



# Cutting in Half the Number of Fatalities in Two Decades (Moving Towards Zero Deaths) in the United States

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**IRF World Congress**  
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# *Boa-tarde senhoras e senhores*

## Overview

- Worldwide and USA's Highway traffic death trends
- Strategies to reduce traffic deaths
- Toward Zero Deaths

## A PUBLIC HEALTH EPIDEMIC

More than **1.2 million deaths a year**  
worldwide

**50+ million serious injuries**

**5<sup>th</sup> leading cause of death by 2030**  
(2.4 million deaths per year)

**#1 cause of death of young people aged 10 to 25**

**≡ MAKE ROADS SAFE**

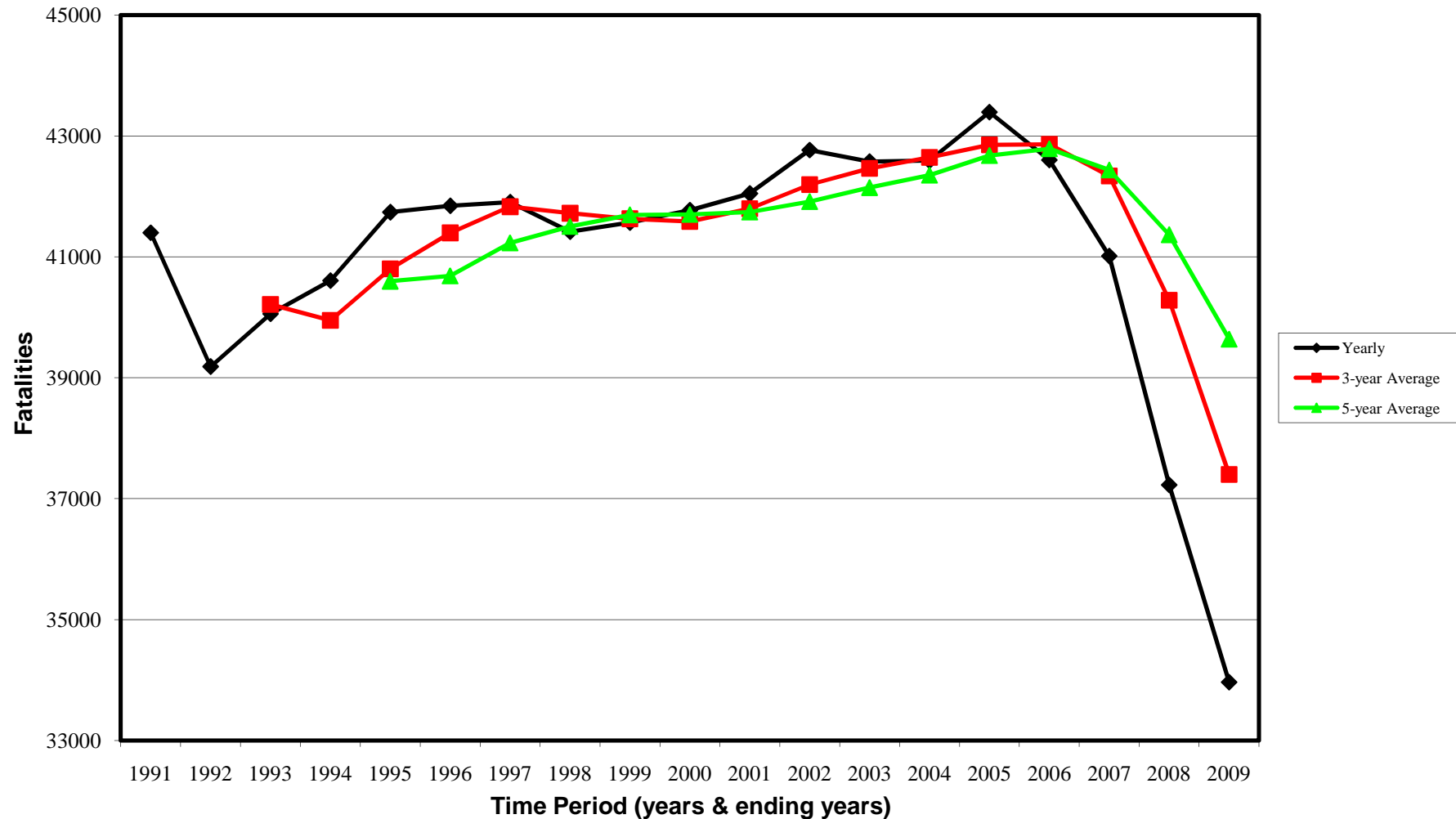


# Highway Deaths – Where Are We?

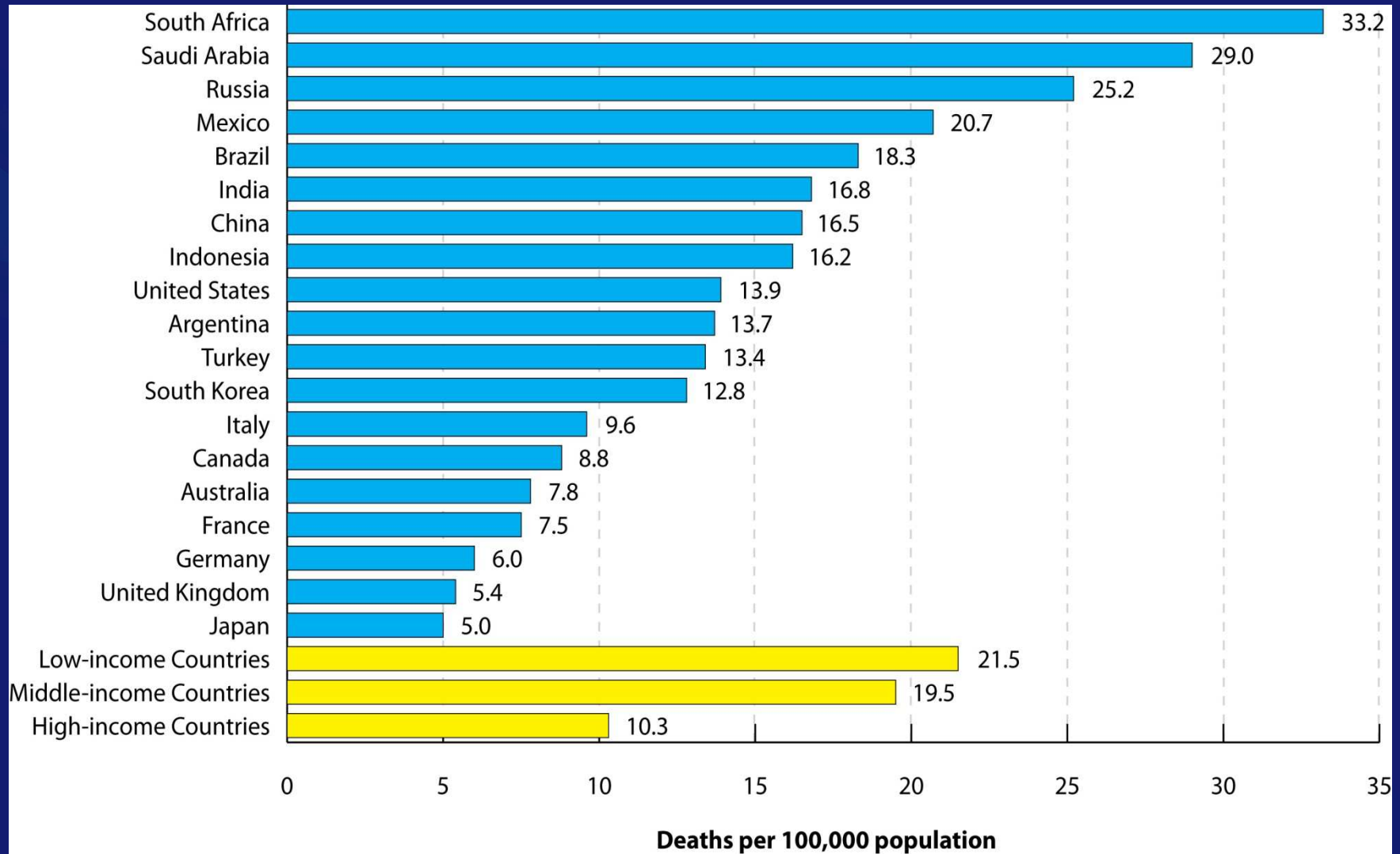


# National Average Fatalities

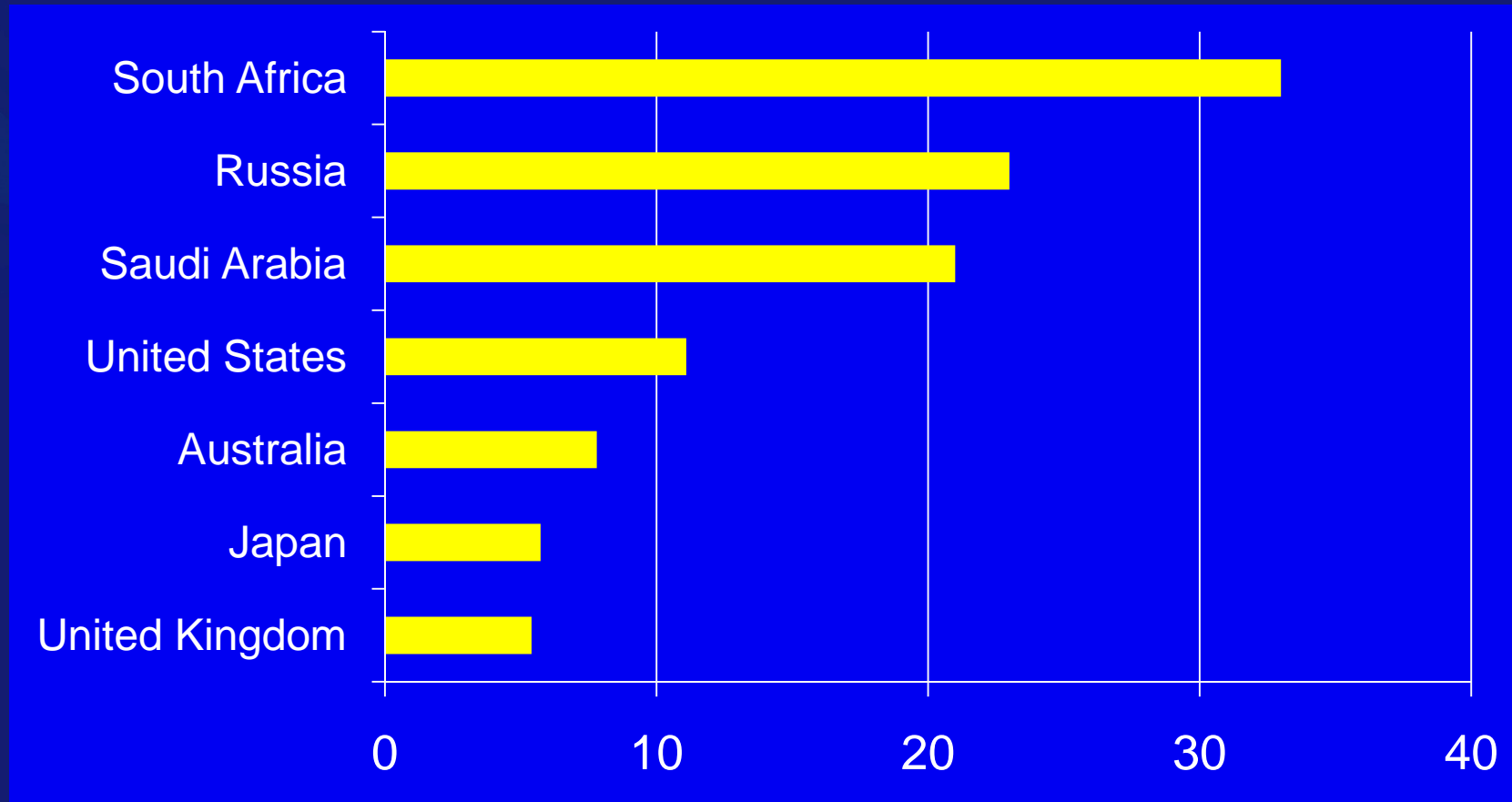
Running Average Fatalities National - Actual, 3-year, and 5-year



