National Transportation Safety Board

# Substance-Impaired Driving: Actions Needed to Reach Zero

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Board Member

San Diego County DUI Symposium
October 10, 2014

# Federal Agencies: Transportation

NTSB

FMCSA

FRA

NHTSA

PHMSA

DOT

MARAD

FTA

FHWA

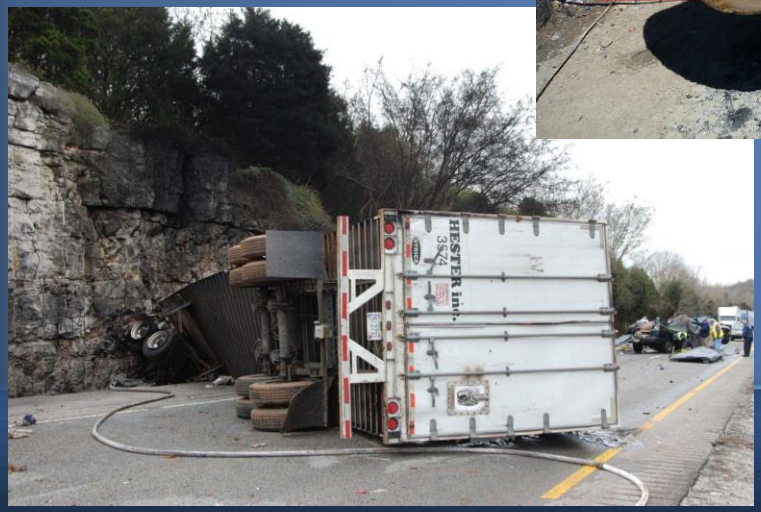
FAA

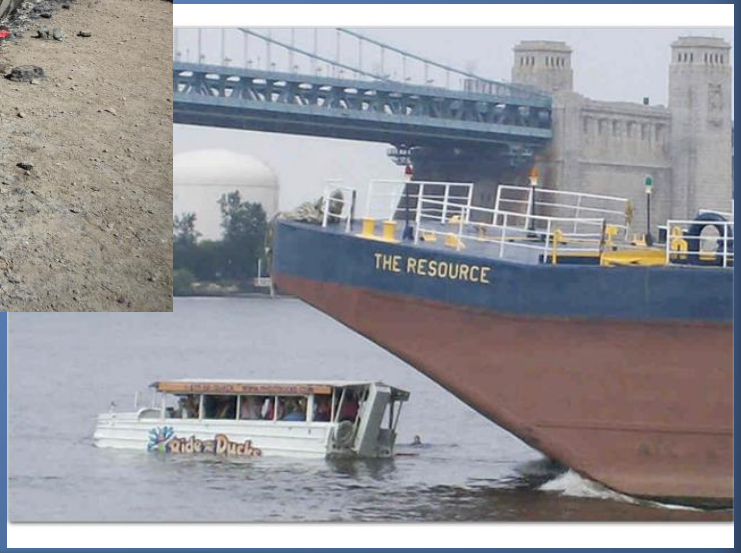
NTSB

**1) determining the probable cause of transportation accidents**

**2) making recommendations to prevent their recurrence**

# All Modes



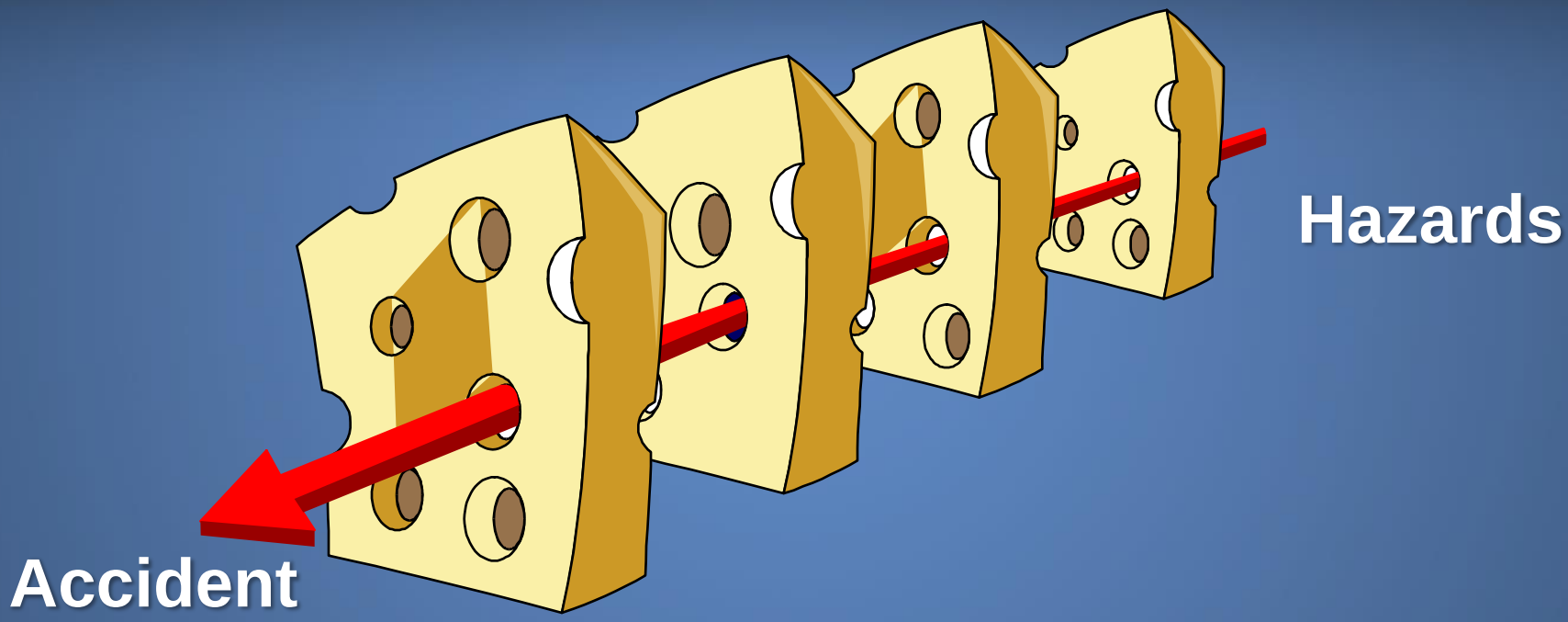




NTSB

# Independent Federal Agency: Created in 1967

- >140,500 accident investigations
- 14,000+ safety recommendations
- ~ 2,300 organizations/recipients
- 82% acceptance rate

