A Public Health Perspective on What Works

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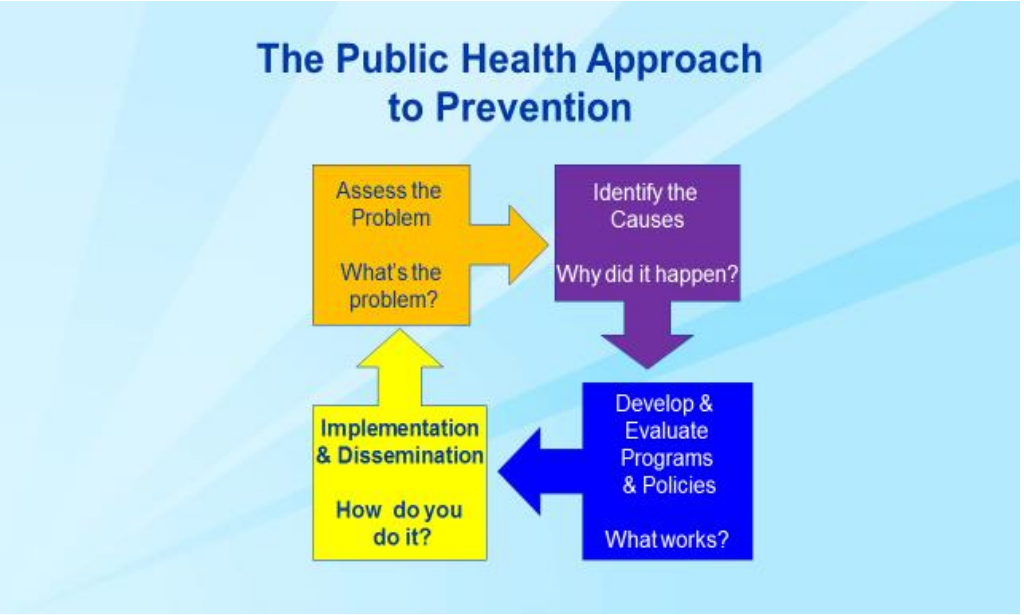
2nd National Summit on Rural Road Safety
December 5, 2018

What Will be Covered?

- What/Who is the CDC?
  and Injury Center?
- Public Health approach to motor vehicle injury prevention
- CDC resources, tools and programs that can support safety efforts in rural communities

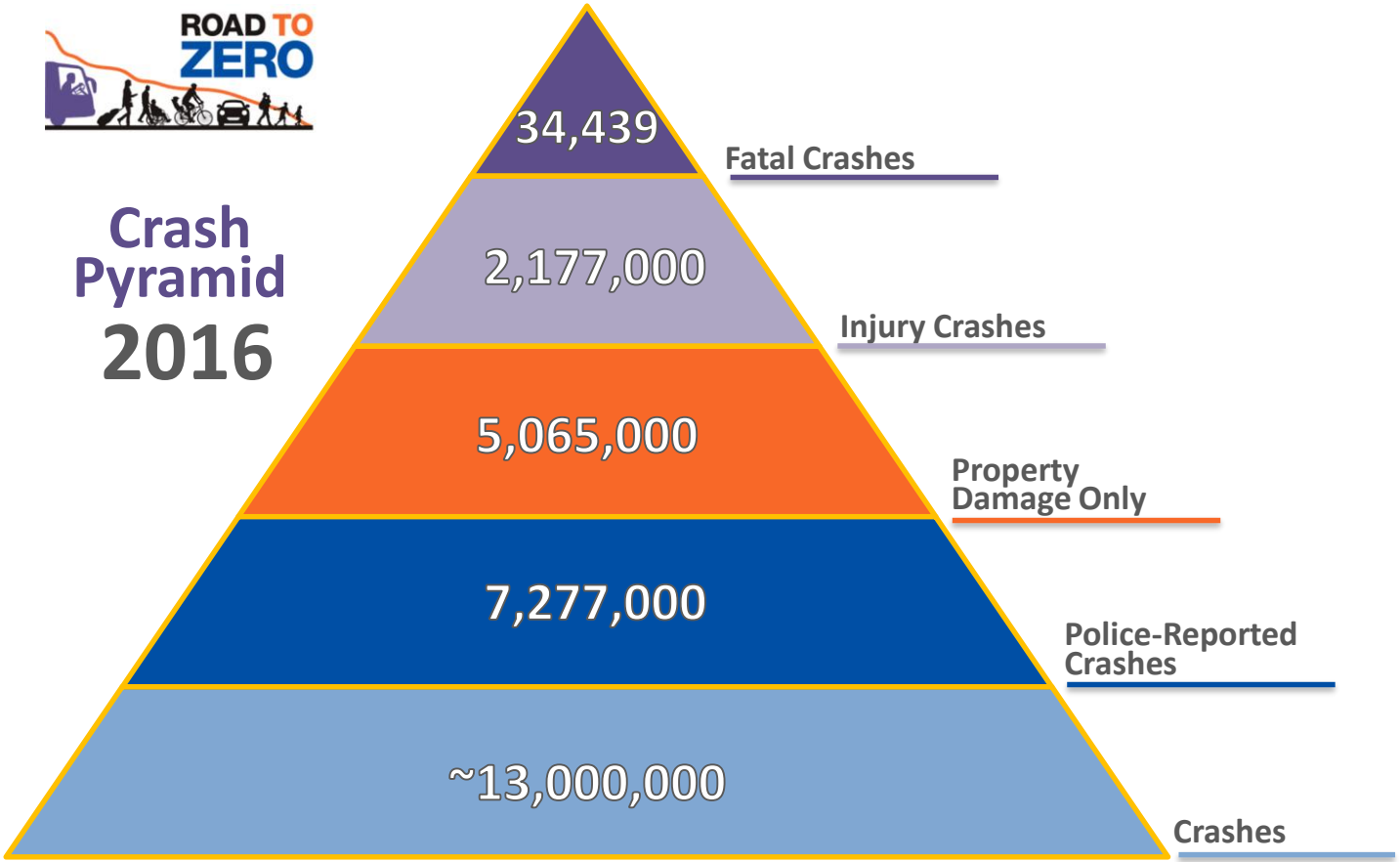
What Will be Covered?