# Road Fatality Rates of the Group of 20 Countries

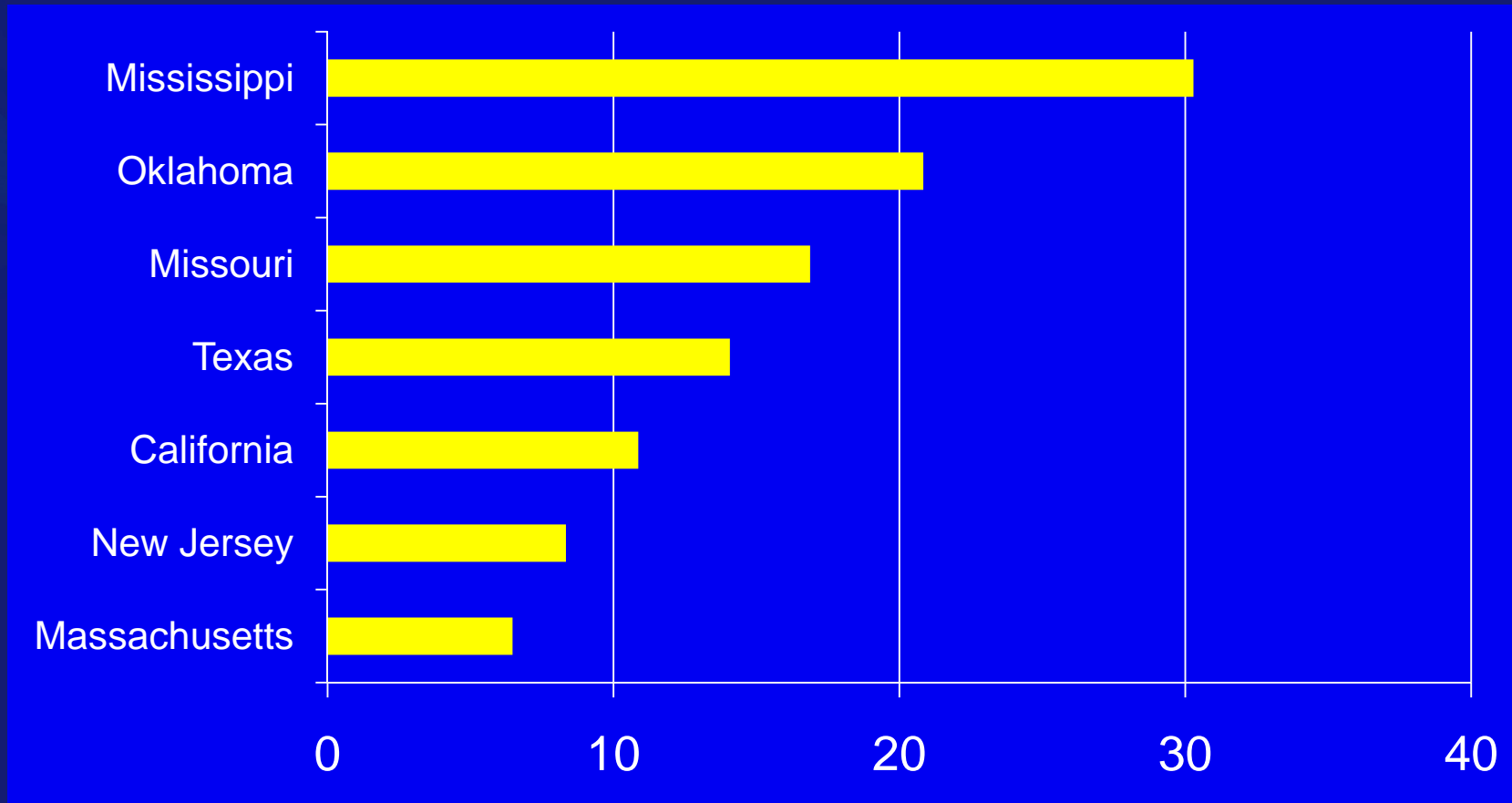


# Range of Highway Fatality Rates – International Comparison



Per 100,000 population  
2006 or more recent

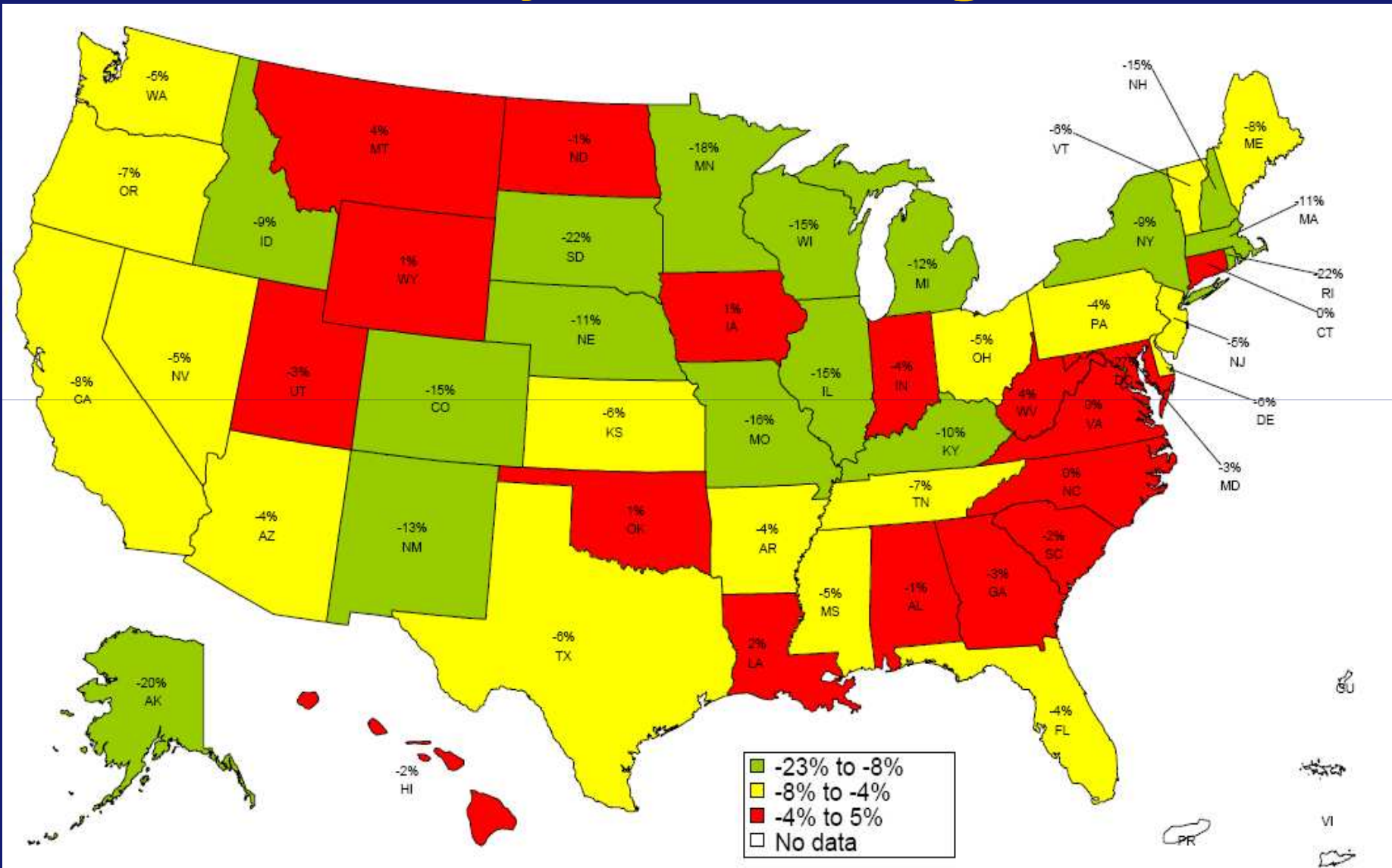
# Range of Highway Fatality Rates – State Comparison



Per 100,000 population  
2007



# State by State Progress



CHANGE IN 3-YEAR AVERAGE NUMBER OF FATALITIES FROM 2003-2005 TO 2006-2008

# Safety Trends in The USA

- 37,261 in 2008 about 34,000 in 2009: still too many – 95 per day!!!
- Stagnant in terms of the absolute number until 2007 – multiple reasons why fatalities fell the last three years
- Traffic crashes are the LEADING CAUSE OF DEATH OF 3- to 34-year-olds in the US

# Major Highway Safety Challenges

- Rural roads:
  - 60% of fatalities are rural – most on 2-lane roads
  - Half are off the state highway systems
  - Data problems magnified in rural areas
    - Roadway inventory and crash data
    - Lack of geo-coding
  - Sparse rural population; yet large number of roads
- Pedestrian/bicycle fatalities – 14% of total
- EMS and proximity of health facilities
- Enforcement and law limitations
- ***DRIVER BEHAVIOR***

# National Behavioral Concerns: % of Fatalities Related to

- Speeding: 30+ %
- Impaired drivers: 32%
- Unbelted fatalities: 50%
- Unlicensed/revoked drivers: 15%
- Distracted: 16% and growing

# Emerging Highway Safety Trends to Watch

- Motorcycle deaths: 13% of total and double-digit annual growth
- Large truck related fatalities: 13% of total and truck VMT growing faster than auto VMT
- Aging driving population
- Downsizing of passenger cars; increasing size and number and travel of trucks
- Declining state and federal resources (\$)