# “Swiss Cheese” Model (Reason)




Successive layers of defenses, barriers, and safeguards

# Carrollton, KY (May 14, 1988)

67 passengers, 27 fatalities, 34 serious injuries; driver: .28 BAC

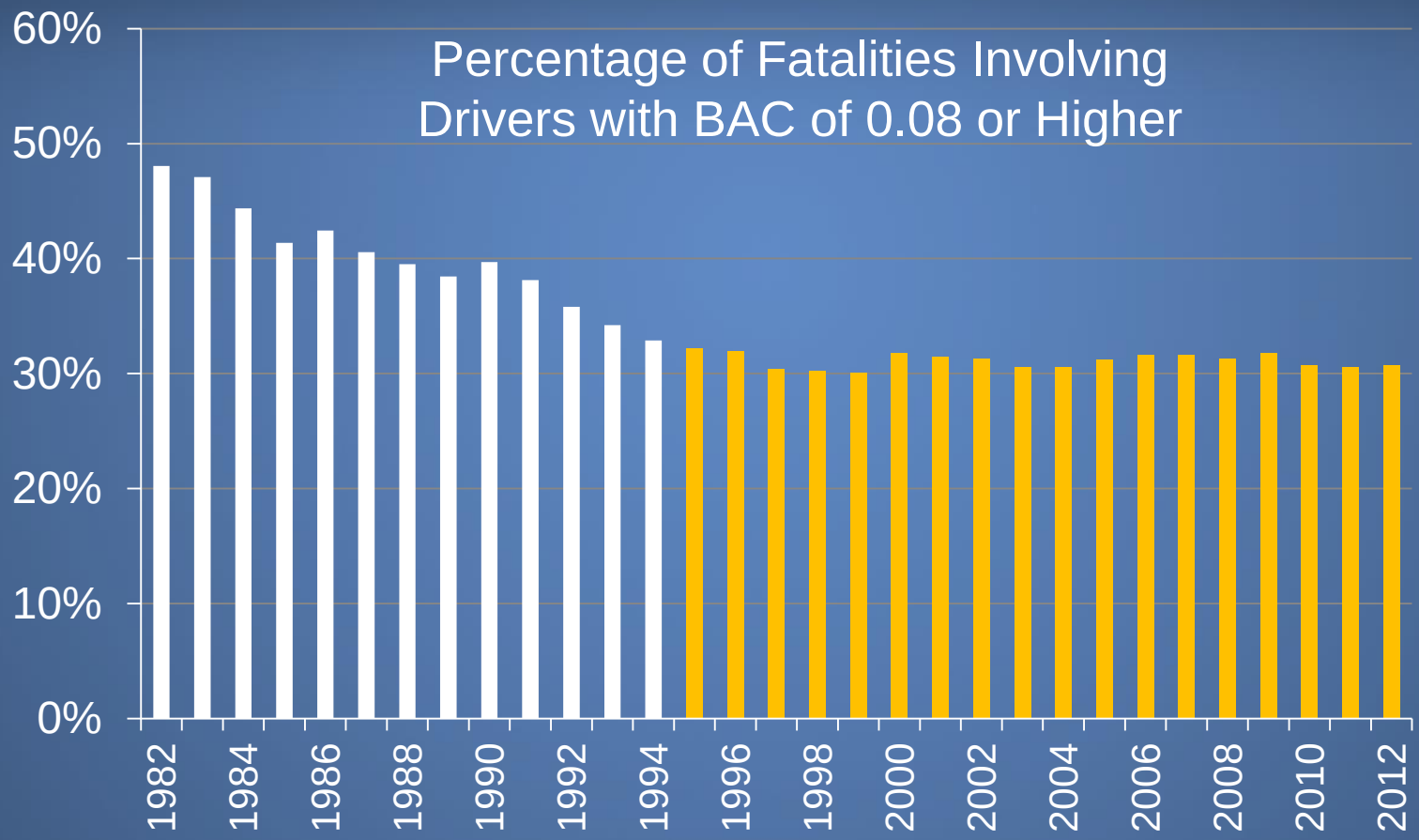
# Since 1988 . . .

- 300,000 lives lost
- Millions injured

# Since 1988 . . .

- 41% of fatalities to 31%
- 31% for over 15 years

# Alcohol-Impaired Driving

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# Since 1988 . . .

- 200 law enforcement lives lost

# Every Year . . .

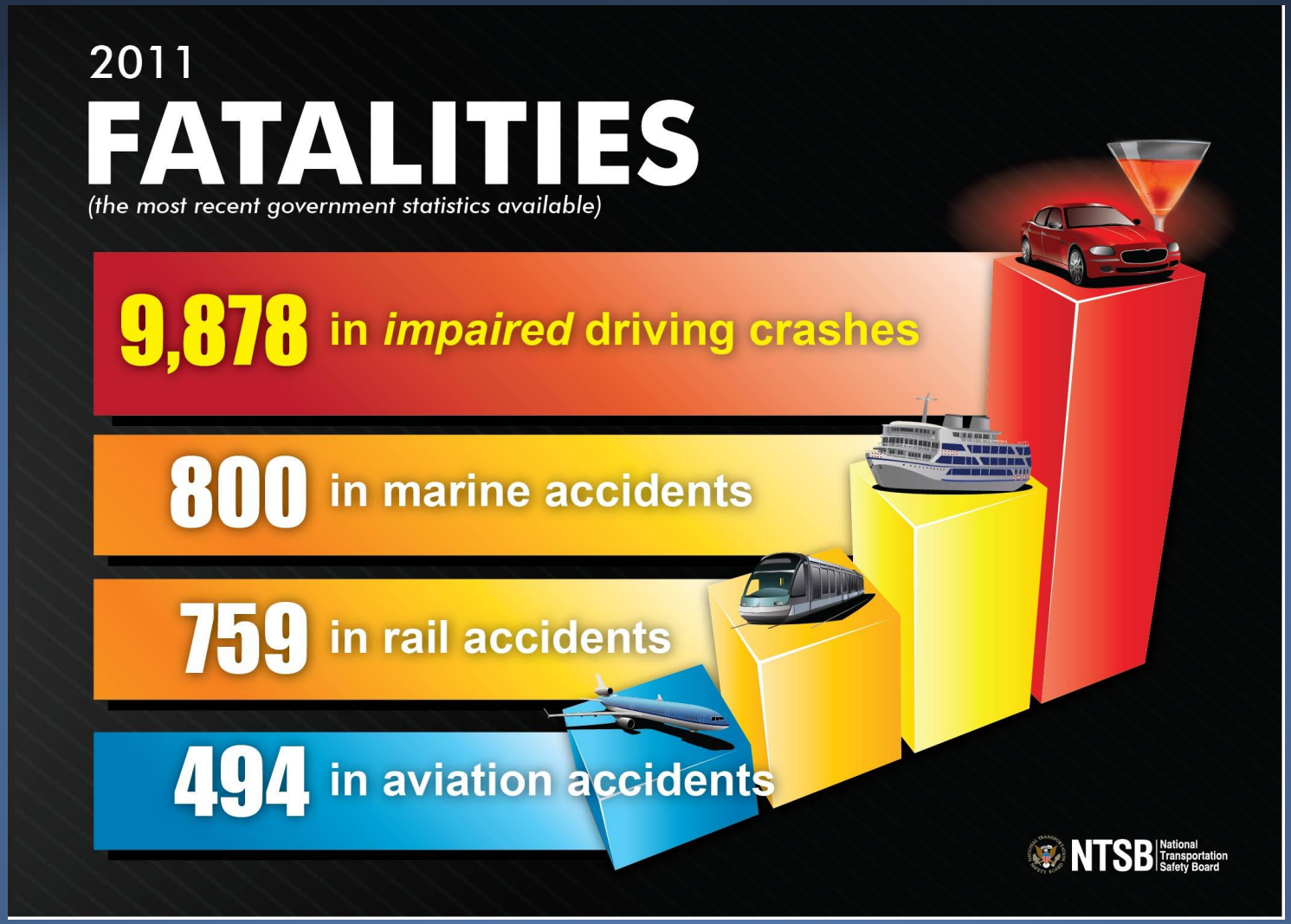
- ~ 10,000 lives lost

# Every Year . . .

- 173,000 injuries
  - 27,000 are life-altering

# Every Hour . . .

- 1 life lost
- 20 injuries


2011
FATALITIES
(the most recent government statistics available)
9,878 in impaired driving crashes
800 in marine accidents
759 in rail accidents
494 in aviation accidents
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# NTSB Forum: May 15-16, 2012

