American Public Health Association
Annual Meeting
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Drugs, Alcohol, and Transportation: A Risky Combination for Public Health

T. Bella Dinh-Zarr, PhD, MPH
Vice Chairman, NTSB

Overview

- NTSB: who we are, our strengths and our unique role in public health
- Public health impact of alcohol-impaired driving and drugged driving.
- NTSB investigations
- Interventions
- Challenges
- Resources

National Transportation Safety Board

- Independent federal agency
- Investigate transportation accidents
- Make safety recommendations
- Assist victims and their families

Our Mission:

Prevent Accidents

Reduce Injuries

Save Lives

What We Do:

Investigate What Happened,

Why It Happened, and

Make Recommendations to Prevent It from Happening Again

UNITED STATES COAST GUARD
SEMPER PARATUS
1790
NATIONAL TRANSPORTATION SAFETY BOARD

NTSB
FARO

The Impact of Motor Vehicle Crashes on Public Health

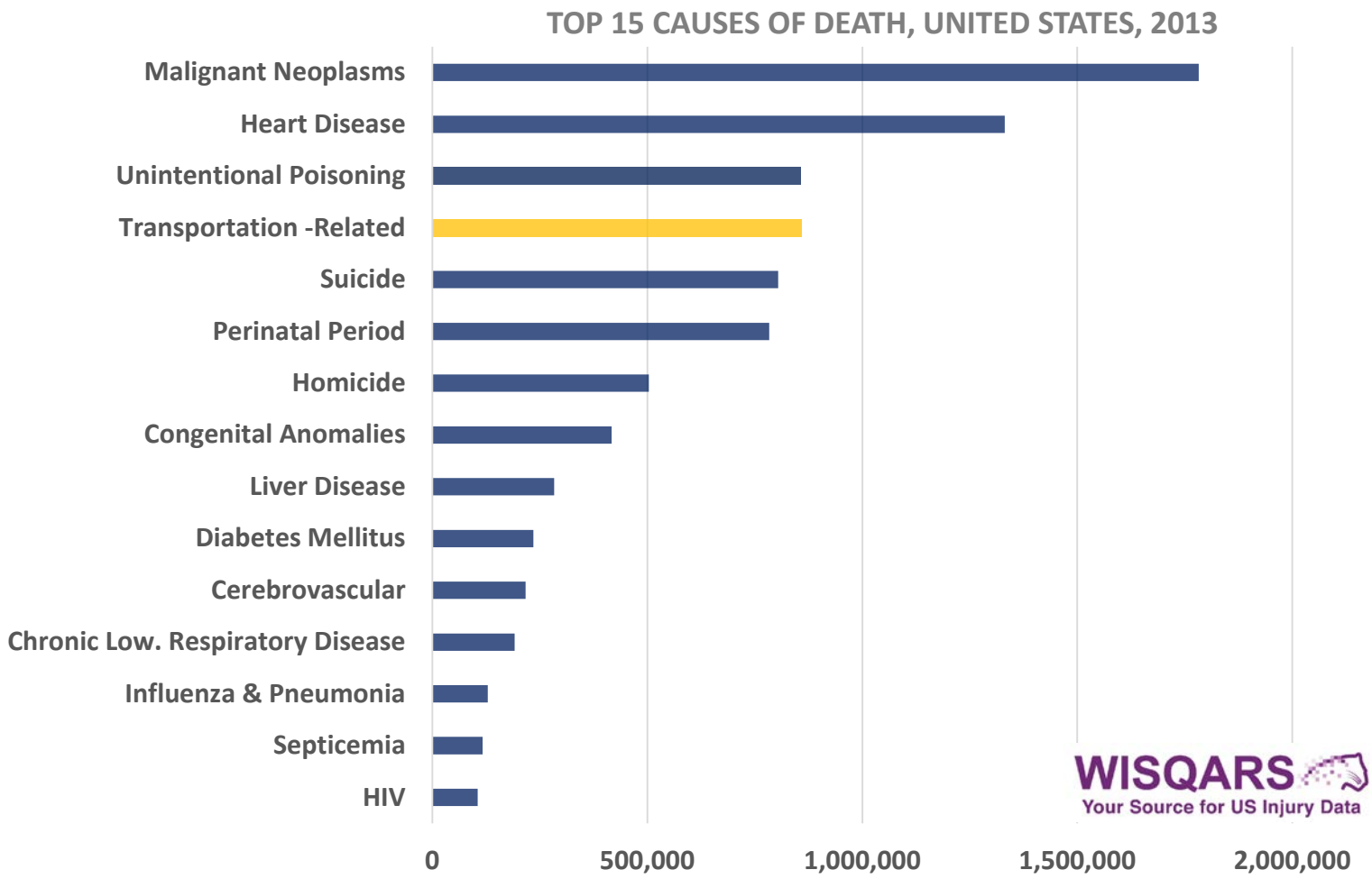
10 Leading Causes of Injury Deaths by Age Group Highlighting Unintentional Injury Deaths, United States – 2013

