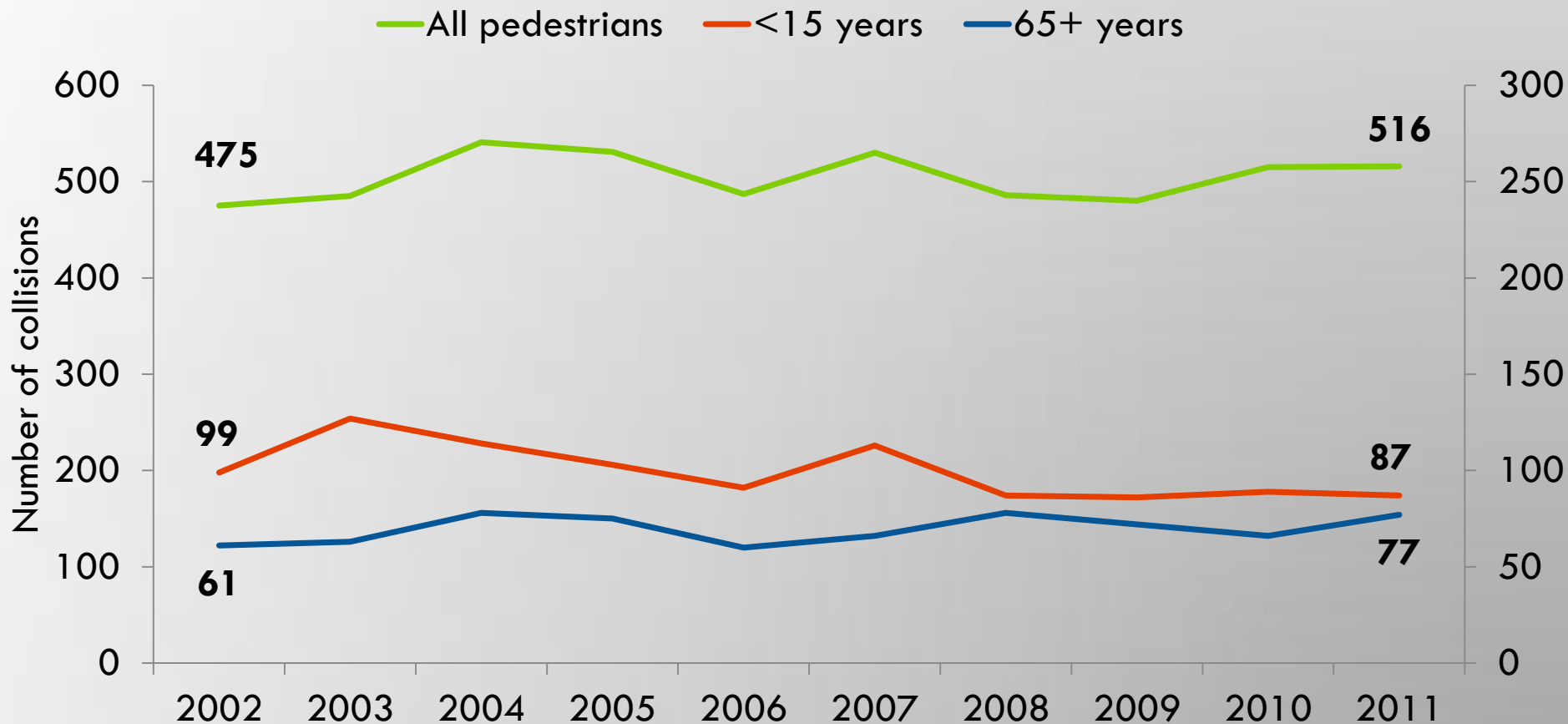
Bicycle collisions, overall and by age, 2002-2011



Source: California Highway Patrol, Statewide Integrated Traffic Records Systems (SWITRS), 2002-2011
Age related data is specific to victims data and all pedestrians involves all collisions