**REACHING ZERO**

Actions to Eliminate Substance-Impaired Driving

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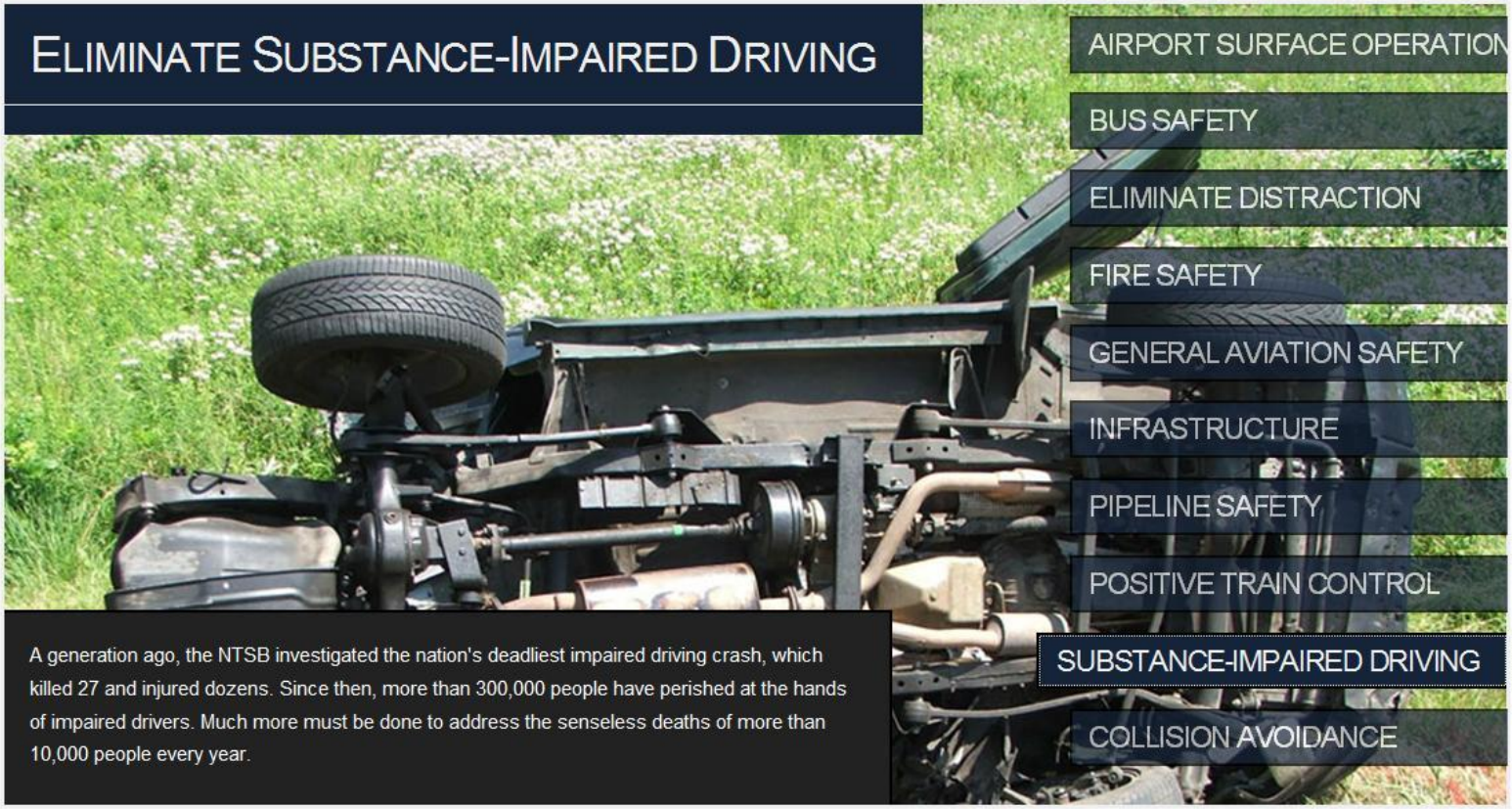
# NTSB Forum: May 15-16, 2012

- 8 panels with 37 panelists
- Topics included:
  - the substance
  - current interventions
  - consequences
  - international view
  - the problem
  - enforcement
  - prevention
  - next steps

# November 14, 2012

## Most Wanted List

The Most Wanted List represents the NTSB's advocacy priorities. It is designed to increase awareness of, and support for, the most critical changes needed to reduce transportation accidents and save lives.

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# November 23, 2012. . .

- NTSB issued 6 new safety recommendations
- Focus: better data

# Reaching Zero: Safety Recommendations

To the National Highway Traffic Safety Administration:

- Develop and disseminate to appropriate state officials a common standard of practice for drug toxicology testing, including (1) the circumstances under which tests should be conducted, (2) a minimum set of drugs for which to test, and (3) cutoff values for reporting the results.

# Wrong-Way Driving

**Special Investigation Report**

NTSB/SIR-12/01
PB2012-917003

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# December 11, 2012. . .

- Wrong-way driver report
  - > 60% involve alcohol-impaired drivers
- NTSB issues 3 new safety recommendations
- Technology focus:
  - all offender ignition interlock
  - in-vehicle passive monitoring (DADSS)

# Reaching Zero: Actions to Eliminate Alcohol-Impaired Driving

**Safety Report**

NTSB/SR-13/01
PB2013-106566

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# May 14, 2013. . .