- **Public Health approach to motor vehicle injury prevention**



ROAD TO ZERO

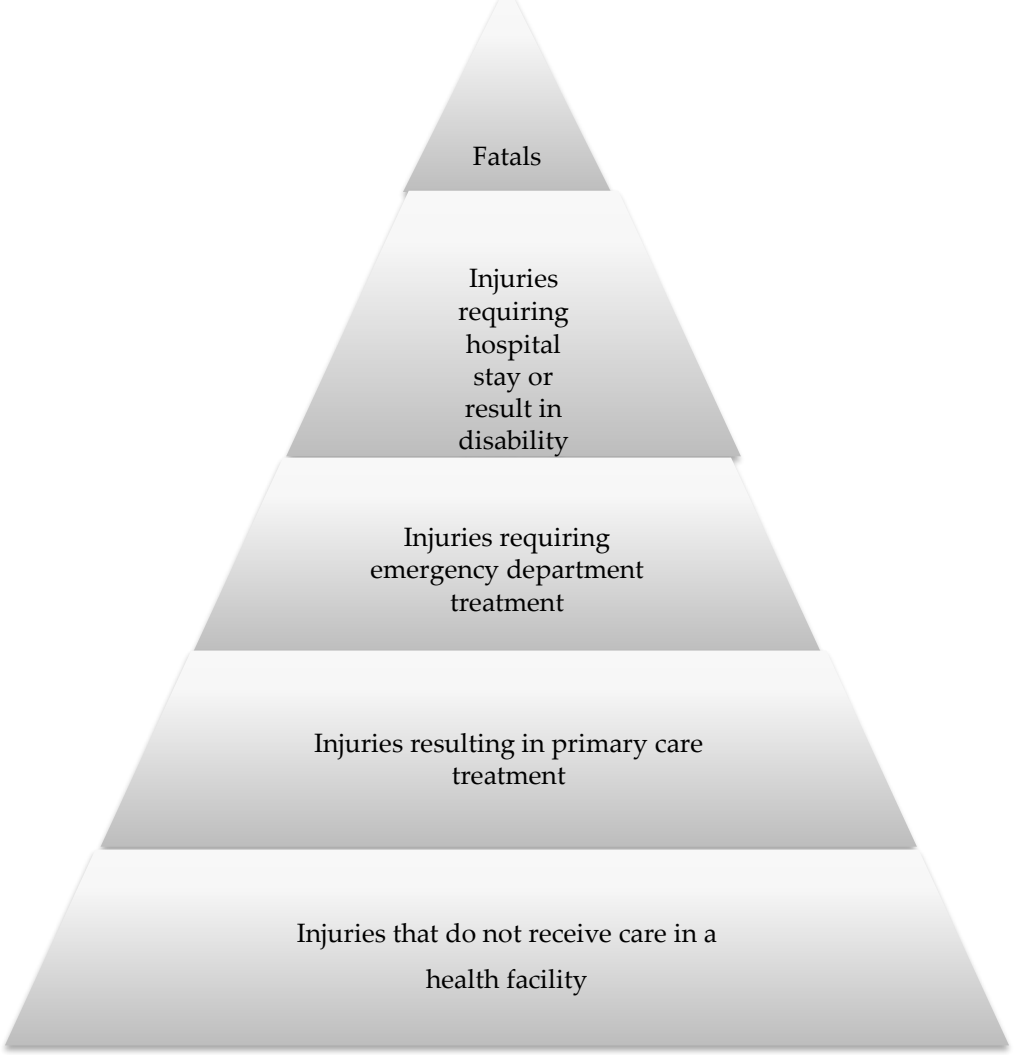
Crash Pyramid 2016

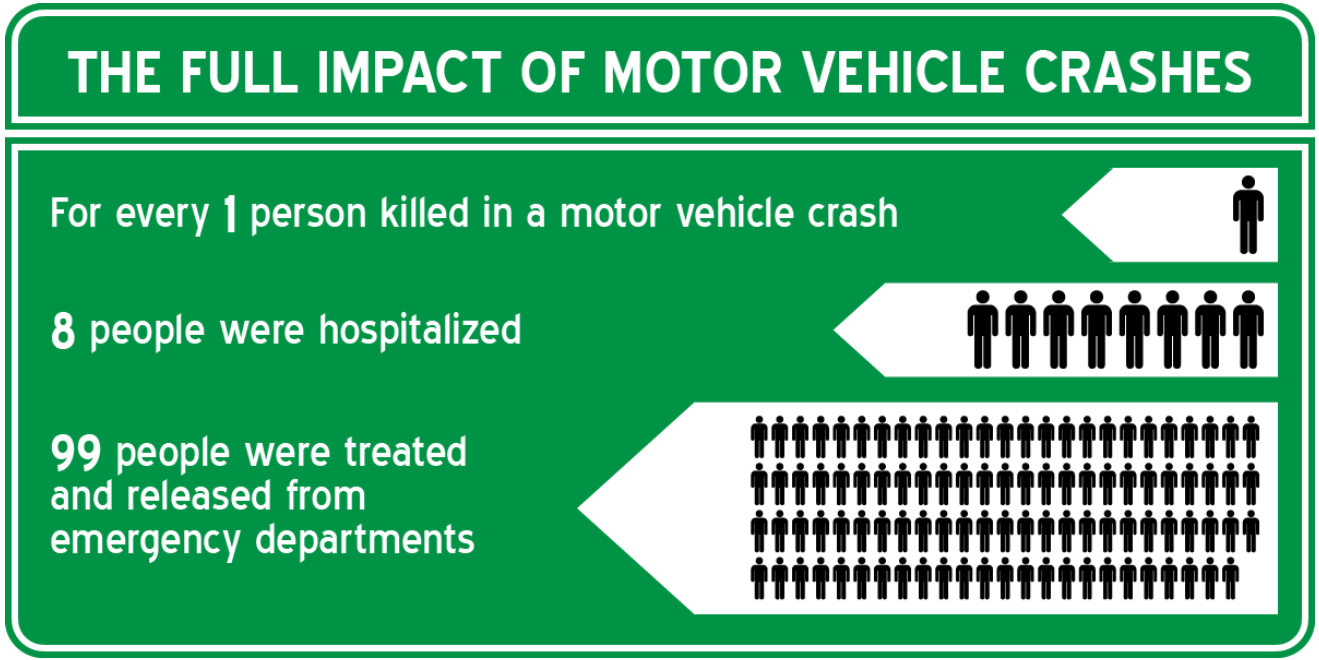


$242 Billion in Economic Cost

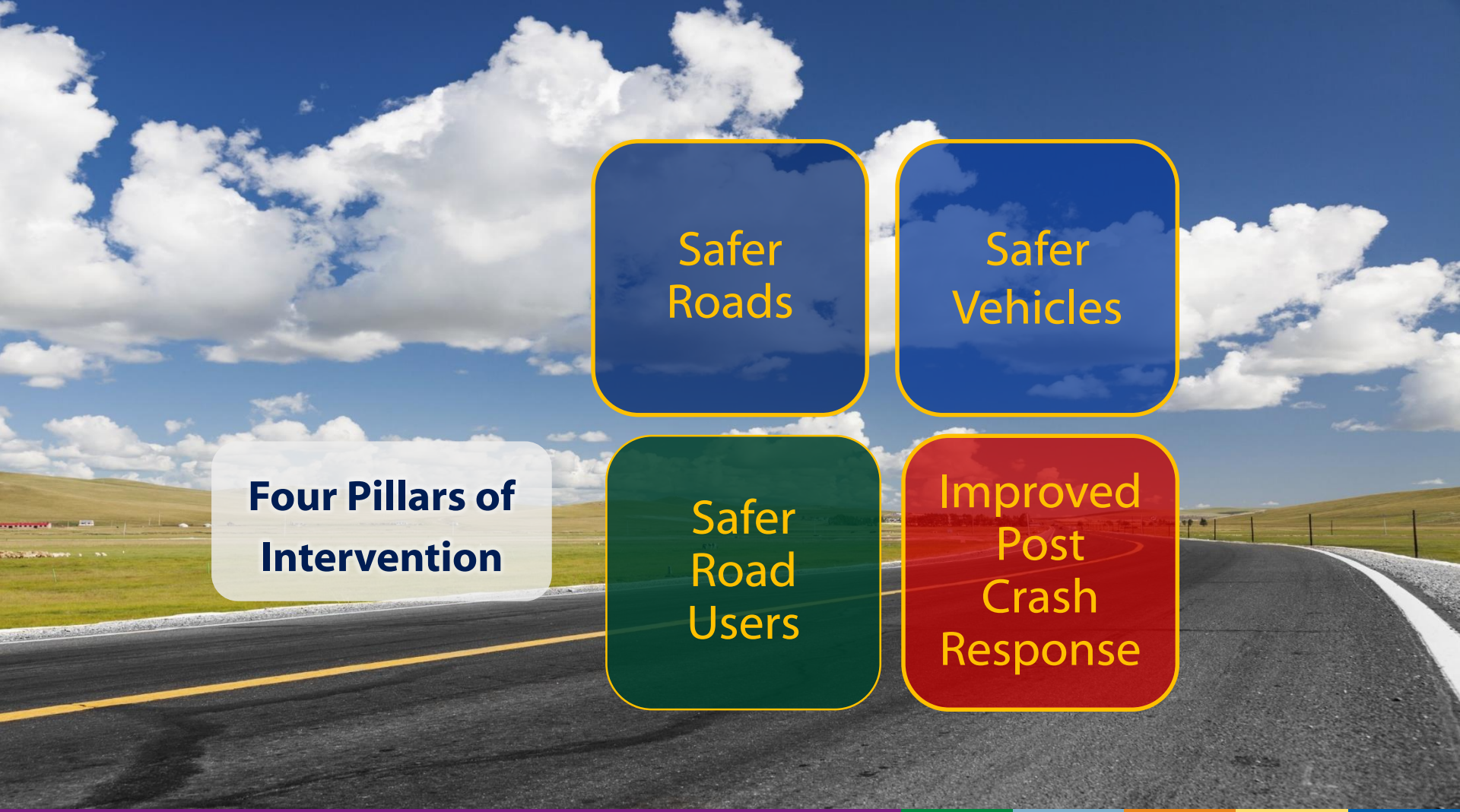
$836 Billion in Societal Harm

NHTSA DOT HS 812 349 – Sept 2016
https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812501