Pedestrian collisions, overall and by age, 2002-2011

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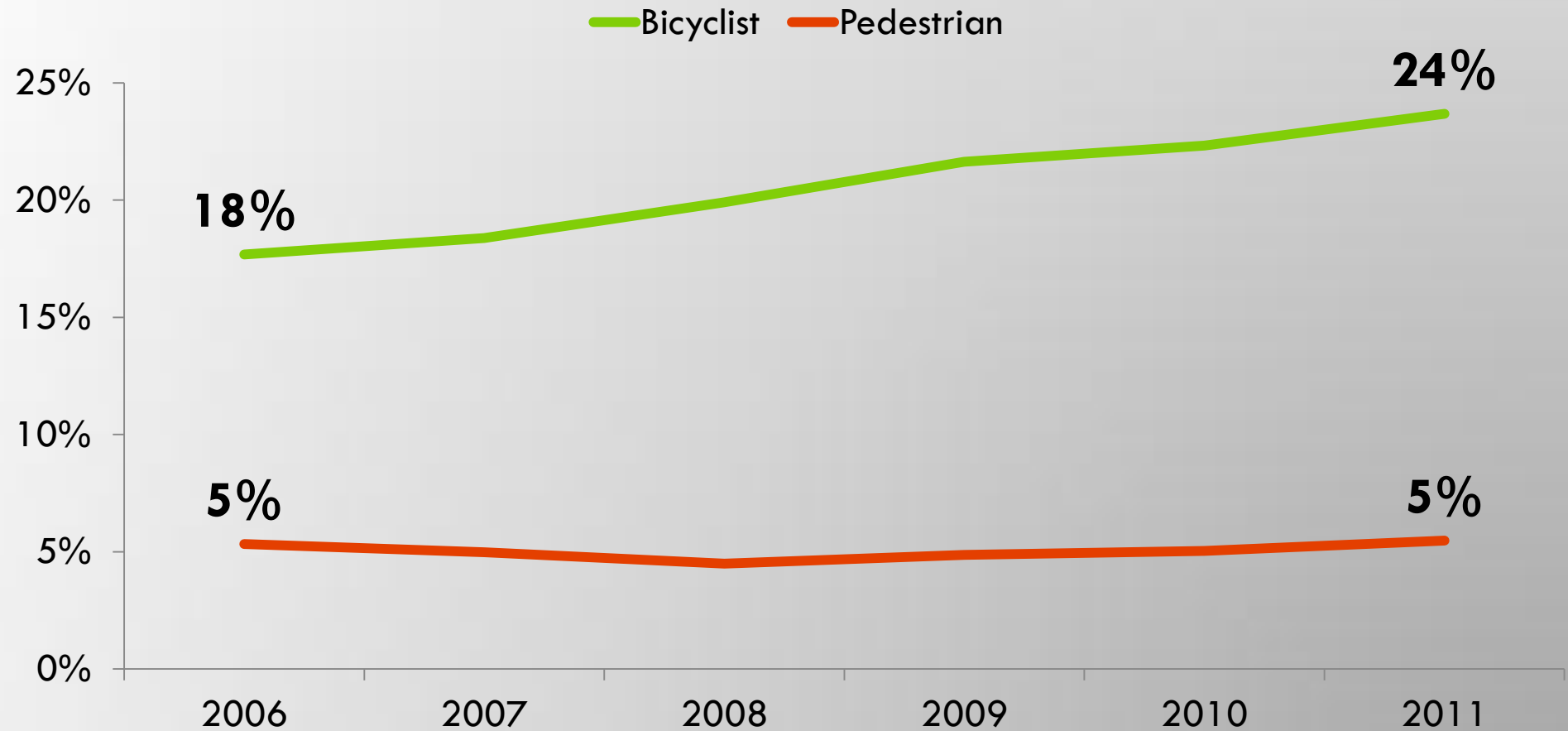


Source: California Highway Patrol, Statewide Integrated Traffic Records Systems (SWITRS), 2002-2012

Age related data is specific to victims data and all pedestrians involves all collisions

Percentage of emergency room visits for motor vehicle collisions involving bicyclists and pedestrians, 2006-2011

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Source: Office of Statewide Health Planning and Development, Emergency Department Data, 2006-2011