- Safety Study
  - Reaching Zero: Actions to Eliminate Alcohol-Impaired Driving

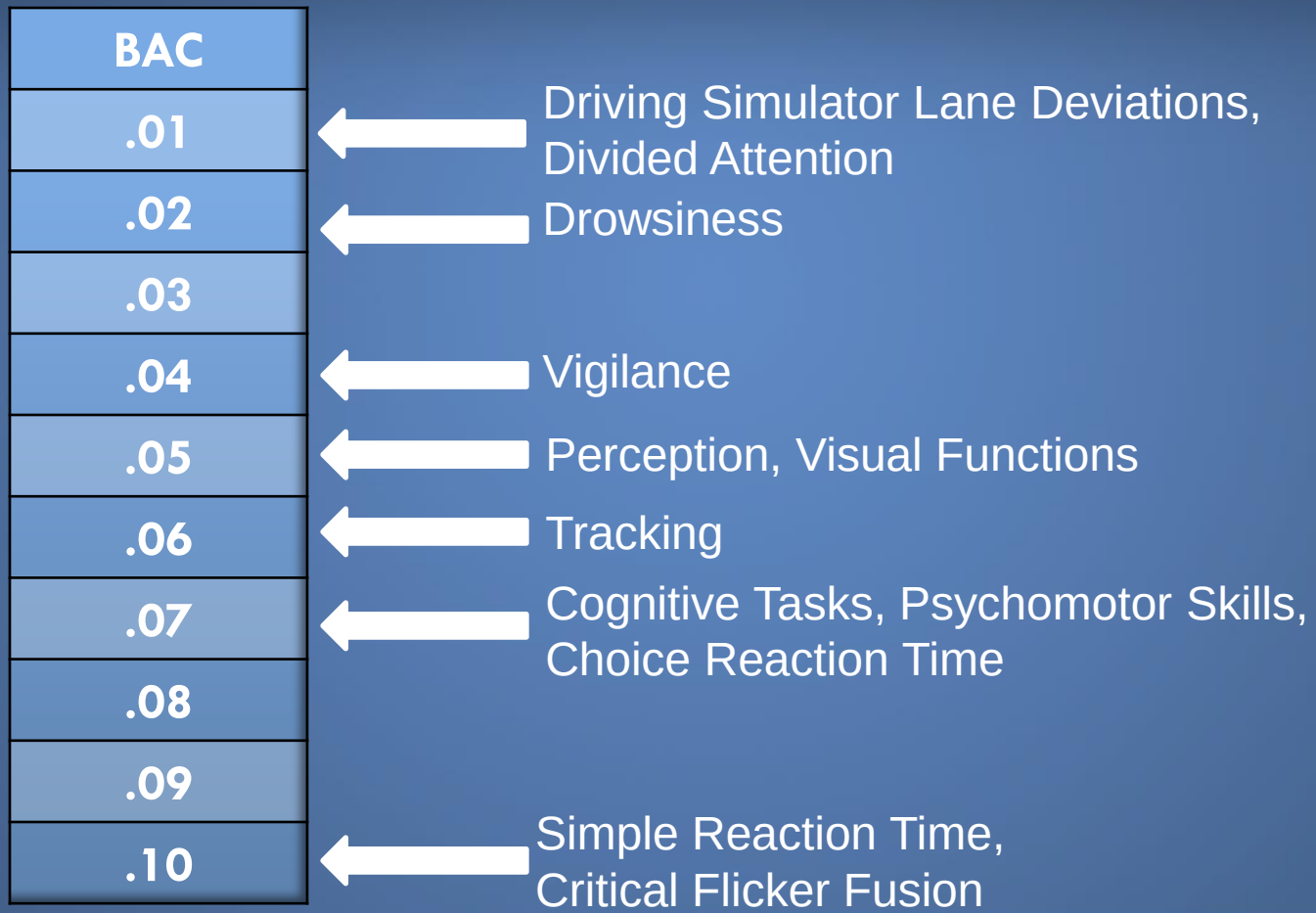
- NTSB issues 10 new safety recommendations

# 10 New Safety Recommendations

- Laws: reducing per se BAC limit; expand ALS/ALR
- HVE incorporating PAS technology
- Expand use of in-vehicle devices (ignition interlocks)
- Repeat offenders: use DWI courts/other programs
- Establishing measurable goals/tracking progress (states)

# Alcohol Impairment and Per Se Laws

# Driving-Related Performance




(Moskowitz and Fiorentino, 2000)

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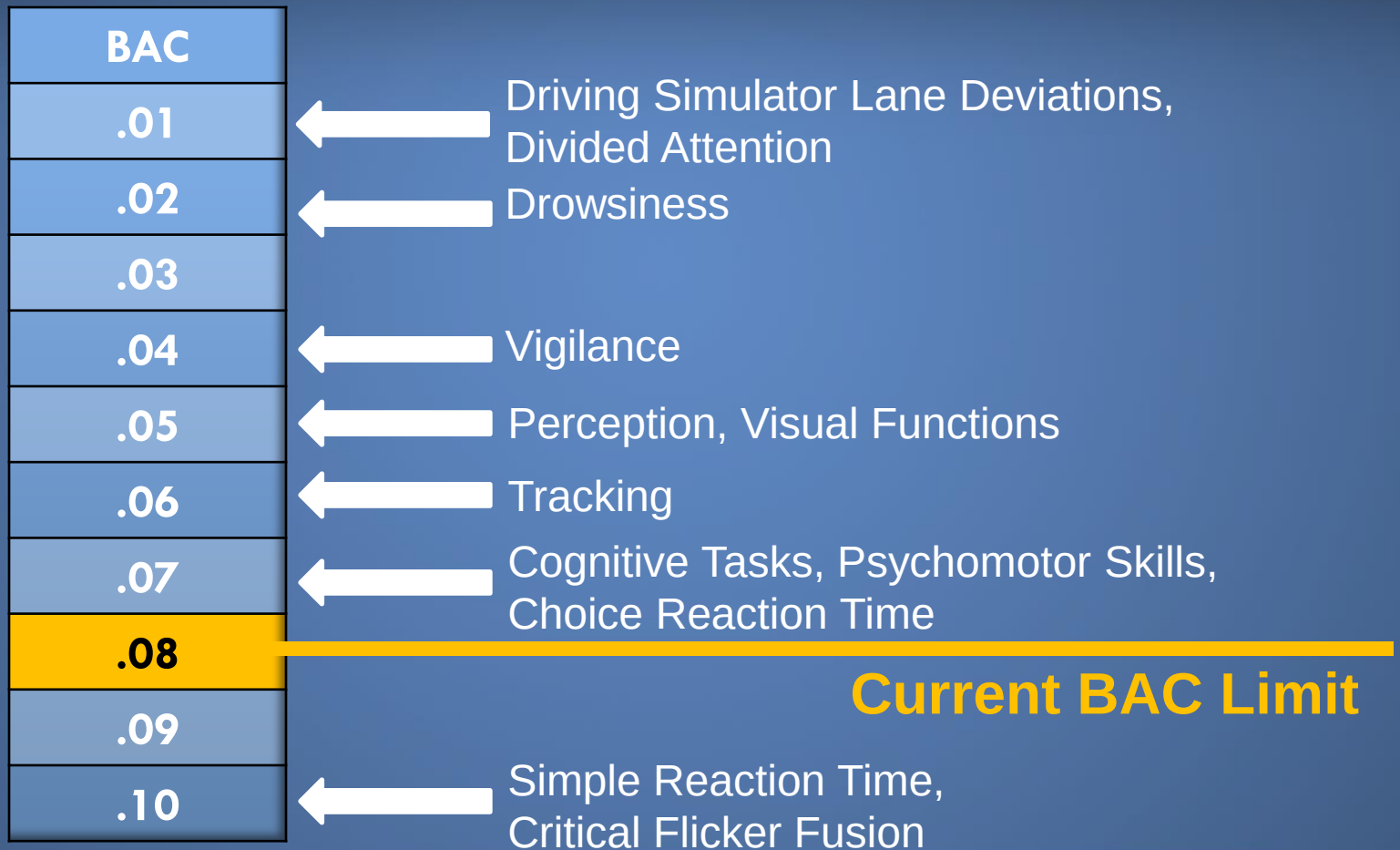
# Driving-Related Performance




(Moskowitz and Fiorentino, 2000)