Fatals
Injuries requiring hospital stay or result in disability
Injuries requiring emergency department treatment
Injuries resulting in primary care treatment
Injuries that do not receive care in a health facility



Source: CDC WISQARS (Web-based Injury Statistics Query and Reporting System) and NHTSA (National Highway Traffic Safety Administration) FARS (Fatality Analysis Reporting System)


Four Pillars of Intervention
Safer Roads
Safer Vehicles
Safer Road Users
Improved Post Crash Response

CDC/Injury Center's Transportation Safety Team

Vision

Keep people safe on the road—every day

Mission

To reduce injury and death due to motor vehicle crashes and promote safe travel

Motor Vehicle Injury Prevention Priority Areas

Restraints

Tribes

Impaired Driving

Older Adult Mobility

Data Linkage

What do we know about motor vehicle-related injuries and deaths in state, local, and rural communities?

Research & Surveillance

Centers for Disease Control and Prevention
MMWR
Morbidity and Mortality Weekly Report
Surveillance Summaries / Vol. 66 / No. 17
September 22, 2017

Rural and Urban Differences in Passenger-Vehicle–Occupant Deaths and Seat Belt Use Among Adults — United States, 2014

Full report available at:
https://www.cdc.gov/mmwr/volumes/66/ss/ss6617a1.htm?s_cid=ss6617a1_w

What do we know about motor vehicle-related injuries and deaths in state, local, and rural communities?

Surveillance Tools for Practitioners

Welcome to WISQARS™

CDC's WISQARS™ (Web-based Injury Statistics Query and Reporting System) is an interactive, online database that provides fatal and nonfatal injury, violent death, and cost of injury data from a variety of trusted sources. Researchers, the media, public health professionals, and the public can use WISQARS™ data to learn more about the public health and economic burden associated with unintentional and violence-related injury in the United States.

- Fatal Injury Data
- Cost of Injury Data
- Nonfatal Injury Data
- Fatal Injury Mapping
- Violent Deaths
- About Us

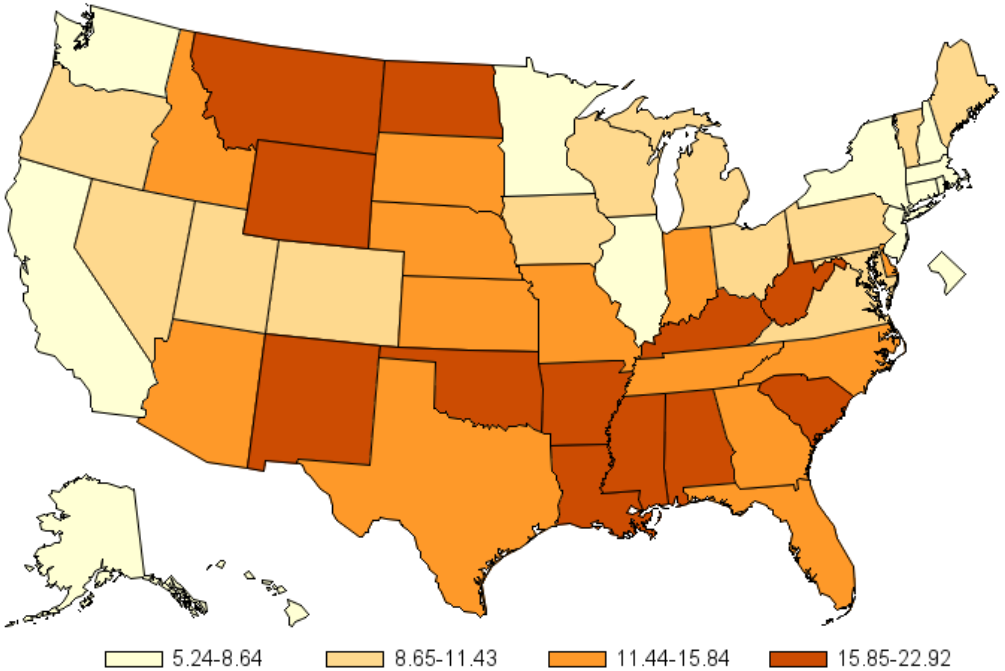
https://www.cdc.gov/injury/wisqars

2016, United States
Unintentional MV Traffic Deaths and Rates per 100,000
All Races, Both Sexes, All Ages

ICD-10 Codes: V30-V39 (.4-.9), V40-V49 (.4-.9), V50-V59 (.4-.9), V60-V69 (.4-.9), V70-V79 (.4-.9), V81.1 V82.1,V83-V86 (.0-.3), V20-V28 (.3-.9),V29 (.4-.9),V12-V14 (.3-.9),V19 (.4-.6), V02-V04 (.1,.9),V09.2,V80 (.3-.5),V87(.0-.8),V89.2

2013 Urbanization (Collapsed) Classification	Number of Deaths	Population	Crude Rate	Age-Adjusted Rate**
Metro Areas	29,583	277,016,929	10.68	10.34
Non-metro Areas	9,165	46,110,584	19.88	19.60
	38,748	**323,127,513**	**11.99**	

2008-2014, United States
Age-adjusted Death Rates per 100,000 Population
Motor Vehicle, Traffic, Unintentional, All Races, All Ethnicities, Both Sexes, All Ages
Annualized Age-adjusted Rate for United States: 10.88

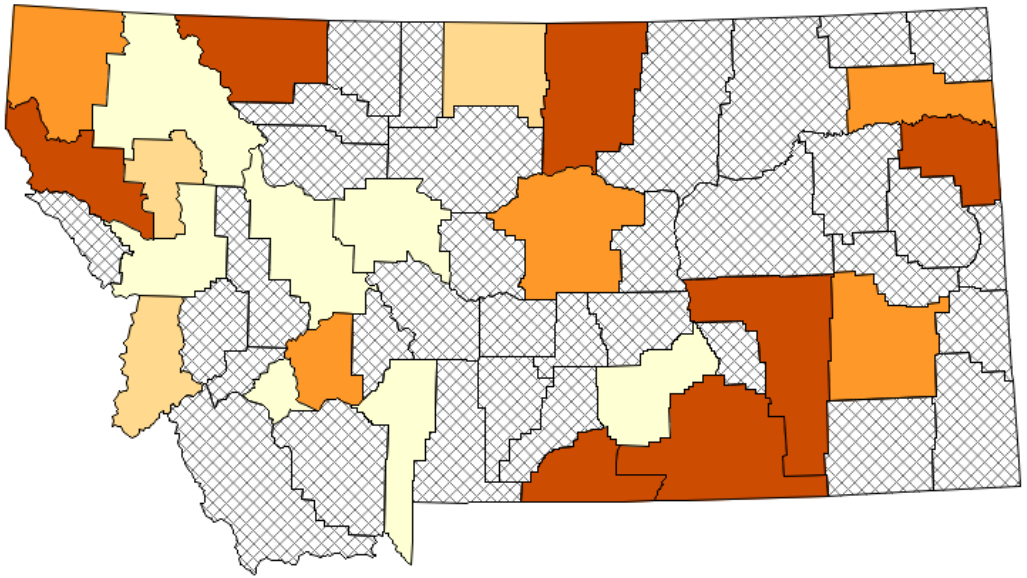


Reports for All Ages include those of unknown age.
* Rates based on 20 or fewer deaths may be unstable. States with these rates are cross-hatched in the map (see legend above). Such rates have an asterisk.
The standard population for age-adjustment represents the year 2000, all races, both sexes.