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Motor vehicle deaths

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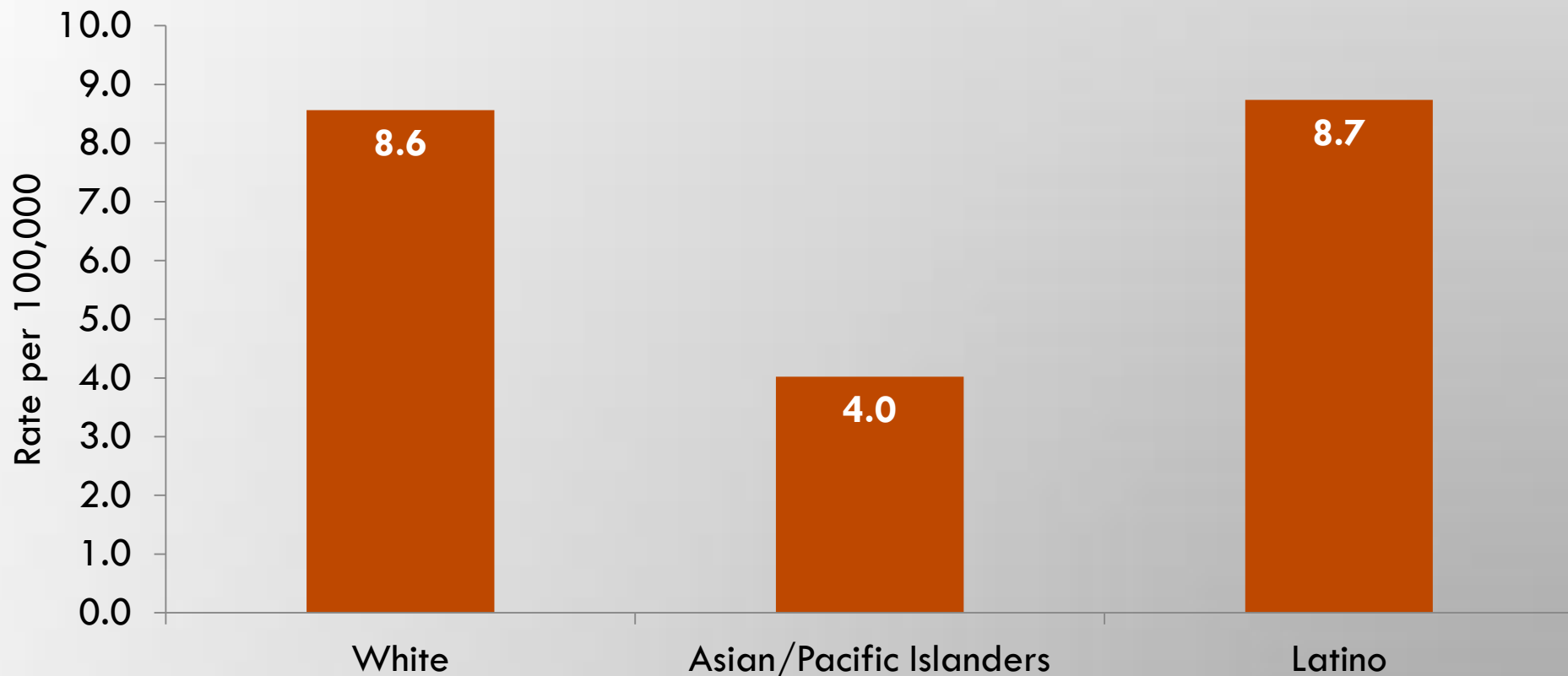
- ▣ Counts and rates for MV deaths remain stable from 2003 to 2012
- ▣ MVT collisions ranked first in the leading causes of injury deaths among ages 5 to 14 and ages 25 to 34
 - ▣ Ranked second among ages 15 to 24 and ages 35-44, 45-54, 55-64, 65-74, 75-84, 85 and older
- ▣ Among all deaths from motor vehicle collisions in 2012:
 - ▣ 30% were among motor vehicle occupants
 - ▣ 26% pedestrians
 - ▣ 11% motorcyclists
 - ▣ 5% bicyclists
- ▣ More common among males (63% vs. 37%)

Source: Santa Clara County Public Health Department, Death Statistical Master File, 2012

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Age-adjusted motor vehicle-related mortality by race/ethnicity

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Source: Santa Clara County Public Health Department, Death Statistical Master File, 2010-12; State of California, Department of Finance, Report P-3: State and County Population Projections by Race/Ethnicity, Detailed Age, and Gender, 2010-2060. Sacramento, California, January 2013.

Note: Age adjusted motor vehicle related mortality rate for African Americans is not reported due to small sample size

Distracted driving

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- ▣ Defined by SWITRS:
 - ▣ Cell phone handheld/hands free, electronic equipment, radio/CD, smoking, eating, children, animals, personal hygiene, reading, other
- ▣ In a national survey conducted in 2011:
 - ▣ 69% reported talking on a cell phone while driving at least once in the past 30 days
 - ▣ 31% reported reading or sending a text/e-mail message while driving at least once in the last 30 days

Source: MMWR. Vital signs: nonfatal, motor vehicle--occupant injuries (2009) and seat belt use (2008) among adults --- United States. Morb Mortal Wkly Rep. 2011; 7;59(51):1681-6.