	Age Groups										
Rank	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	Total
1	Unintentional Suffocation 979	Unintentional Drowning 393	Unintentional MV Traffic 342	Unintentional MV Traffic 414	Unintentional MV Traffic 6,510	Unintentional Poisoning 8,251	Unintentional Poisoning 8,374	Unintentional Poisoning 10,651	Unintentional Poisoning 6,388	Unintentional Fall 25,464	Unintentional Poisoning 38,851
2	Homicide Unspecified 139	Unintentional MV Traffic 327	Unintentional Drowning 116	Suicide Suffocation 231	Homicide Firearm 3,704	Unintentional MV Traffic 5,776	Unintentional MV Traffic 4,448	Unintentional MV Traffic 5,082	Unintentional MV Traffic 4,502	Unintentional MV Traffic 6,333	Unintentional MV Traffic 33,804
3	Homicide Other Spec., classifiable 74	Unintentional Suffocation 161	Unintentional Fire/Burn 87	Suicide Firearm 137	Unintentional Poisoning 3,293	Homicide Firearm 3,372	Suicide Firearm 2,948	Suicide Firearm 4,057	Suicide Firearm 3,809	Suicide Firearm 5,113	Unintentional Fall 30,208
4	Unintentional MV Traffic 66	Homicide Unspecified 153	Homicide Firearm 48	Homicide Firearm 94	Suicide Firearm 2,210	Suicide Firearm 2,897	Suicide Suffocation 1,868	Suicide Suffocation 2,007	Unintentional Fall 2,283	Unintentional Unspecified 4,316	Suicide Firearm 21,175
5	Undetermined Suffocation 43	Unintentional Fire/Burn 129	Unintentional Suffocation 44	Unintentional Drowning 93	Suicide Suffocation 1,839	Suicide Suffocation 2,154	Homicide Firearm 1,843	Suicide Poisoning 1,867	Suicide Poisoning 1,528	Unintentional Suffocation 3,616	Homicide Firearm 11,208
6	Undetermined Unspecified 28	Unintentional Pedestrian, Other 90	Unintentional Other Land Transport 29	Unintentional Other Land Transport 49	Unintentional Drowning 501	Suicide Poisoning 716	Suicide Poisoning 1,193	Unintentional Fall 1,366	Suicide Suffocation 1,182	Unintentional Poisoning 1,824	Suicide Suffocation 10,062
7	Unintentional Drowning 23	Homicide Other Spec., classifiable 71	Unintentional Natural/ Environment 22	Unintentional Fire/Burn 48	Suicide Poisoning 418	Undetermined Poisoning 565	Undetermined Poisoning 633	Homicide Firearm 1,158	Unintentional Suffocation 723	Adverse Effects 1,755	Suicide Poisoning 6,637
8	Homicide Suffocation 22	Unintentional Natural/ Environment 43	Unintentional Pedestrian, Other 18	Unintentional Suffocation 37	Homicide Cut/Pierce 331	Unintentional Drowning 424	Unintentional Fall 522	Undetermined Poisoning 801	Homicide Firearm 573	Unintentional Fire/Burn 1,103	Unintentional Suffocation 6,601
9	Unintentional Natural/ Environment 19	Homicide Firearm 39	Homicide, Other Specified., NEC[N] 15	Unintentional Firearm 24	Undetermined Poisoning 219	Homicide Cut/Pierce 409	Unintentonal Drowning 367	Unintentional Suffocation 478	Unintentional Fire/Burn 564	Suicide Poisoning 905	Unintentional Unspecified 5,407
10	Unintentional Fire/Burn 17	Unintentional Struck by or Against 33	Unintentional Firearm 15	Unintentional Poisoning 21	Unintentional Fall 205	Unintentional Fall 305	Homicide Cut/Pierce 267	Unintentional Drowning 464	Undetermined Poisoning 547	Suicide Suffocation 770	Unintentional Drowning 3,391

[N] Not elsewhere classifiable

Data Source: National Center for Health Statistics (NCHS), National Vital Statistics System.
Produced by: National Center for Injury Prevention and Control, CDC using WISQARS™.

Transportation-related deaths are the fourth leading cause of Years of Potential Life Lost



An “Epidemic on Wheels”?