Produced by: the Statistics, Programming & Economics Branch, National Center for Injury Prevention & Control, CDC
Data Sources: NCHS National Vital Statistics System for numbers of deaths; US Census Bureau for population estimates.

2008-2014, Montana
Death Rates per 100,000 Population

Motor Vehicle, Traffic, All Intents, All Races, All Ethnicities, Both Sexes, All Ages
Annualized Crude Rate for Montana: 20.00



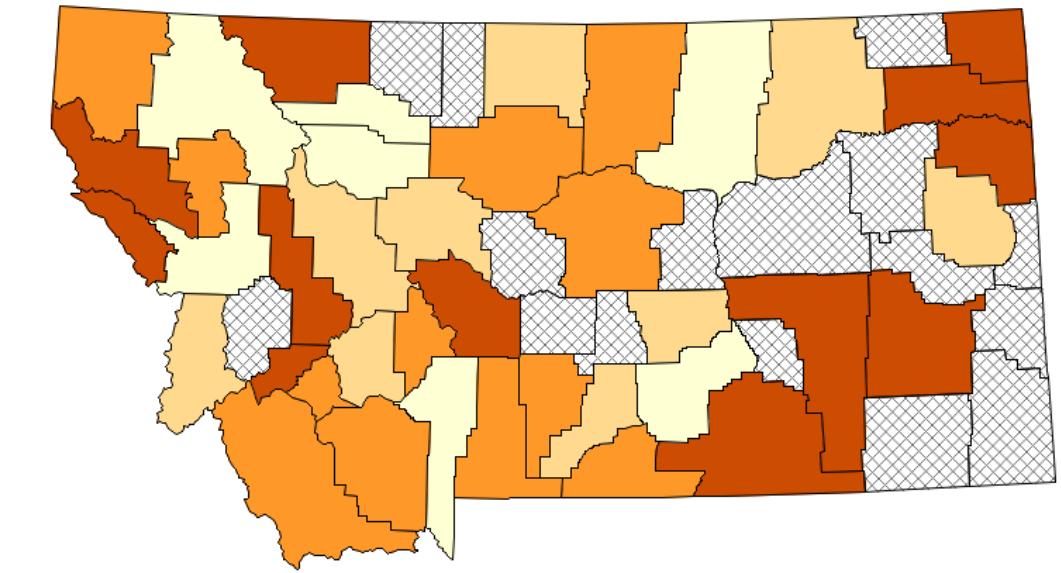
Suppressed/Unstable/Undefined
0.00-17.05
17.06-24.46
24.47-34.99
35.00-70.60

Reports for All Ages include those of unknown age.
* Rates based on 20 or fewer deaths may be unstable. These rates are suppressed for counties (see legend above); such rates in the title have an asterisk.

Produced by: the Statistics, Programming & Economics Branch, National Center for Injury Prevention & Control, CDC
Data Sources: NCHS National Vital Statistics System for numbers of deaths; US Census Bureau for population estimates.

2008-2014, Montana
Death Rates per 100,000 Population

All Injury, All Intents, All Races, All Ethnicities, Both Sexes, All Ages
Annualized Crude Rate for Montana: 88.74



Suppressed/Unstable/Undefined
40.94-82.29
82.30-94.62
94.63-117.32
117.33-210.40

Reports for All Ages include those of unknown age.
* Rates based on 20 or fewer deaths may be unstable. These rates are suppressed for counties (see legend above); such rates in the title have an asterisk.

Produced by: the Statistics, Programming & Economics Branch, National Center for Injury Prevention & Control, CDC
Data Sources: NCHS National Vital Statistics System for numbers of deaths; US Census Bureau for population estimates.

Behavioral Risk Factor Surveillance System (BRFSS)

- Health-related telephone survey
- Administered every year to adults 18+ years
- Completes more than 400,000 interviews
- Collects state data regarding residents
- Health-related risk behaviors, chronic health conditions, and use of preventive services
- Collects data on **alcohol-impaired driving** and **seat belt use** every two years

https://www.cdc.gov/brfss/index.html

BRFSS™

Prevalence Data & Data Analysis Tools

Find city and county data collected through the Selected Metropolitan/Micropolitan Area Risk Trends (SMART) project, the Web Enabled Analysis Tool (WEAT), interactive maps, and other resources provided through BRFSS.

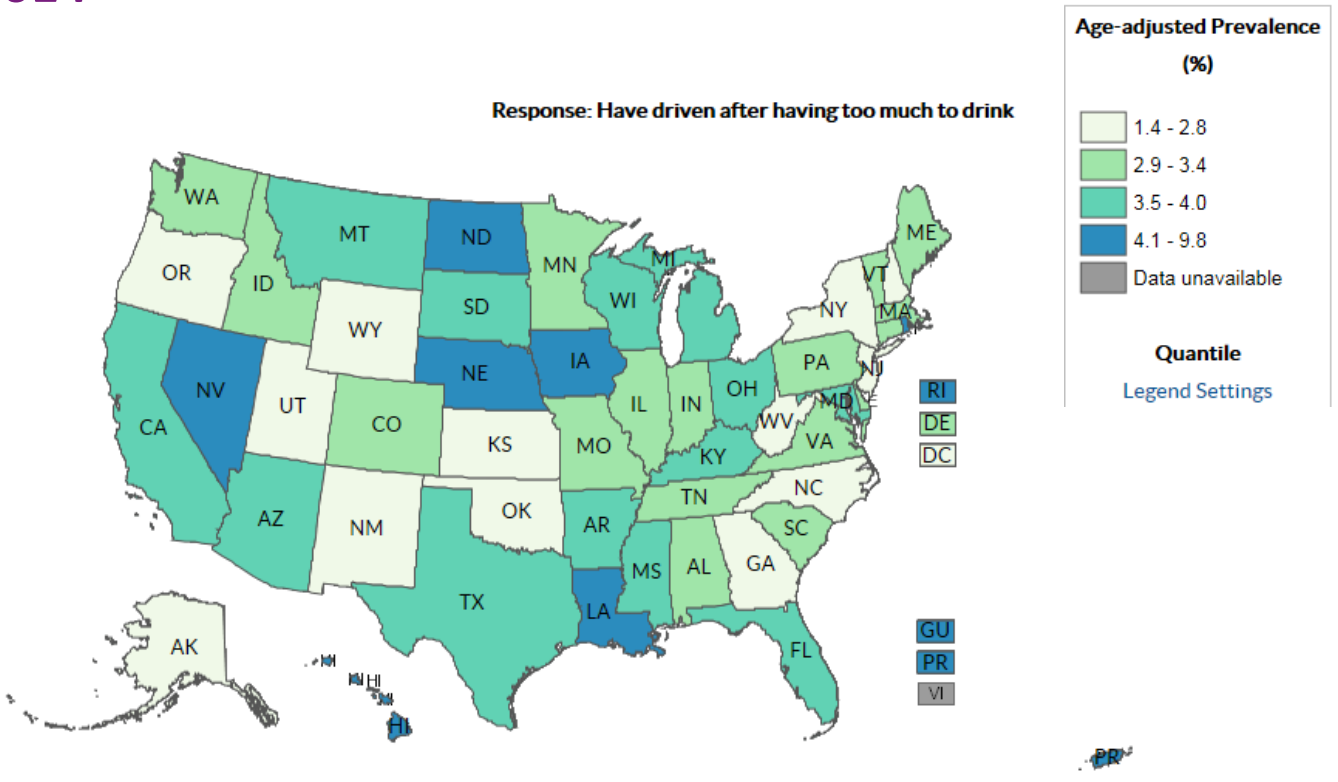
PREVALENCE AND TRENDS DATA

Using the Prevalence and Trends Data Tools, users may produce charts for individual states or the nation by health topic. Users may select specific years or request multiple year data. The Prevalence and Trend Data Tools will produce line graphs for multiple years and bar charts for single years for each selected indicator.