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Distracted driving violations

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- ❑ Distraction affected collision counts are likely underreported and should be viewed with caution
- ❑ Distracted driving is captured as an “other associated factor” in motor vehicle traffic collisions reports
 - ❑ From 2009-2011, 12% of all collisions listed distracted driving as the other associated factor

Source: California Highway Patrol, Statewide Integrated Traffic Records Systems (SWITRS), 2009-2011

Alcohol-involved collisions

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- ▣ Overall, the number of alcohol-involved collisions was stable from 2002 to 2011
- ▣ In 2011, 11% of collisions involved alcohol

Source: California Highway Patrol, Statewide Integrated Traffic Records Systems (SWITRS), 2002-2011

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Alcohol-impaired driving among 9th and 11th grade students

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- 21% had ever driven in a car when they had been drinking alcohol, or had been in a car driven by a friend that had been drinking
- Little difference between males and females (20% vs. 22%)
- More common among 11th than 9th graders (24% vs. 17%)
- Highest among Hispanic students (28%) compared to 23% of African American and 20% of White students

Source: 2009-10 California Healthy Kids Survey

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Collisions near public schools, 2002-2012

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- ▣ Pedestrian-involved collisions
 - ▣ 69% were within a half mile of a school
 - ▣ 88% were within one mile of a school
- ▣ Bicyclist-involved collisions
 - ▣ 65% were within a half mile of a school
 - ▣ 86% were within a mile of school

Source: California Highway Patrol, Statewide Integrated Traffic Records Systems (SWITRS), 2002-2011

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Other collision factors

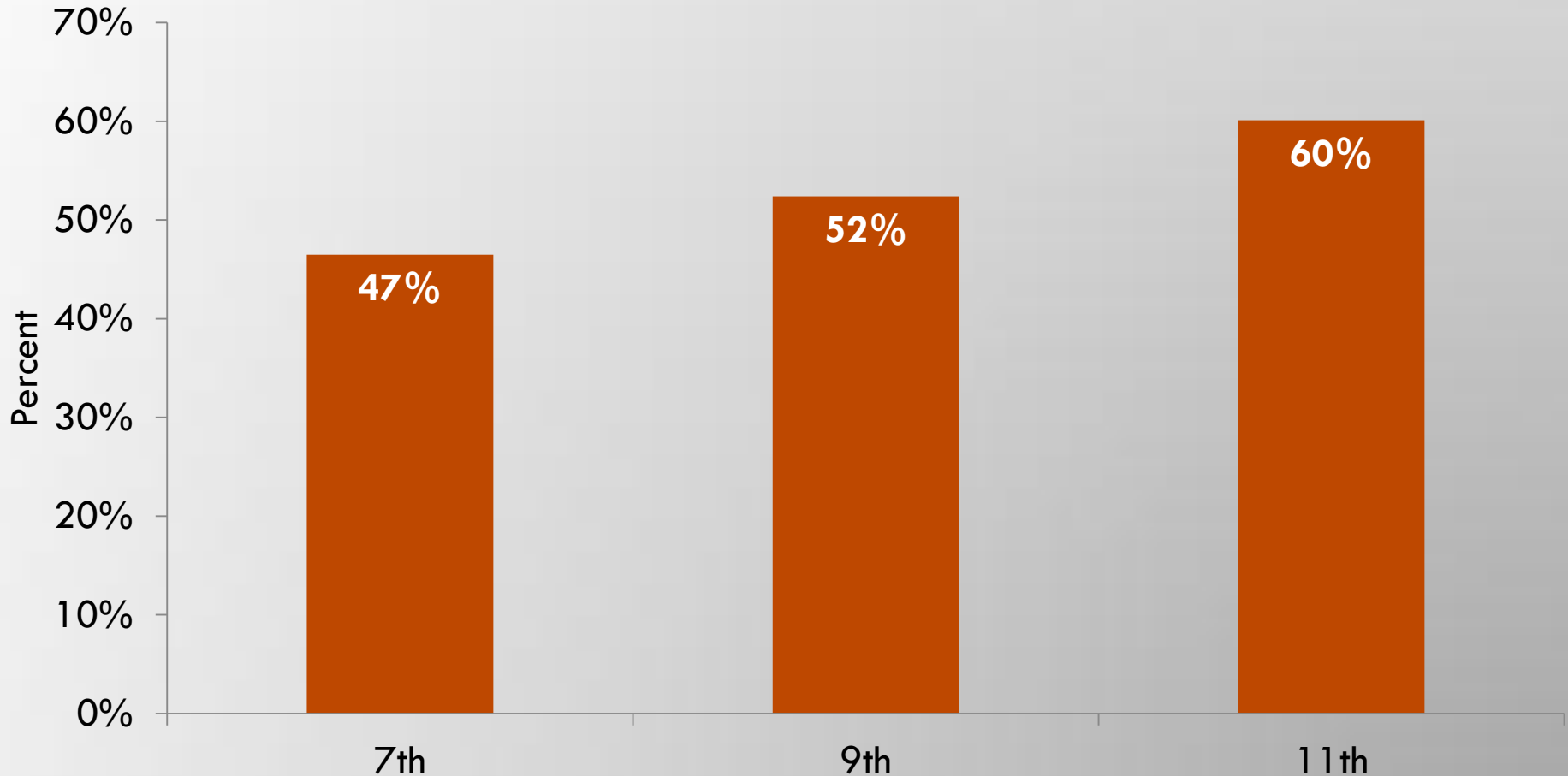
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- ▣ **Unsafe speed (2011):** 40% of all collisions
- ▣ **Not wearing a seatbelt (2011):**
 - ▣ 1% (15 of 1259) of parties responsible
 - ▣ 2% (22 of 937) of collision victims
- ▣ **No bicycle helmet (2013):** 57% of MV-related EMS bicycle transports