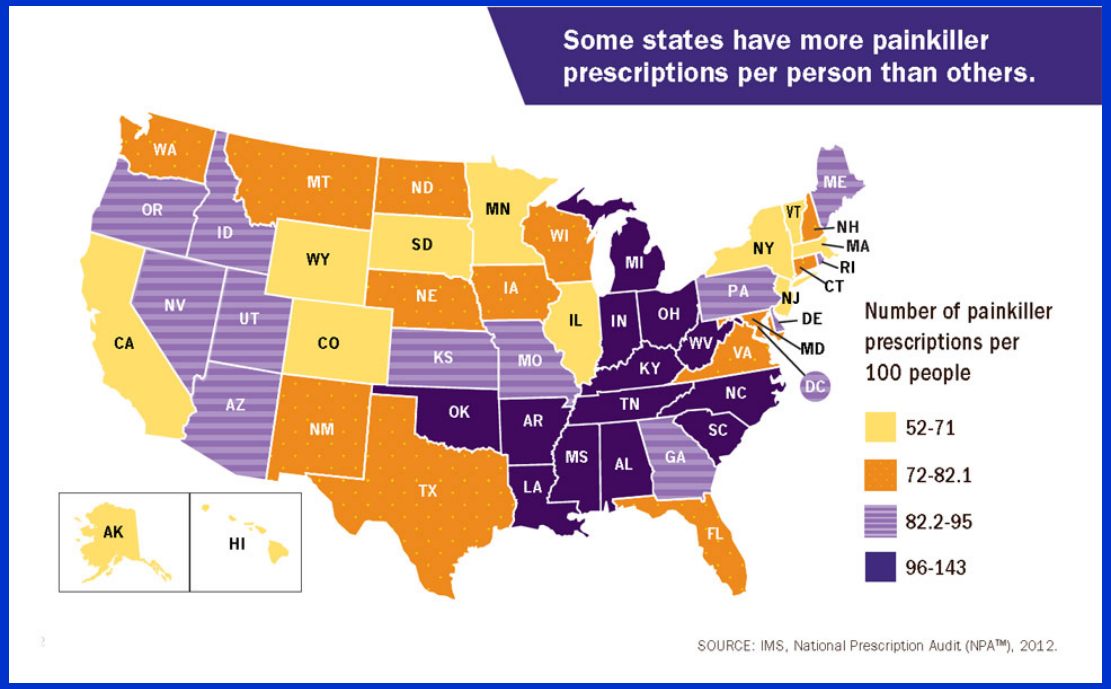
10,000+ alcohol-related crash deaths/year

NHTSA 2014, CDC 2015

An "Epidemic on Wheels"?

- 9.9 million people report driving while using illicit drugs
- Prescription painkillers prescribed and sold have quadrupled since 1999

(SAMHSA 2013, CDC 2015)



What is Impairment?

Continuum from fully awake and alert to unconscious

Ready to go **Unconscious**

What Impairs?

- **Alcohol – Well studied**

- **Drugs – Not so well studied, difficulties in testing/toxicology, different types**
  - Medications (Over the Counter, Prescription)
  - Illicit (Illegal Drugs and Illegal Use of Substances)
  - New Drugs/Synthetics

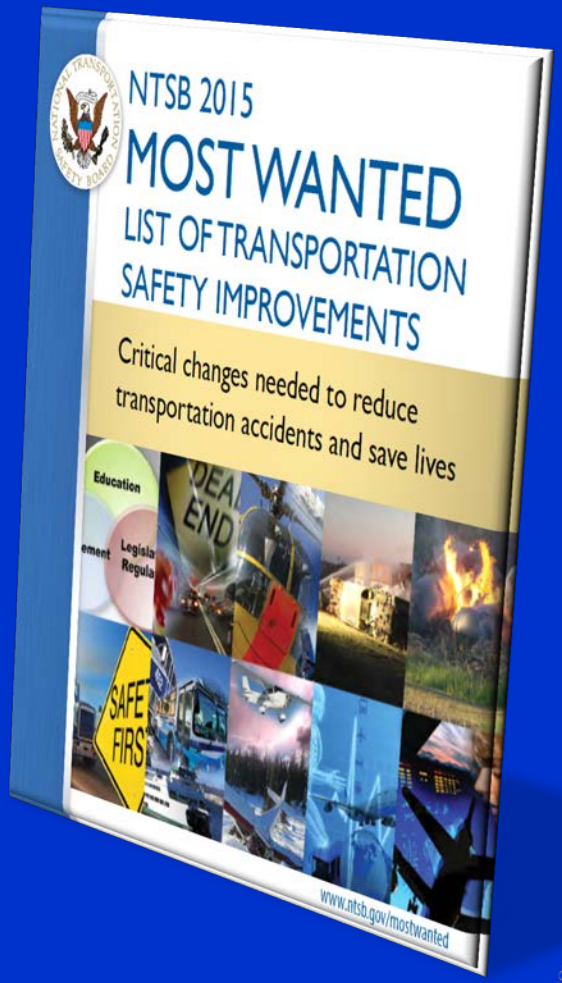
- **Combinations**
  - Drug/Drug
  - Alcohol/Drug