SMART: CITY AND COUNTY DATA

Selected Metropolitan/Micropolitan Area Risk Trends (SMART) is an ongoing project that uses BRFSS data to produce some local area estimates. Counties and Metropolitan/Micropolitan Areas (MMSAs) were selected for SMART if there were 500 or more respondents BRFSS combined landline and cell phone data for any year.

Prevalence of having driven after drinking too much (self-reported), BRFSS, 2014

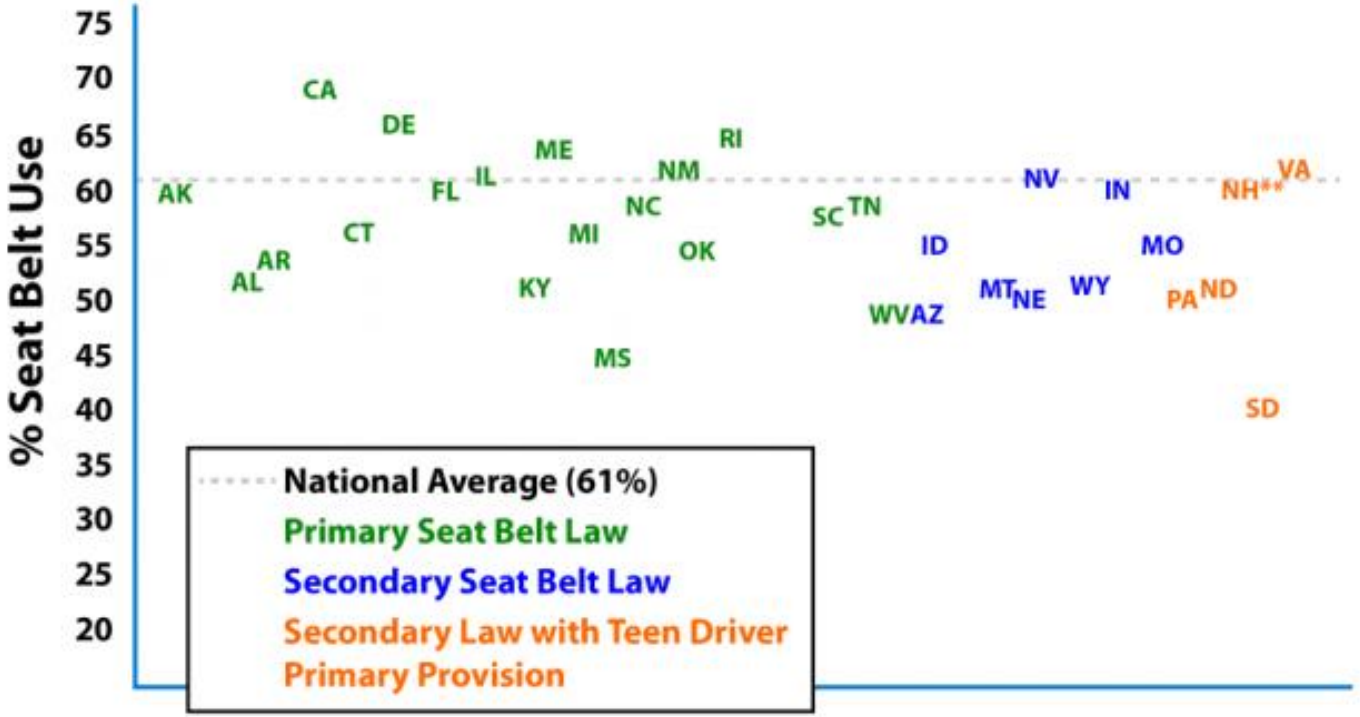


Youth Risk Behavior Surveillance System (YRBSS)

- School-based survey
  - Administered every other year
  - Anonymous, self-administered
  - National, State, territorial, tribal, and local surveys
- Monitors priority risk behaviors, including transportation topics
  - Rode with a driver who had been drinking alcohol
  - Drove after drinking alcohol
  - Texted or e-mailed while driving a car or other vehicle
  - Seat belt use
  - Bicycle helmet use

https://www.cdc.gov/healthyyouth/data/yrbs/index.htm

2015 Seat Belt Use by US High School Students Riding as Passengers*, by Type of Seat Belt Law, 32 States



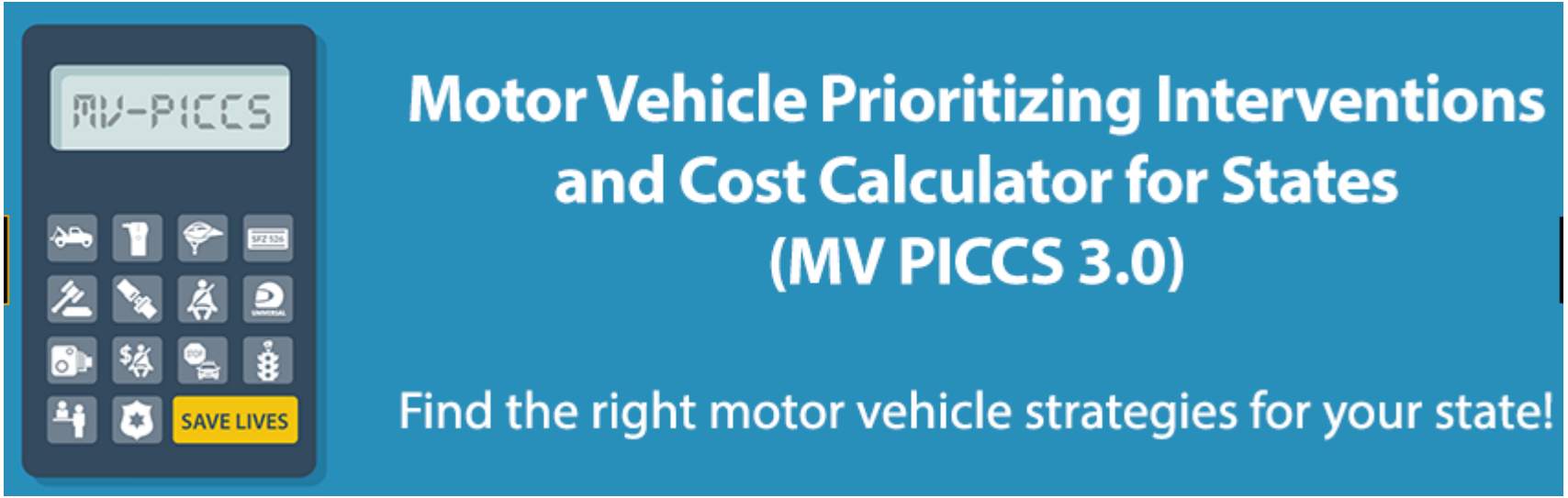
* Percentage of students who always wear a seat belt when riding in a car as passengers.

** NH does not have a seat belt law for adults, but their child passenger safety law has a primary enforcement seat belt provision for drivers and passengers <18 years.