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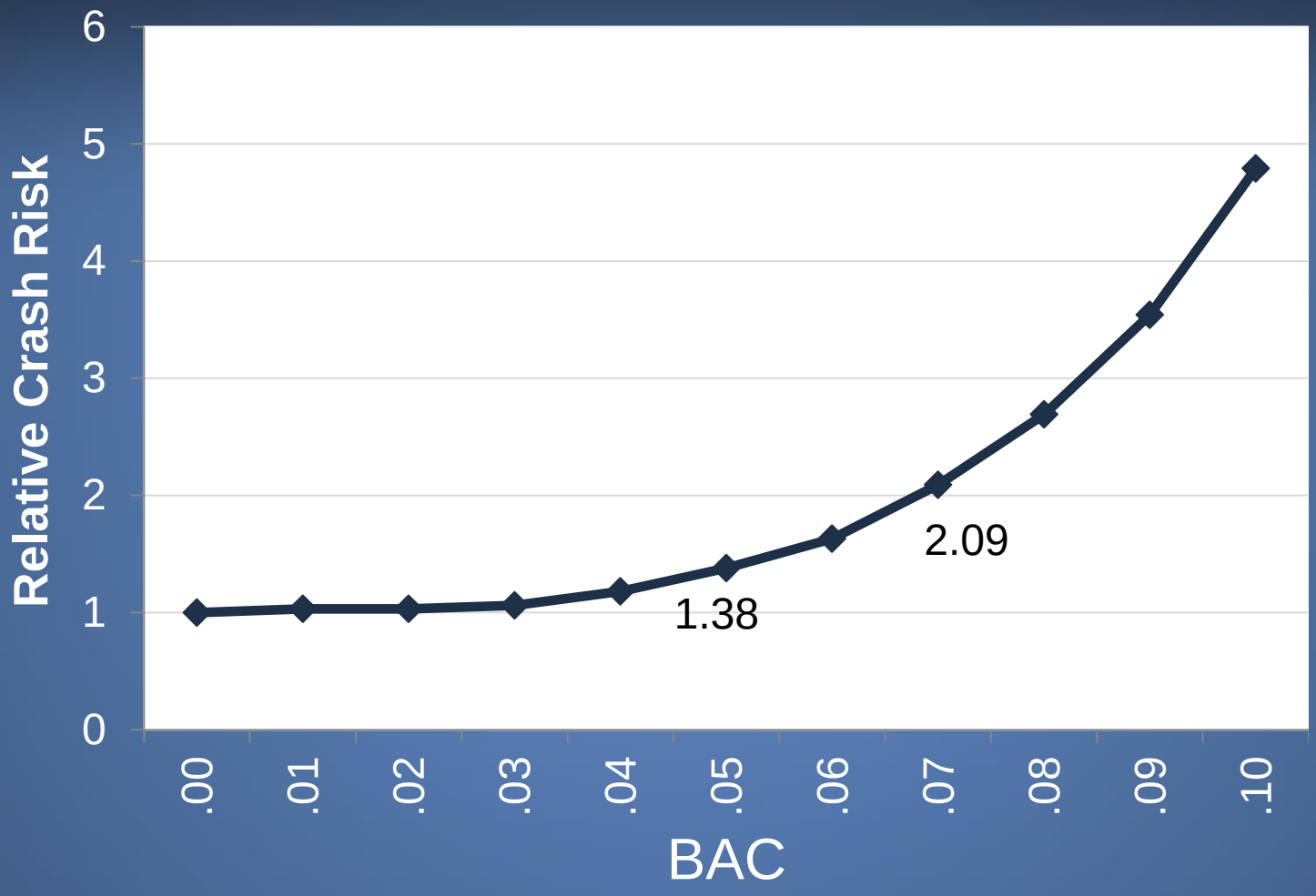
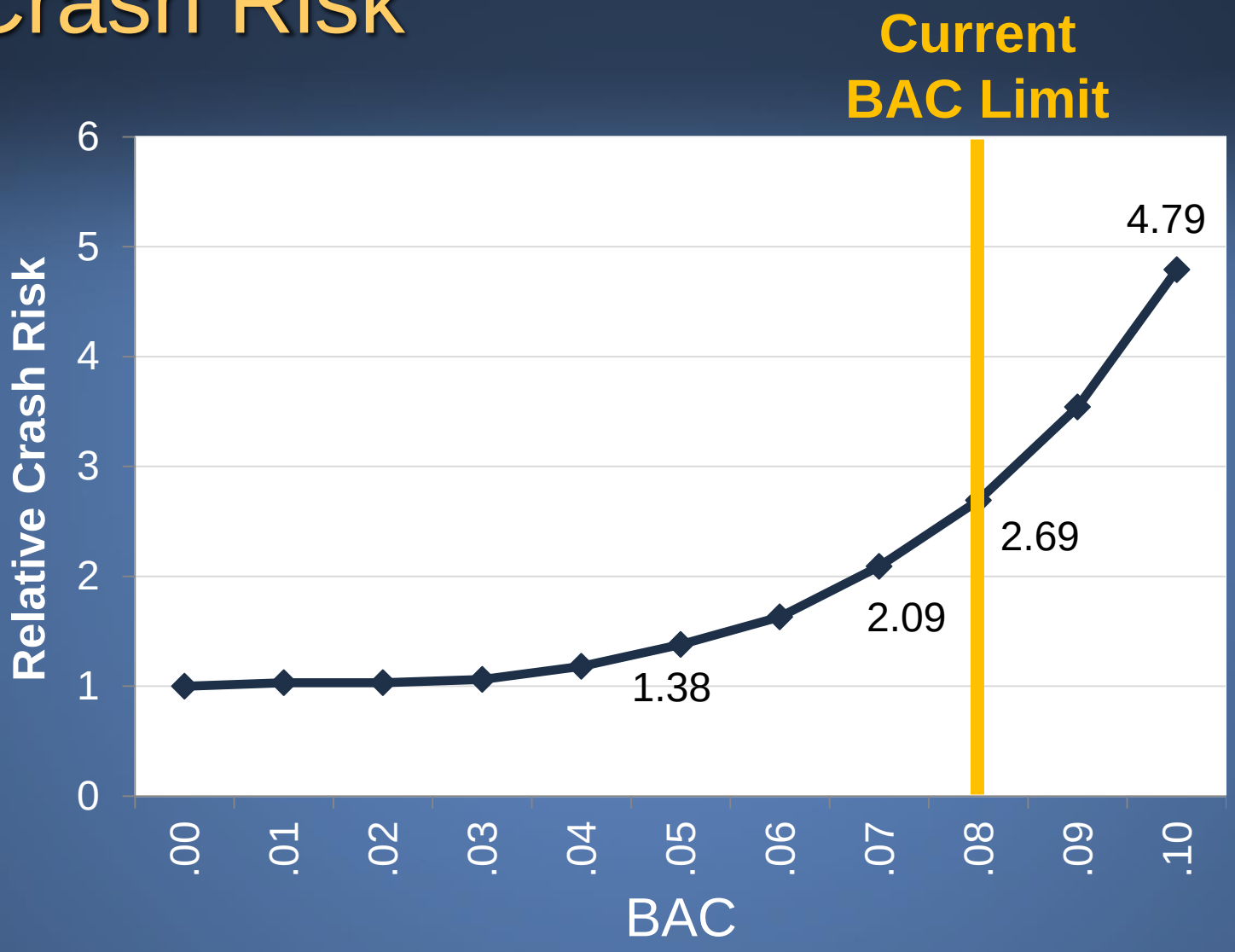
# Crash Risk


Relative Crash Risk
6
5
4
3
2
1
0
1.38
2.09
.00
.01
.02
.03
.04
.05
.06
.07
.08
.09
.10
BAC