Impairment and the NTSB "Probable Cause"

- Medical condition or drug with potential to cause impairment
- Impaired decision-making or behavior not reasonably predicted by operator's skill and experience
- Associated with accident circumstances

NTSB's Strengths

- Prevention through Post-Crash Investigations (and Safety Recommendations)
- Early Awareness
- Agility
- Front lines
- Independence

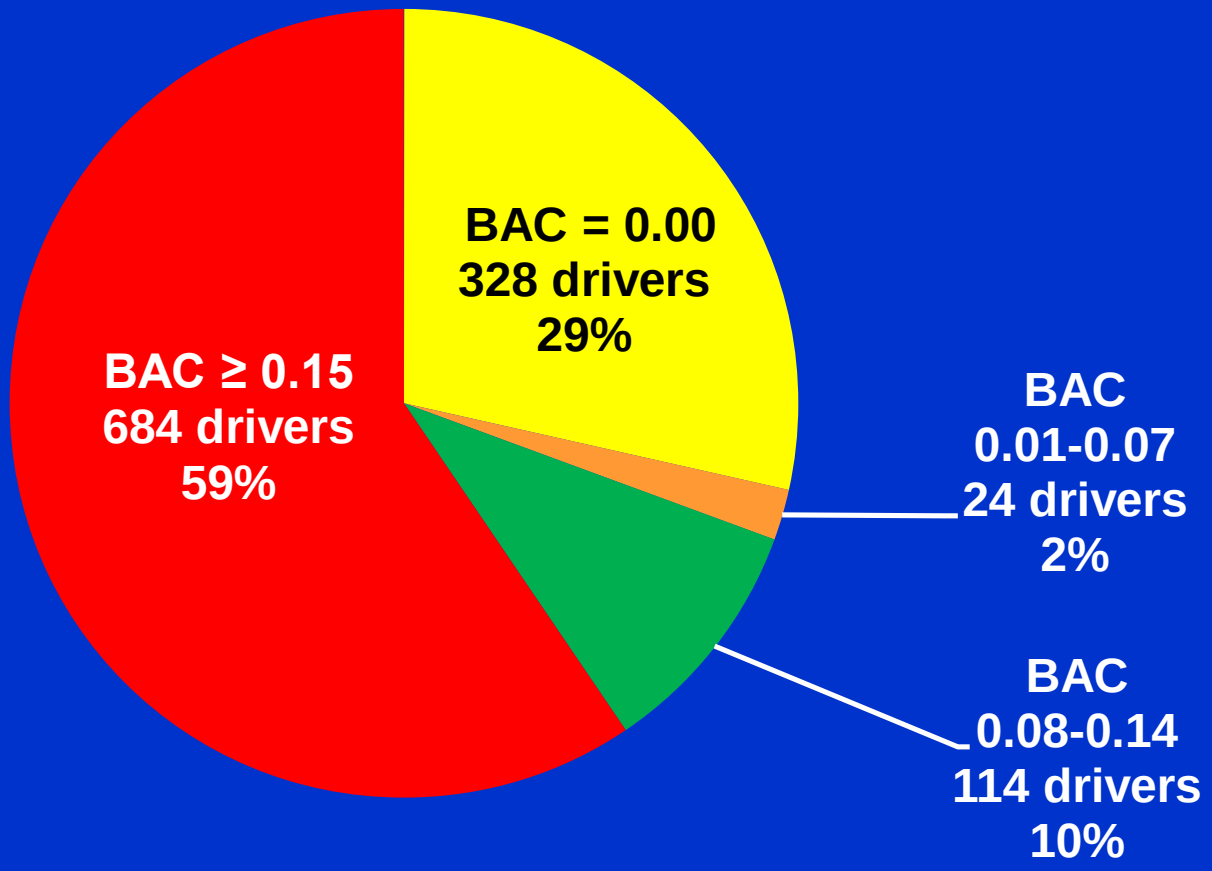


NTSB Recommendations

- Often an “early warning” system to raise awareness of an issue
- 1968: First Recommendation on Alcohol (H-68-27) – Develop a program designed to produce a sense of individual responsibility in the general public to protect the nation’s highways from drinking drivers…
- But also reflects the evolution in societal thinking from a focus on individual responsibility to including broader approaches such as reducing access and policy changes