SOURCES: seat belt use: CDC, Youth Risk Behavior Surveillance System (YRBSS), YRBSS data and documentation, Atlanta, GA: US Department of Health and Human Services, CDC; 2017, https://www.cdc.gov/healthyyouth/data/yrbs/data.htm; type of seat belt law: Governors Highway Safety Association, seat belts, Washington, DC; 2017, http://www.ghsa.org/state-laws/issues/Seat-Belts

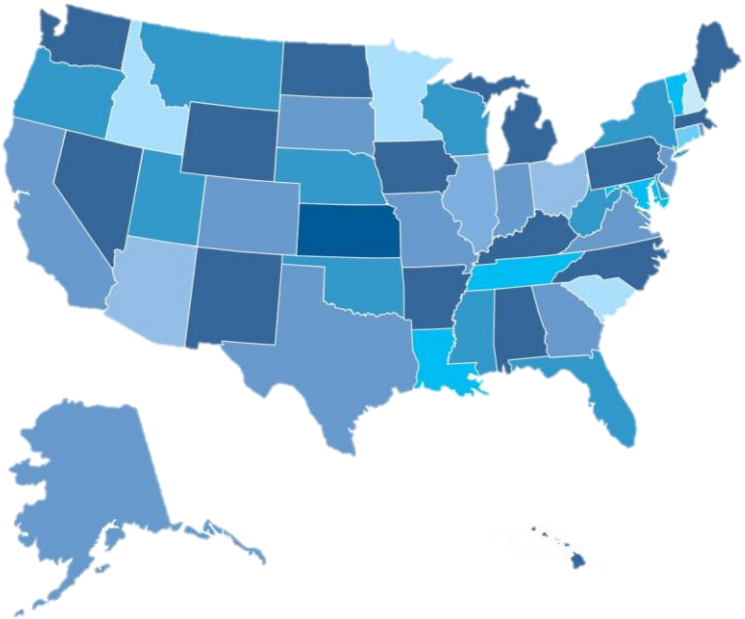
www.cdc.gov
Your Source for Credible Health Information

Developing Tools for State Decision-Makers MV PICCS 3.0



https://www.cdc.gov/motorvehiclesafety/calculator/index.html

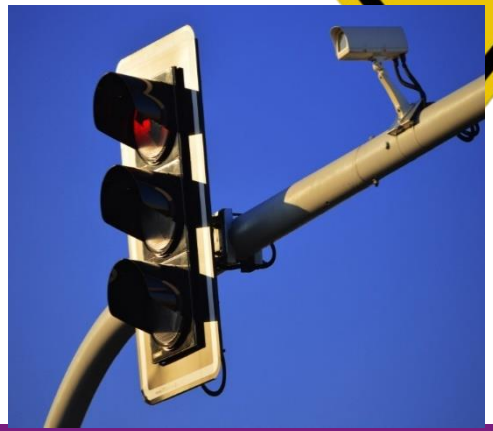
States can choose among many options

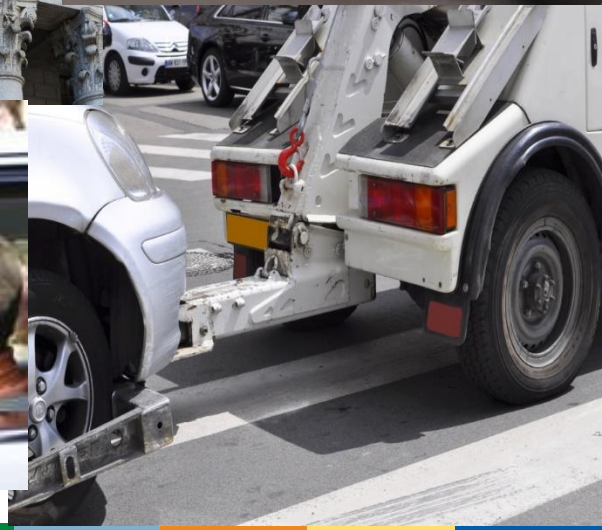


- Many interventions are implemented at state level
- States must prioritize options
- To prioritize, states can use information about the costs and benefits of each option

MV PICCS Includes

14 Evidence-based Interventions

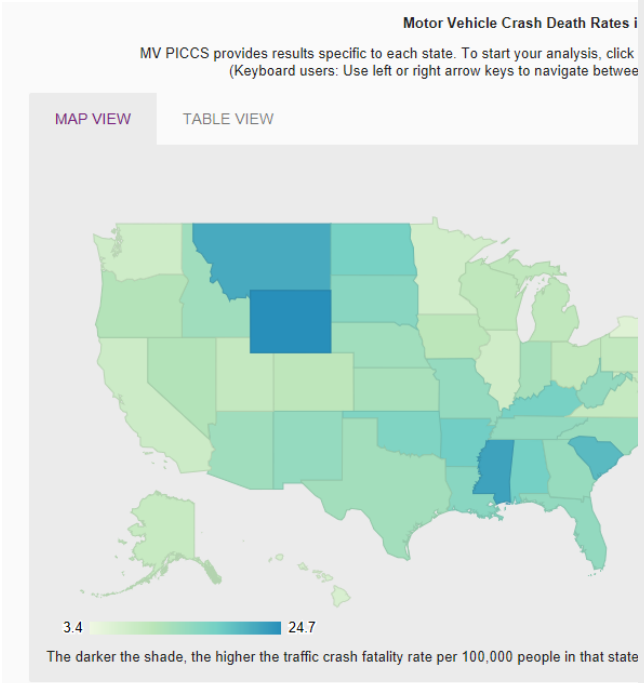


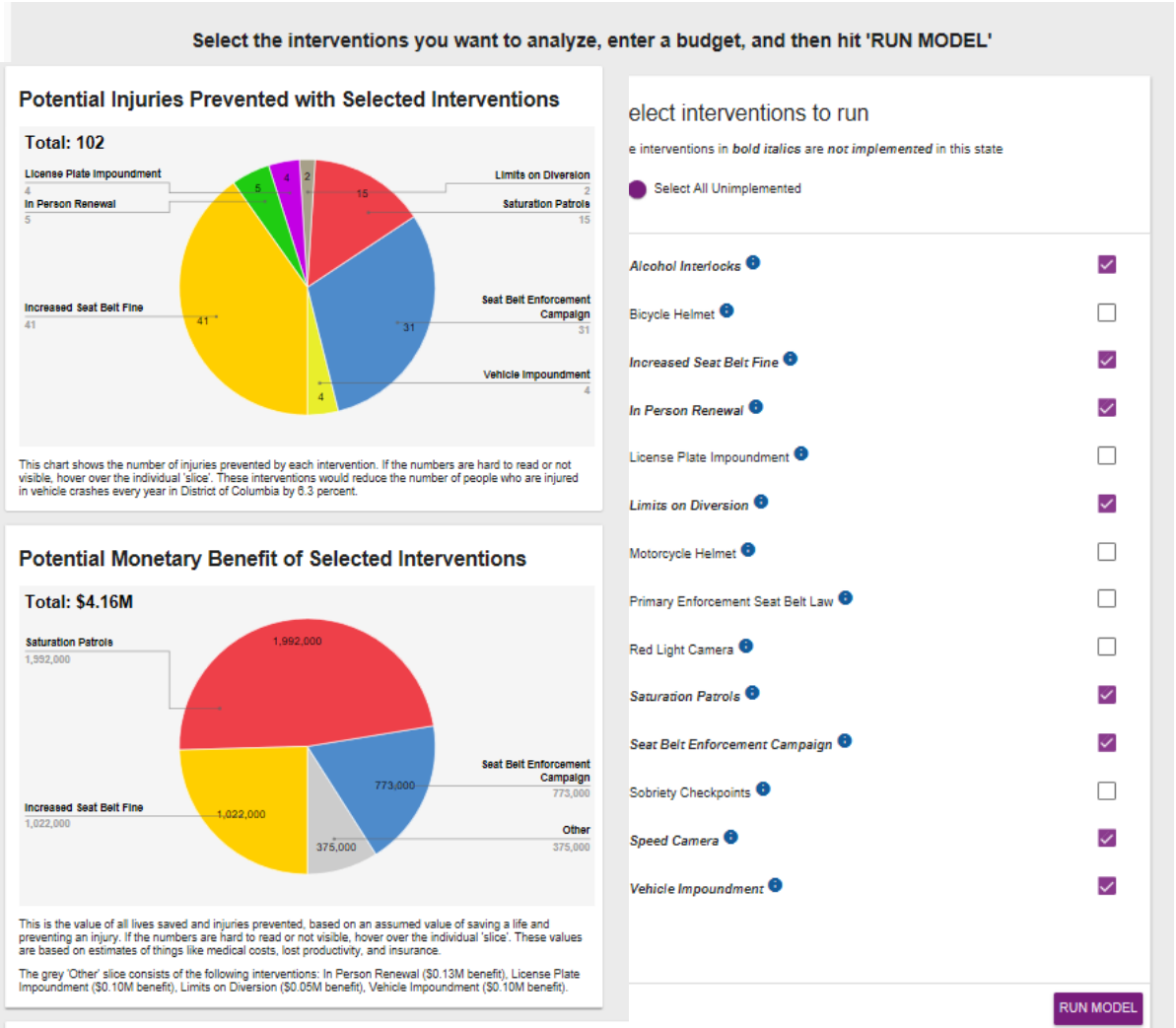


Cost and Benefit Calculations

- **Calculates the expected:**
  - **Costs:** Monetary costs of implementation as well as costs paid by individuals to states
  - **Benefits:** Number of injuries prevented and lives saved
  - **Benefits:** Monetized value of injuries prevented and lives saved
- **Data sources:**
  - **Costs:** Published articles and reports, interviews with state officials and safety experts
  - **Benefits:** Peer-reviewed articles and reports that use reduction in deaths as the basis for evaluating effectiveness

Developing Tools for State Decision-Makers MV PICCS 3.0





PARENTS are the KEY

http://www.cdc.gov/parentsarethekey/

Centers for Disease Control and Prevention

MMWR

Morbidity and Mortality Weekly Report

43%

Motor vehicle deaths among children age 12 and under decreased by 43% in the past decade.