# Proven Roadway Countermeasures

- Rumble strips and stripes – edge line and centerline
- Pavement Safety Edge
- Median cable barriers
- Roundabouts
- Yellow clearance intervals
- Pedestrian refuge areas and walkways
- Truck & bicycle separate lanes
- Road safety audits and follow-up actions



# Proven Behavioral Countermeasures

- Enforcement
  - Automated speed enforcement (e.g. Australia/ France/UK/ in the USA: IL ,MD,WA)
  - Sobriety checkpoints
  - Drunk driving – random breathalyzer (Australia), alcohol interlock for first offenders – 12 states
  - Primary Seat Belt and laws – 30 states
  - Cell phone and texting bans – 26 states
- Education (Lessons from Europe and Australia)
  - Well-advertised and strictly enforced laws with strict penalties

# Federal Safety Reauthorization

## Position of the State DOTs

- Congress should adopt an aggressive national goal
  - TOWARDS ZERO DEATHS (TZD): halve fatalities in 2 decades leading to elimination of highway deaths
- Call for a National Commission and a White House Conference
- Enhance federal investment and safety funding that is flexible, goal-oriented and performance driven
- Enhance the State Strategic Highway Safety Plans
- Support tougher laws and better adjudication
- Enhance data collection and sharing
- Enhance RD&T
- Safety improvements in vehicles and drivers



# How Will The USA Cut in Half Fatalities In Two Decades???

## ■ Behavioral

- Motorcycle **helmet laws** in every state – 1500 lives saved per year (NHTSA)
- **Primary seat belt laws** in every state – 1000 plus lives saved per year( NHTSA)
- **Alcohol interlocks** mandated on first offenders in every state – 3000 lives saved per year (30% are repeat offenders)
- **Aggressive and automated speed enforcement** – 1000's of lives per year

# How Will The USA Halve Fatalities In Two Decades (continued)???

- **Vehicle:**
  - **Electronic stability control** on all vehicles sold after 2012 – 5,000 lives saved from the base (NHTSA)
  - **SUV/small truck rollover** roof crush standards – X?
  - **V to V and V to I communication mandated** – 1000's potentially
  - **Other safety features (IIHS):**
    - Lane departure: 10,000 max
    - Adaptive headlights: 2,500 max
    - Forward collision warning: 7,000 max
    - Blind spot detection: 400 max
    - Brake assist: 3,000 max

# How will the USA halve Fatalities in two decades (continued)???

- **Infrastructure: 1000's of lives saved from the base (anecdotal)**
  - **Pervasive protection/prevention for lane departures:** e.g., median cables; centerline and edge line rumble strips and stripes; bright/large chevrons on dangerous curves
  - **Intersection improvements:** e.g., roundabouts
  - **Lane separation:** bikes and trucks and cars
- **Driver Licensing: focus on the old, young and un-licensed**

# How will the USA halve Fatalities in two decades (continued)???

- **Safety culture change**
- **EMS – effectiveness (E-911; automated crash notification)**
- **Implementation of state and local **strategic highway safety plans** with targeted reduction strategies/resources and share ownership of the outcomes**
- **Partnerships – HEALTH; Partnerships – LOCALS; Partnerships – SPECIAL INTERESTS**

# Bottom Line

- We know a lot about the causes of highway traffic deaths and serious injuries, and we have some very good countermeasures, but...
- *We need:*
  - *Political will and leadership at all levels of government to overcome institutional and policy challenges*
  - *To further demonstrate the link between traffic deaths and health, other governmental, and personal costs to support the message on highway safety needs*
  - *To share a common vision!!*

# Key Lessons for the World

- **Top leadership** is essential
- Driving must be considered **a privilege** rather than a **right**
- **Partnerships** across disciplines and across levels of government **are essential**
- **Fatality reduction** must become a **shared value, shared goal and shared responsibility**
- **We can learn from each other** on effective roadway and behavioral countermeasures
- We must **implement best practices** across the nation
- **Let's unite in the Decade for Action**

# Some Key AASHTO/GHSA Safety Related Publications

**Highway Safety Manual (AASHTO)**

**NCHRP series 500 guides (TRB)**

**Countermeasures that Work (GHSA)**



# Thank You—

## Muito obrigado

- [Akane@aaashto.org](mailto:Akane@aaashto.org)
- [www.transportation.org](http://www.transportation.org)