# Crash Risk

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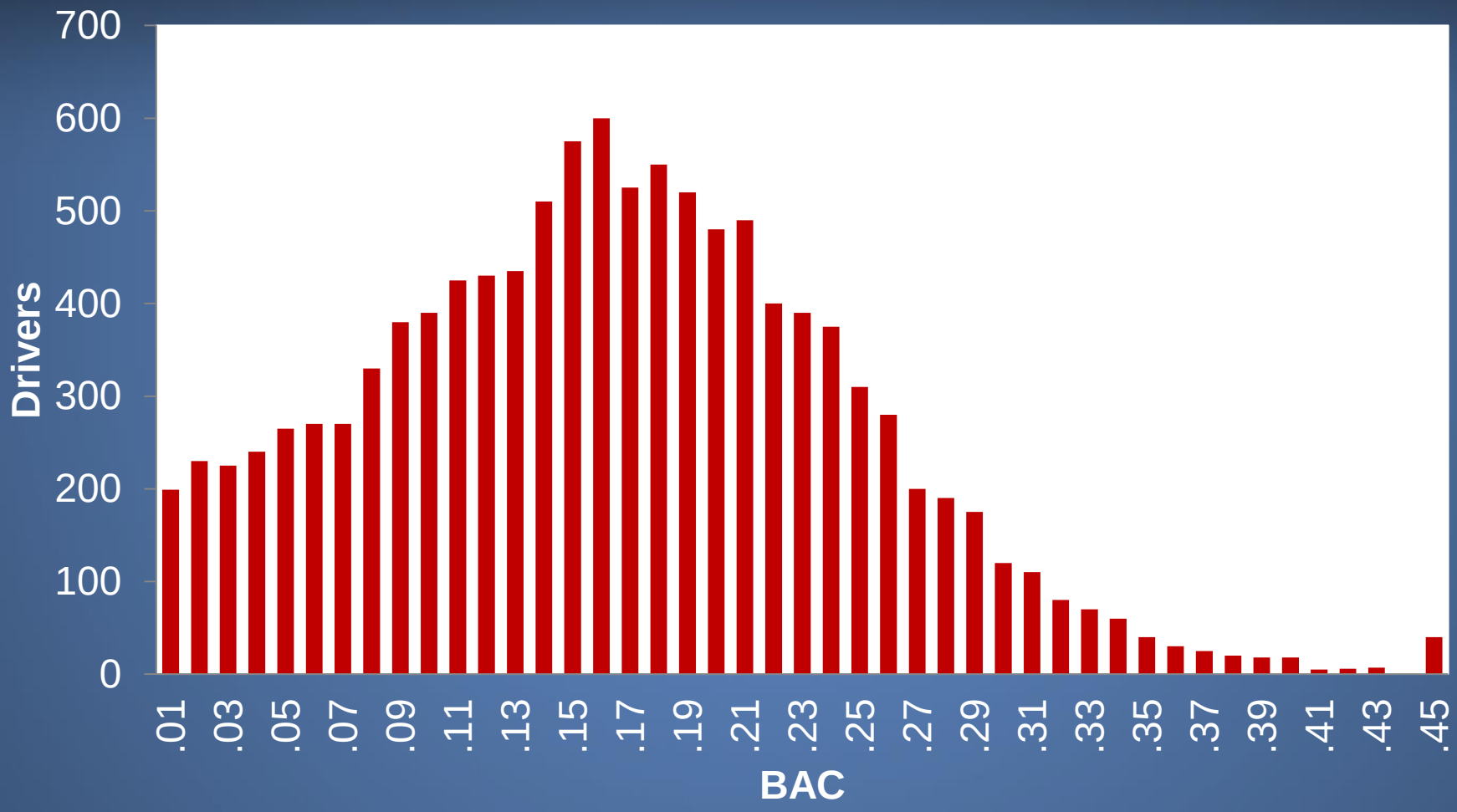
# Fatal Crashes (2012): BAC ≥ .01

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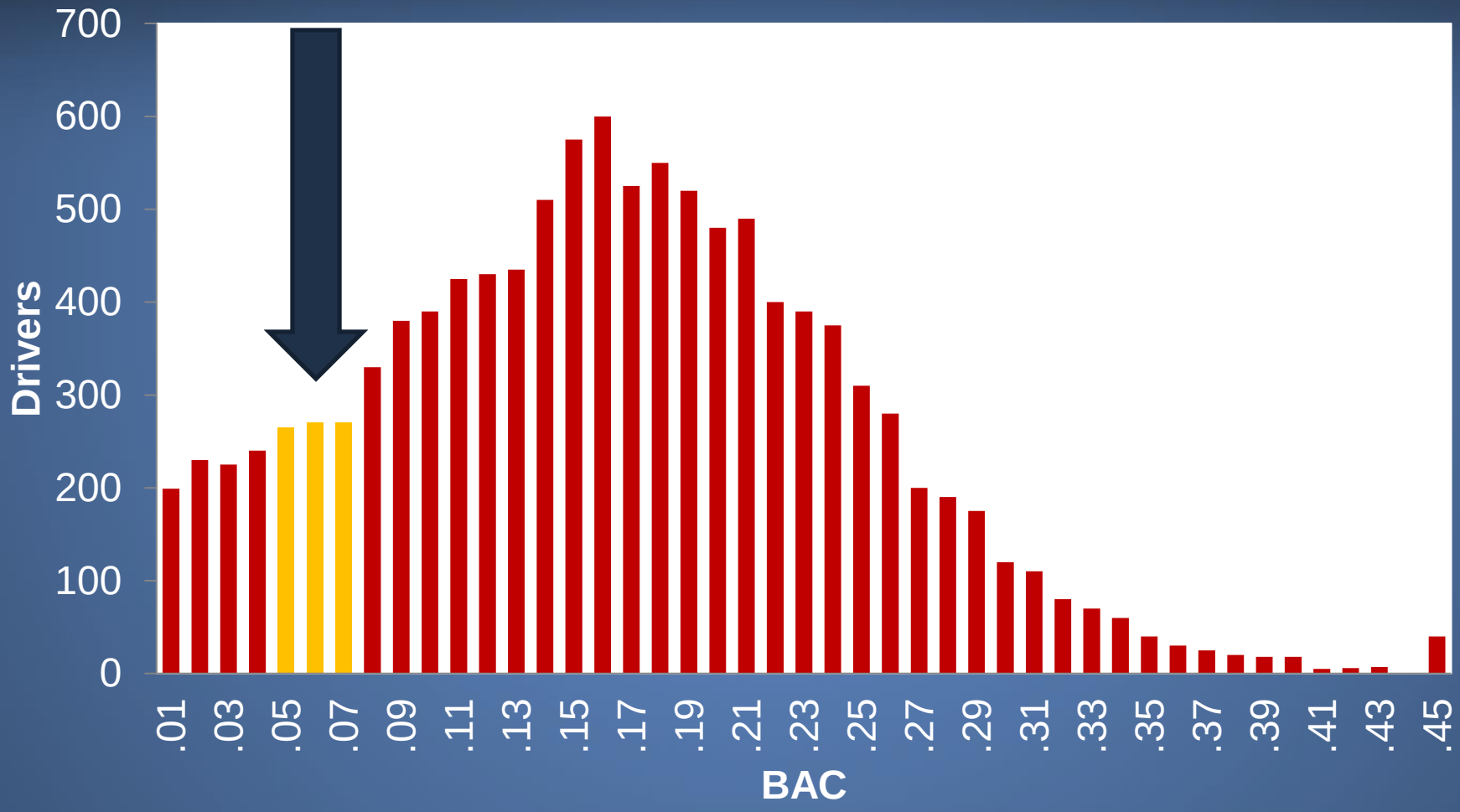
# Misconception: Changing BAC Affects Small Group