Source: California Highway Patrol, Statewide Integrated Traffic Records Systems (SWITRS), 2002-2011; Santa Clara County Public Health Department, Emergency Medical Services (EMS), 2013

Percentage of students who bicycled during the last 12 months and never/rarely used a helmet by grade level

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Source: California Healthy Kids Survey, 2007-08

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Summary

- ❑ Although, the number of total collisions is decreasing, those involving bicyclists and pedestrians are on the rise
- ❑ The number of ER visits due to MVT accidents are also increasing
- ❑ Pedestrians represent disproportionate share of MVT fatal collisions
- ❑ Distracted driving is underreported despite national evidence of widely prevalent distracted driving practices
- ❑ Less than half of the student bicyclists use a helmet; usage decreases as grade level increases

ACTIVE TRANSPORTATION

Overview

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- ▣ Adults
 - ▣ Means of transportation to work
- ▣ Youth
 - ▣ Means of transportation home from school

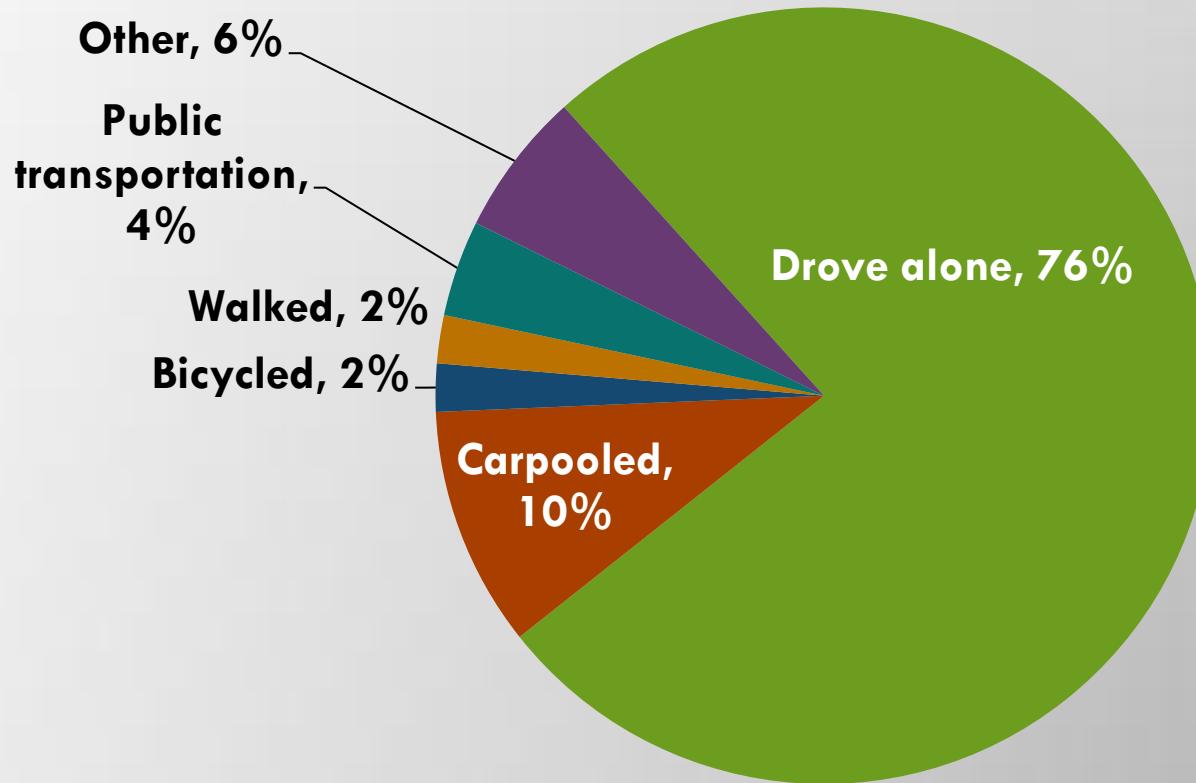
Significance

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- Active transportation represents the link between “healthy, active living and our transportation choices”
- Studies have shown that states with higher rates of walking and biking have lower rates of chronic disease
- Increases in walking and biking for some or short trips can decrease the impact of transportation on air quality