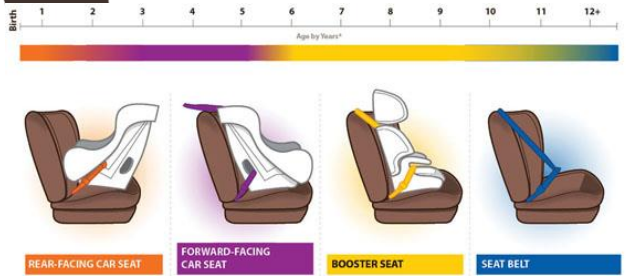
9,000

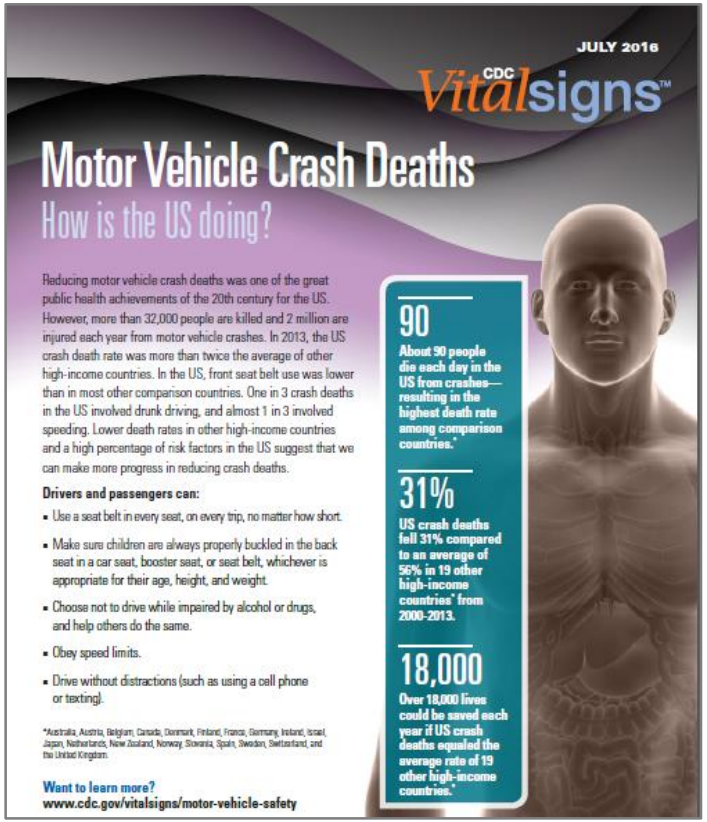
Still more than 9,000 children age 12 and under died in crashes in the past decade.

1 in 2

Almost half of all black (45%) and Hispanic (46%) children who died in crashes were not buckled up (2009 – 2010).

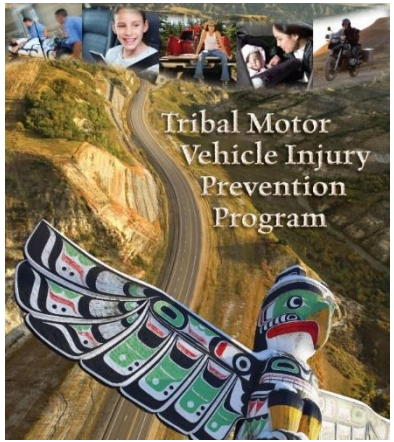
CDC Vitalsigns™





http://www.cdc.gov/vitalsigns

Tribal Motor Vehicle Toolkit



https://www.cdc.gov/motorvehiclesafety/native/index.html

Sobering Facts: Drunk Driving in GEORGIA

ALCOHOL-INVOLVED DEATHS

Persons Killed in Crashes Involving a Drunk Driver†

What Works

The strategies in this section are effective for reducing or preventing drunk driving. They are recommended by *The Guide to Community Preventive Services* and/or have been demonstrated to be effective in reviews by the National Highway Traffic Safety Administration.* Different strategies may require different resources for implementation or have different levels of impact. Find strategies that are right for your state.

Strategies to reduce or prevent drunk driving

- **Drunk driving laws** make it illegal nationwide to drive with a BAC at or above 0.08%. For people under 21, ***"zero tolerance" laws*** make it illegal to drive with any measurable amount of alcohol in their system. These laws, along with laws that maintain the ***minimum legal drinking age*** at 21, are in place in all 50 states and the District of Columbia, and have had a clear effect on highway safety, saving tens of thousands of lives since their implementation.
- **Sobriety checkpoints** allow police to briefly stop vehicles at specific, highly visible locations to see if the driver is impaired. Police may stop all or a certain portion of drivers. Breath tests may be given if police have a reason to suspect the driver is intoxicated.
- **Ignition interlocks** installed in cars measure alcohol on the driver's breath. Interlocks keep the car from starting if the driver has a BAC above a certain level, usually 0.02%. They're used for people convicted of drunk driving and are highly effective at preventing repeat offenses while installed. Mandating interlocks for all offenders, including first-time offenders, will have the greatest impact.
- **Multi-component interventions** combine several programs or policies to prevent drunk driving. The key to these comprehensive efforts is ***community mobilization*** by involving coalitions or task forces in design and implementation.

https://www.cdc.gov/motorvehiclesafety/impaired_driving/states.html

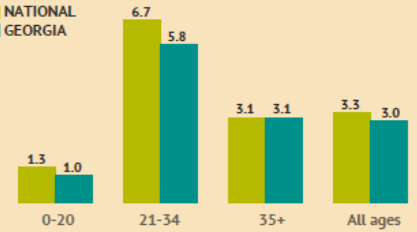
ALCOHOL-INVOLVED DEATHS

Persons Killed in Crashes Involving a Drunk Driver†

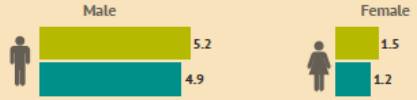
Number of Deaths, 2003–2012

3,699
people were killed in crashes involving a drunk driver in Georgia

Rate of Deaths by Age (per 100,000 population), 2012



Rate of Deaths by Gender (per 100,000 population), 2012



†Deaths in crashes involving a driver with BAC ≥ 0.08%.
Source: Fatality Analysis Reporting System (FARS).

DRUNK DRIVING

Percentage of Adults Who Report Driving After Drinking Too Much (in the past 30 days)

NATIONAL	GEORGIA
1.9%	**1.4%**
report driving after drinking too much	report driving after drinking too much

Source: Behavioral Risk Factor Surveillance System (BRFSS), 2012.

Motor Vehicle Safety

Motor Vehicle Safety
State Data and Information +
Cost Data and Prevention Policies +
Child Passenger Safety +
Seat Belts +
Teen Drivers +
Older Adult Drivers
Impaired Driving +
Distracted Driving
Pedestrian Safety +
Tribal Road Safety +
Motorcycle Safety
Bicycle Safety +
Global Road Safety

State-Based Motor Vehicle Data & Information

Motor vehicle crashes are a leading cause of injury and death in the U.S., and because many proven prevention strategies occur on the state-level, it can be helpful to see things broken down by state.