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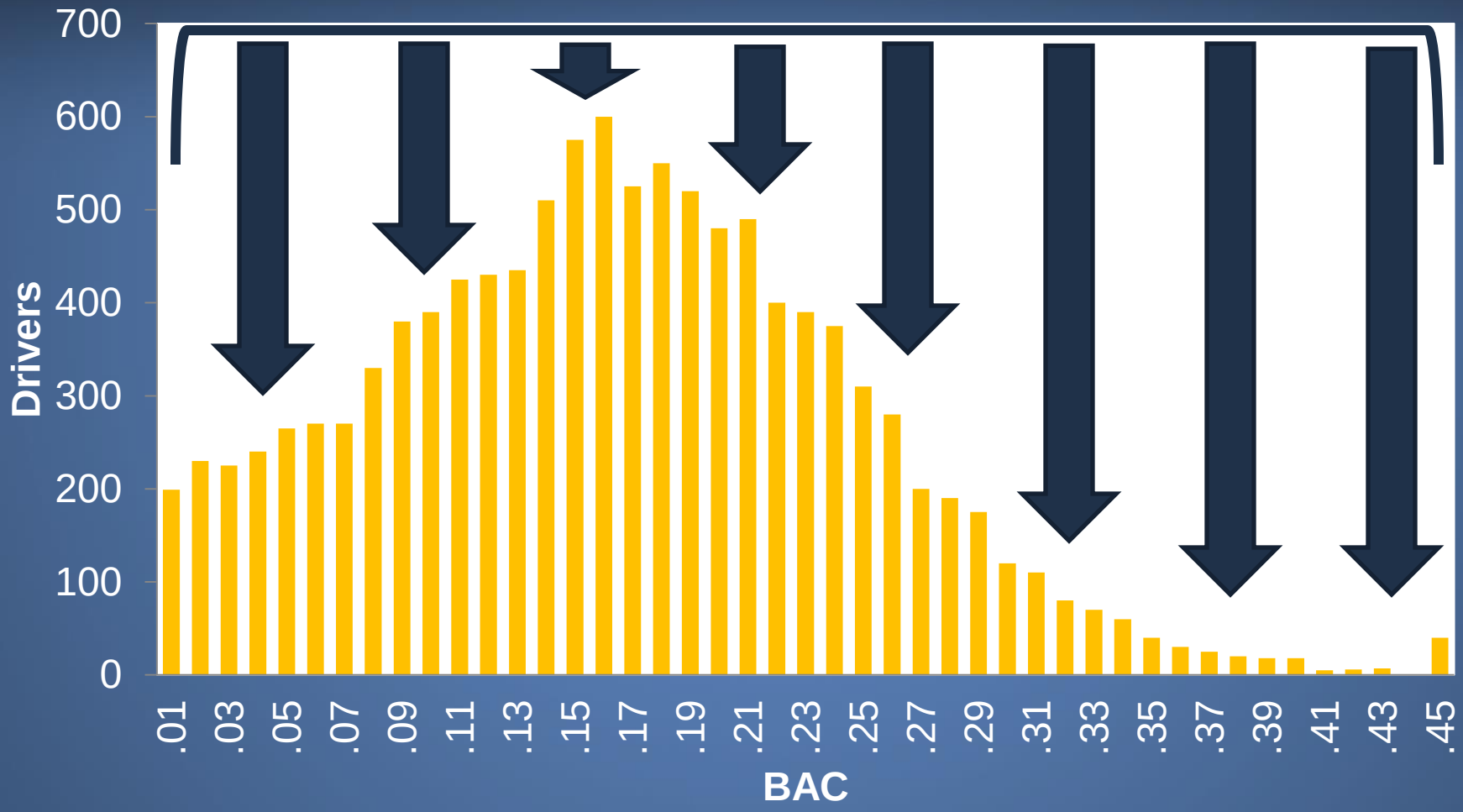
# Reality: Changing BAC Affects Drivers at All Levels

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# Reducing Per Se BAC Limits

- Reduces crashes and fatalities across BAC levels
- Move from 0.10 to 0.08
  - 5-16% reduction in crashes, fatalities or injuries
- Estimated:
  - prevents 360 deaths/yr
  - 0.08 to 0.05 prevent additional 538 deaths/yr

(Wagenaar et al, 2007; 28-state study)

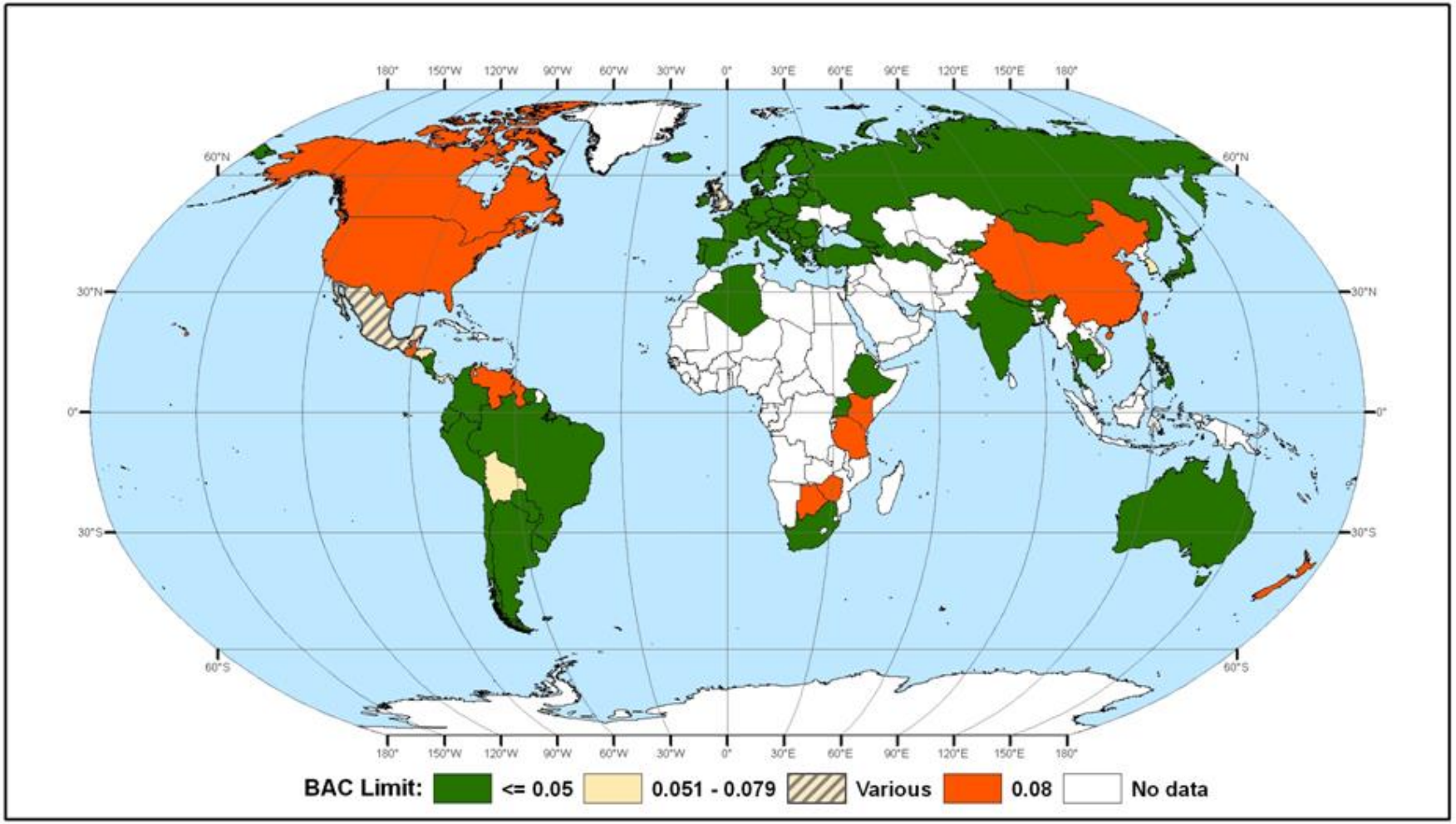
# Reducing Per Se BAC Limits

- Lowering BAC from 0.08 to ≤ 0.05

  - Europe: fatal crashes reduced among males and people aged 18-49

  - Australia: fatal crashes reduced 8% & 18% (could prevent ~1,000 – 2,000 deaths/yr)