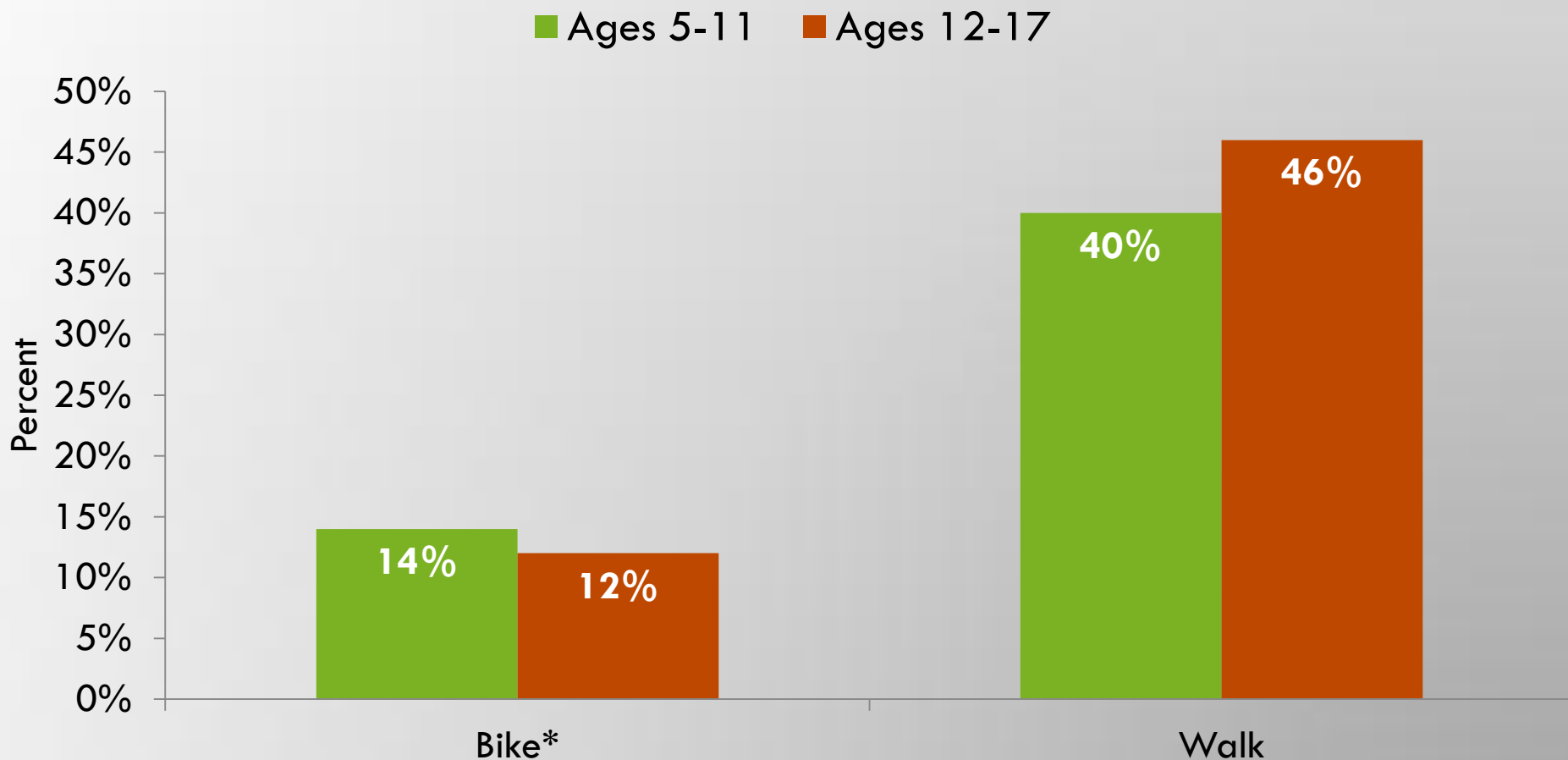
Means of transportation to work

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Percentage of children and youth who walked or biked home 1 or more days from school in the past week by age group

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Source: California Health Interview Survey, 2011-2012

*For ages 12-17, includes students who biked or skated

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AIR QUALITY

Air quality

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- The EPA has identified six pollutants as "criteria" air pollutants: carbon monoxide, lead, nitrogen oxides, ground-level ozone, particulate matter, and sulfur oxides
- Ozone and particulate matter have been linked to health conditions such as lung cancer, asthma attacks, heart attacks, strokes, and early death
- The transportation sector accounts for 42% of greenhouse gas emissions in Santa Clara County