On this page, find links to state-based data, MMWR and Vital Signs reports, and recommendations on a variety of topics, such as: child passenger safety, seat belts, impaired driving, teen drivers, and motorcycle safety.

On This Page

Crash Deaths

- CDC MMWR: Rural and Urban Differences in Passenger-Vehicle-Occupant Deaths and Seat Belt Use Among Adults — United States, 2014 (September 2017)
- Motor Vehicle Occupant Death Rates by State (January 2015)
- Motor Vehicle Occupant Deaths in States, 2003-2012 (January 2015)
- CDC MMWR: Motor Vehicle Crash Deaths in Metropolitan Areas — United States, 2009 (July 2012)
  - Map: Motor vehicle crash death rates for the 50 most populous metropolitan statistical areas, 2009

Top of Page

Child Passenger Safety

https://www.cdc.gov/motorvehiclesafety/states

MyMobility

A PLAN FOR STAYING INDEPENDENT

Myself – A PLAN TO KEEP ME HEALTHY

My House – A PLAN TO KEEP ME SAFE INSIDE MY HOME

My Community – A PLAN TO STAY MOBILE IN MY COMMUNITY

- Mobility-related deaths are the leading cause of injury death for adults aged 65 years and above
- Mobility Planning Tool
  - Targets adults age 60-74
  - Plan for mobility changes as you age in the same way that you may plan financially for retirement
  - Leverages broad array of partner resources

MyMobility

A PLAN FOR STAYING INDEPENDENT

CONSIDER THAT:

1 in 4 adults who are now 65 years old will live into their 90's.

Because people are living longer, there may be a time when you still need to get around, but can no longer drive.

1 in 3 older adults falls each year. Fall-related injuries can make it hard to get around and live independently.

Making a plan to stay mobile as you get older is important to help you stay independent.

Many people make financial plans for retirement, but not everyone plans for other changes that may come with age.

This includes changes in your mobility - your ability to get around.

It's not easy to talk about, but as we get older, physical changes can make it harder to get around and do things we want or need to do – like driving, shopping, or even doing simple chores around the house.

These physical changes can also make us more likely to get injured.

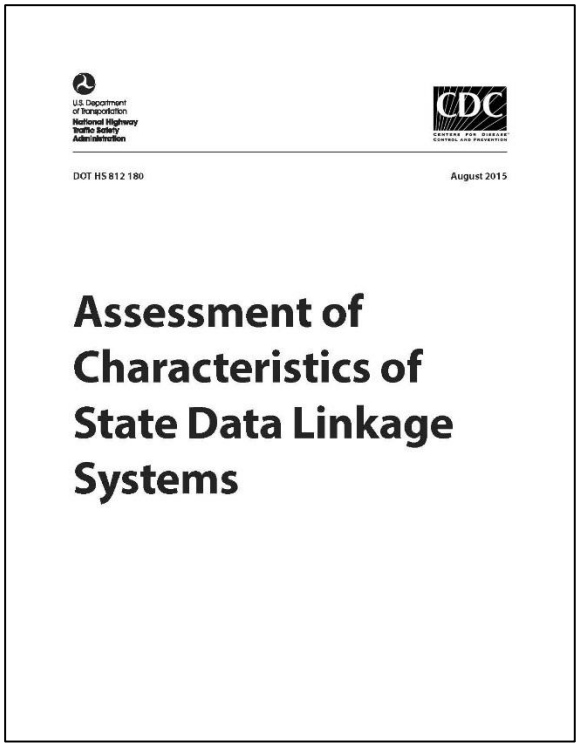
This planning tool can help you begin doing things to protect your mobility and stay independent longer.

Work through MyMobility plan on the next few pages to help you keep your freedom and independence as you get older. The plan will take you through these three sections:

- **Myself** – A PLAN TO KEEP ME HEALTHY
- **My House** – A PLAN TO KEEP ME SAFE INSIDE MY HOME
- **My Community** – A PLAN TO STAY MOBILE IN MY COMMUNITY

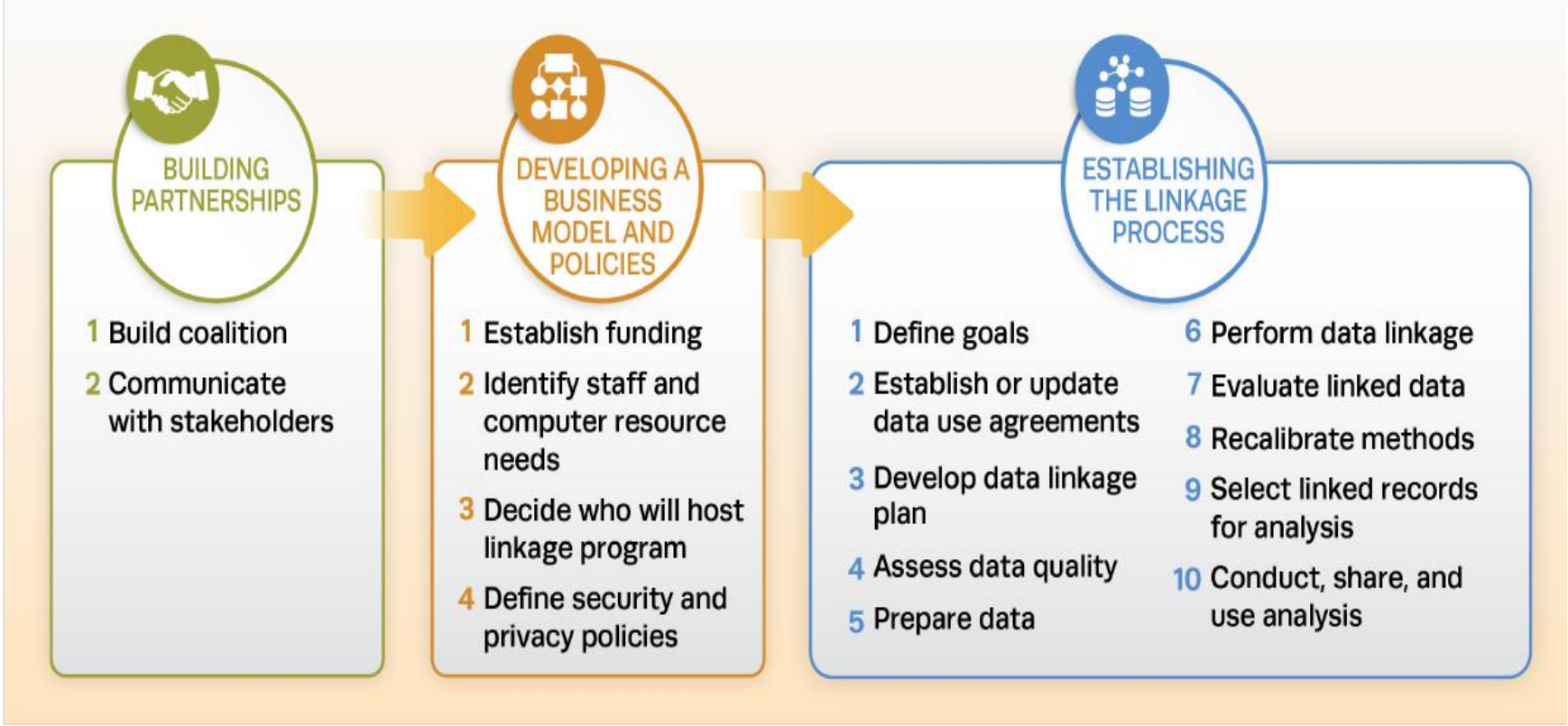
Data Linkage

- Linking Information for Non-Fatal Crash Surveillance
  - LINCS Guide; early 2019
  - MITRE
- National Governors Association
  - Learning Labs
    - Annapolis; February 2018
    - Utah; June 2018



http://www.cdc.gov/motorvehiclesafety/linkage

Data Linkage



Thank You!

amd1@cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.