# BAC Per Se Limits World Wide

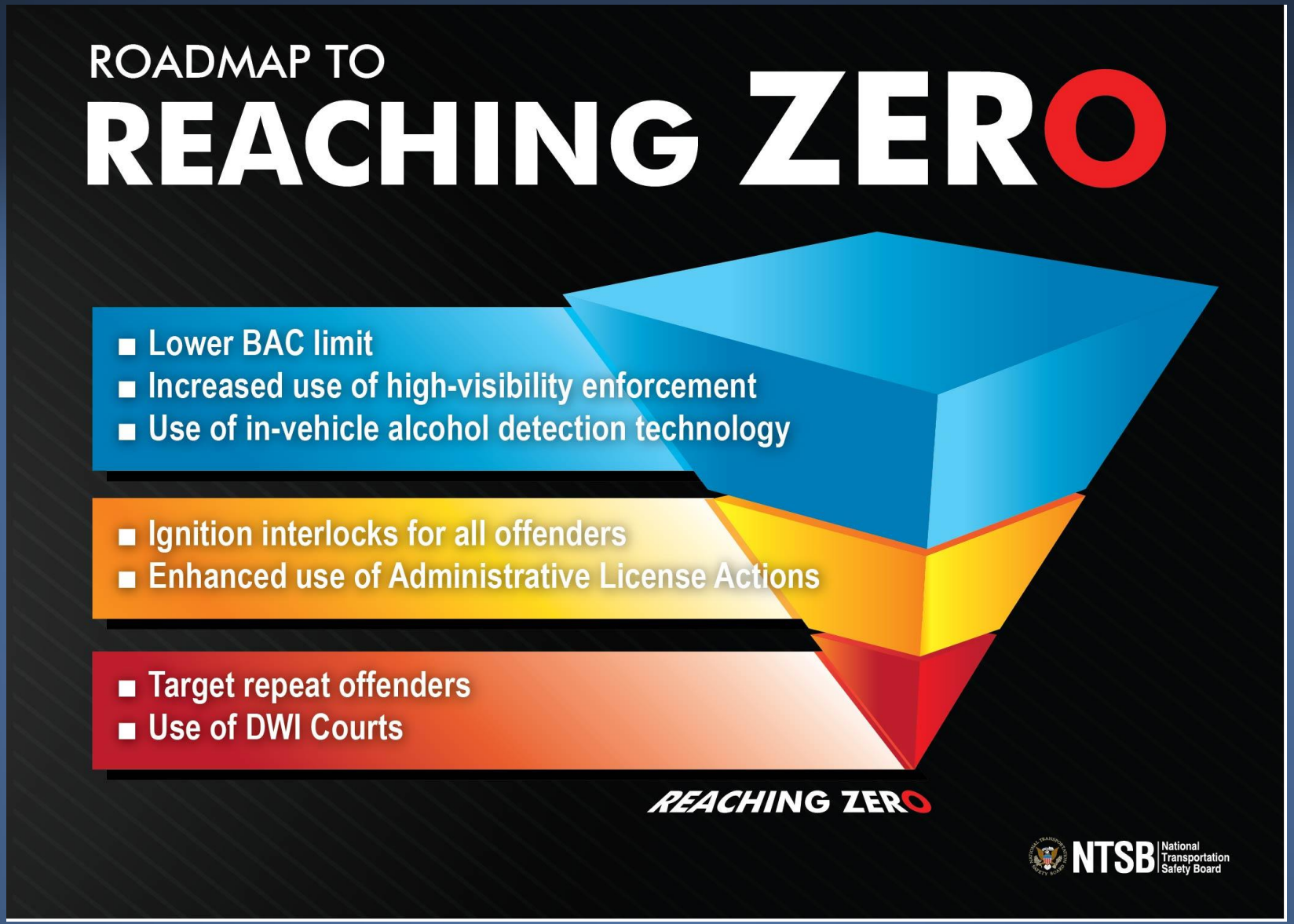


# Traffic Safety and Public Health Support

- Association for the Advancement of Automotive Medicine
- American Medical Association
- World Health Organization
- World Medical Association

# Separate

Drinking ⟷ Driving


ROADMAP TO
REACHING ZERO
Lower BAC limit
Increased use of high-visibility enforcement
Use of in-vehicle alcohol detection technology
Ignition interlocks for all offenders
Enhanced use of Administrative License Actions
Target repeat offenders
Use of DWI Courts
REACHING ZERO
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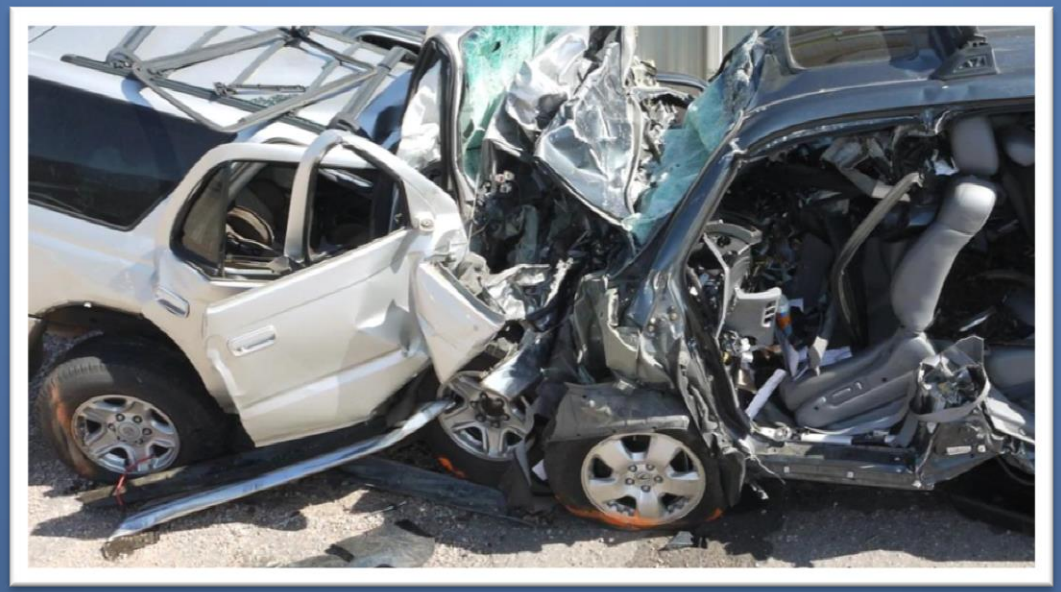
# NTSB Roadmap

- Science-based/data-driven
- Diverse approaches
- Set of targeted interventions
- Near- and long-term strategies

# Reaching Zero: NTSB Roadmap

- Stronger laws
  - Swifter enforcement
    - Expanded use of technology



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