Source: Bay Area Air Quality Management District, Source Inventory of Bay Area Greenhouse Gas Emissions, 2010

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Criteria air pollutant standards across federal, state, and Santa Clara jurisdictions

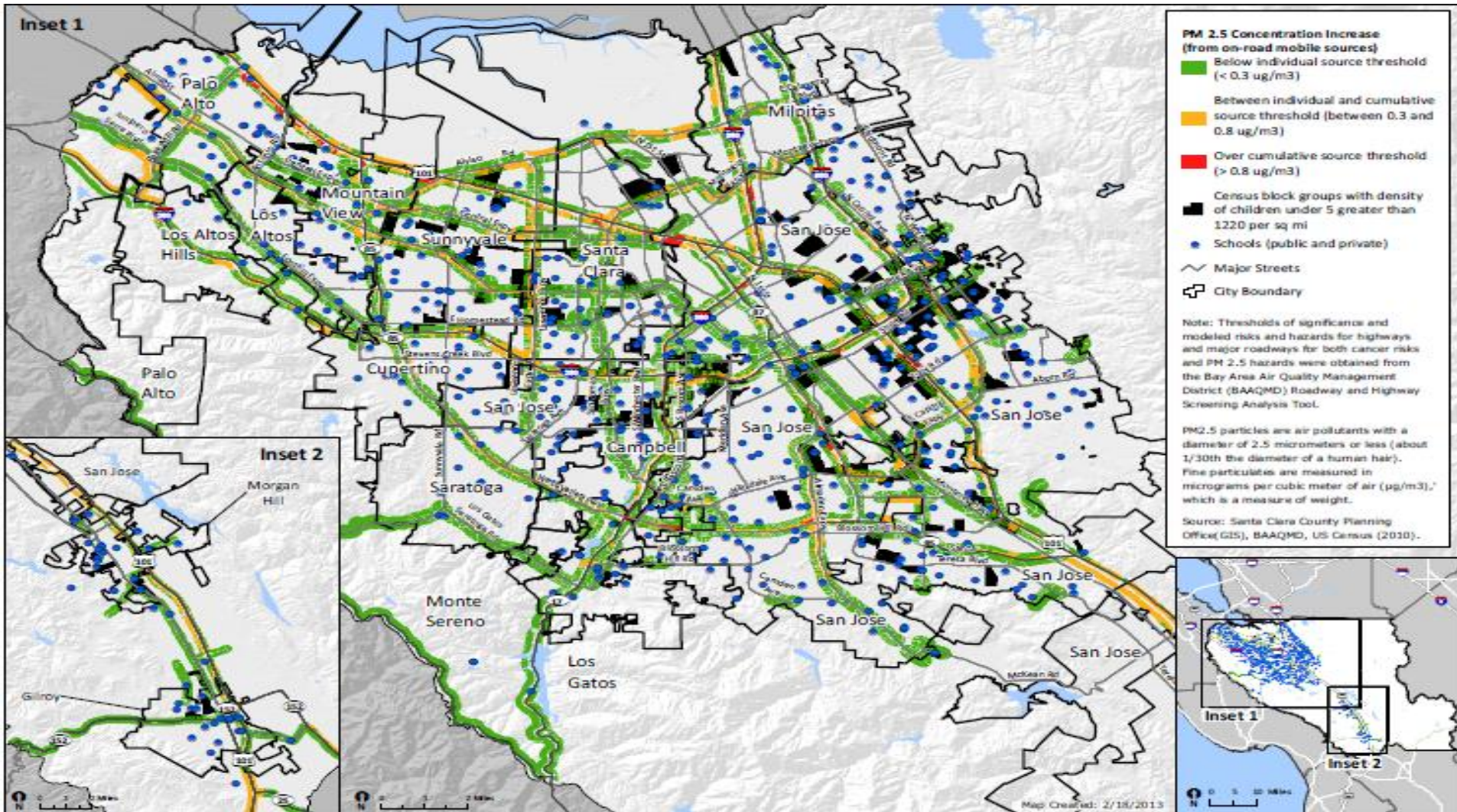
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Criteria Air Pollutant	EPA (Federal) Air Quality Standards	CA Air Quality Standards	Santa Clara County Air Quality Report	Meets EPA Air Quality Standard?	Meets CA Air Quality Standard?
Carbon Monoxide	9.0 ppm (8-hour avg)	9.0 ppm (8-hour avg)	2 ppm	yes	yes
Nitrogen Dioxide	0.18 ppm (1-hour)	0.100 ppm (1-hour)	0.049 ppm	yes	yes
Sulfur Dioxide	0.14 ppm	0.04 ppm	0.005 ppm	yes	yes
Ozone	0.075 ppm (8-hour avg)	0.070 ppm (8-hour avg)	0.068 ppm	yes	yes
PM 2.5	15 $\mu\text{g}/\text{m}^3$ (annual mean)	12 $\mu\text{g}/\text{m}^3$ (annual mean)	9.9 $\mu\text{g}/\text{m}^3$	yes	yes
PM 10	50 $\mu\text{g}/\text{m}^3$ (24-hour)	150 $\mu\text{g}/\text{m}^3$ (annual mean)	40 $\mu\text{g}/\text{m}^3$	yes	yes

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Particulate emission standards (PM 2.5) from air pollutants

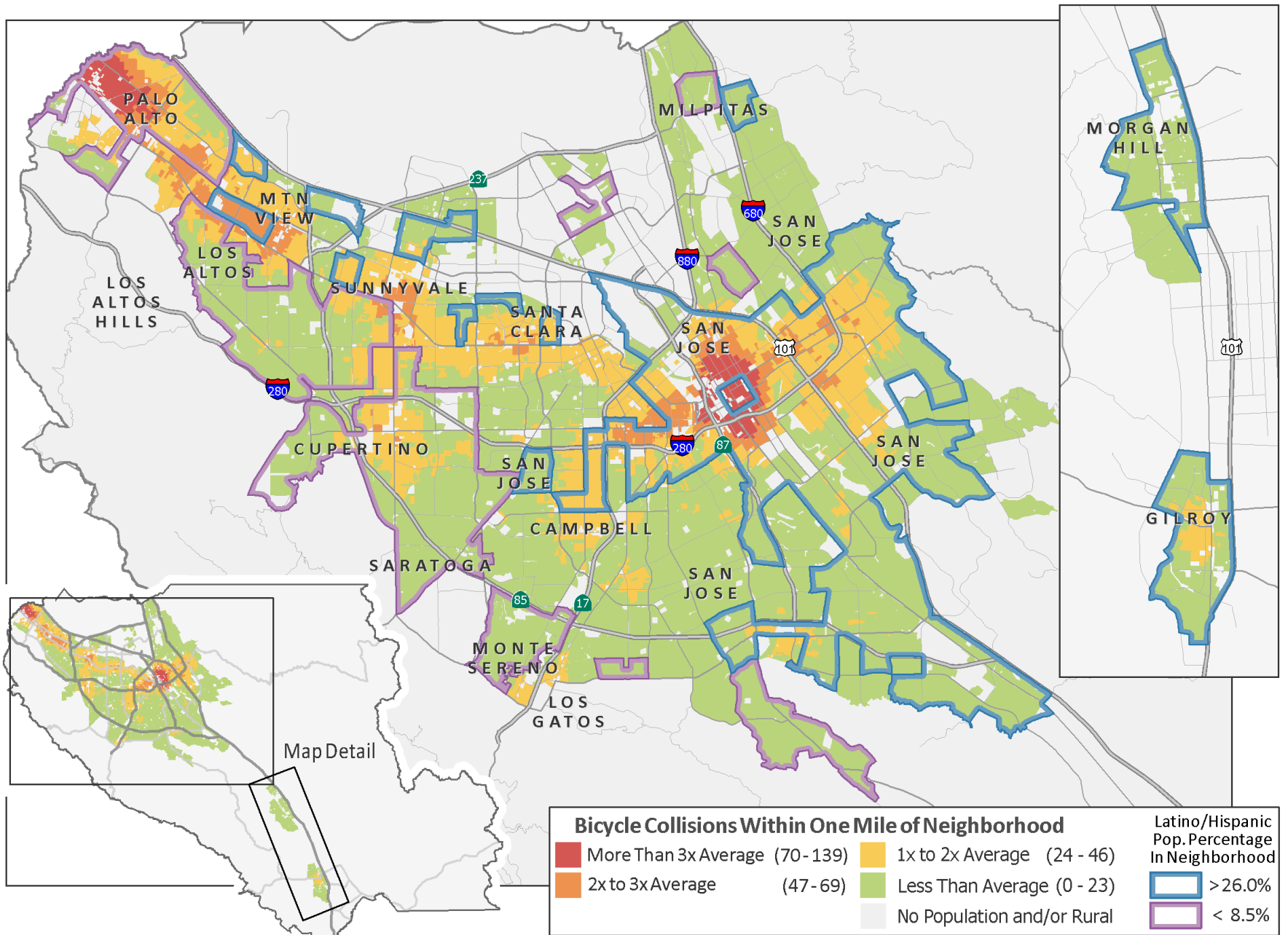
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QUESTIONS?





Source: Santa Clara County, Status of Latino/Hispanic Health, 2012