Wrong Way Driving
NTSB Special Investigative Report
December 11, 2012

BAC of wrong-way drivers in FARS 2004-2009



N=1566 wrong-way drivers

Fountain, Colorado (2011)

Arlington, Texas (2011)

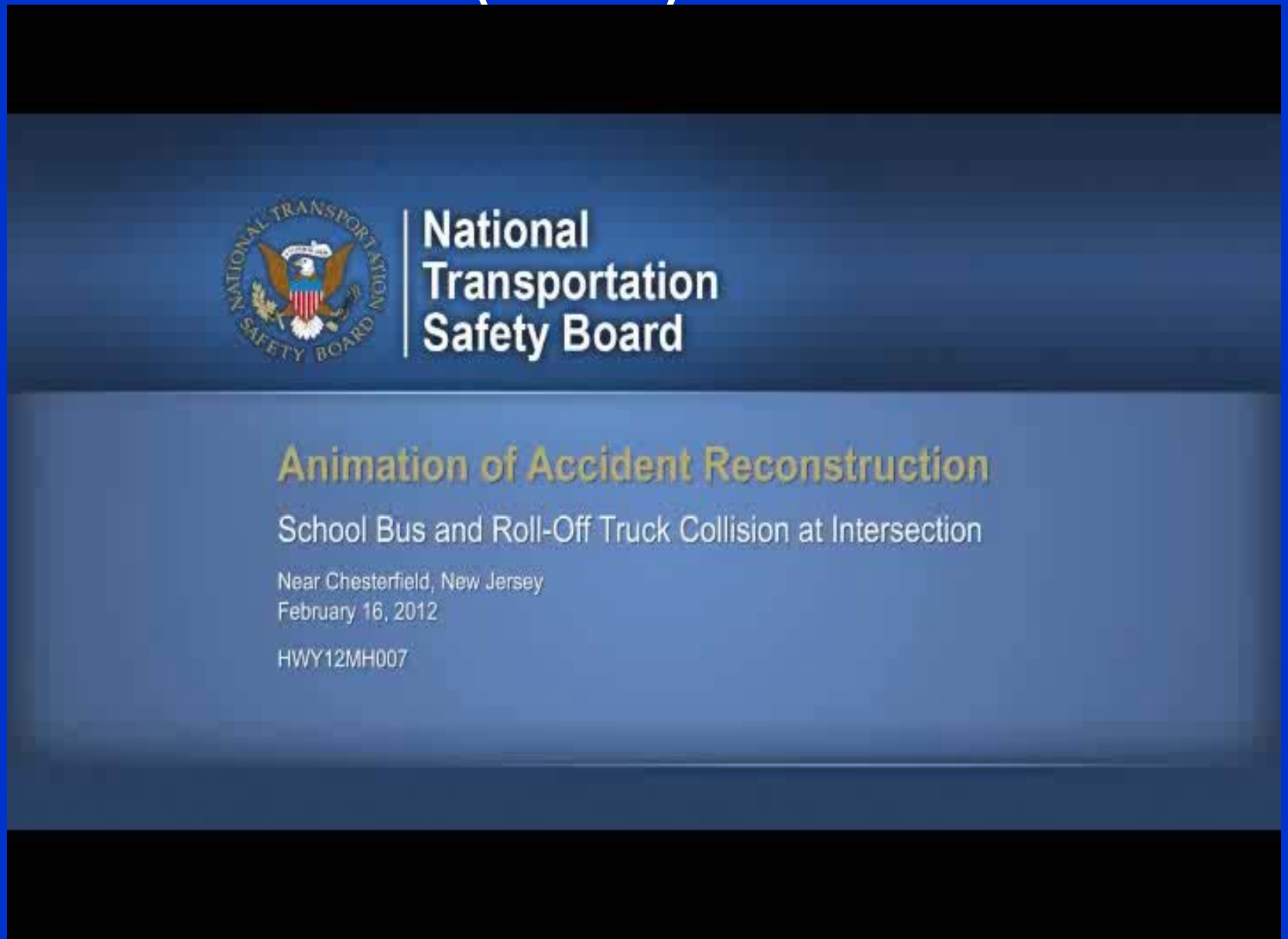
Recommendations

All offender alcohol ignition interlock laws

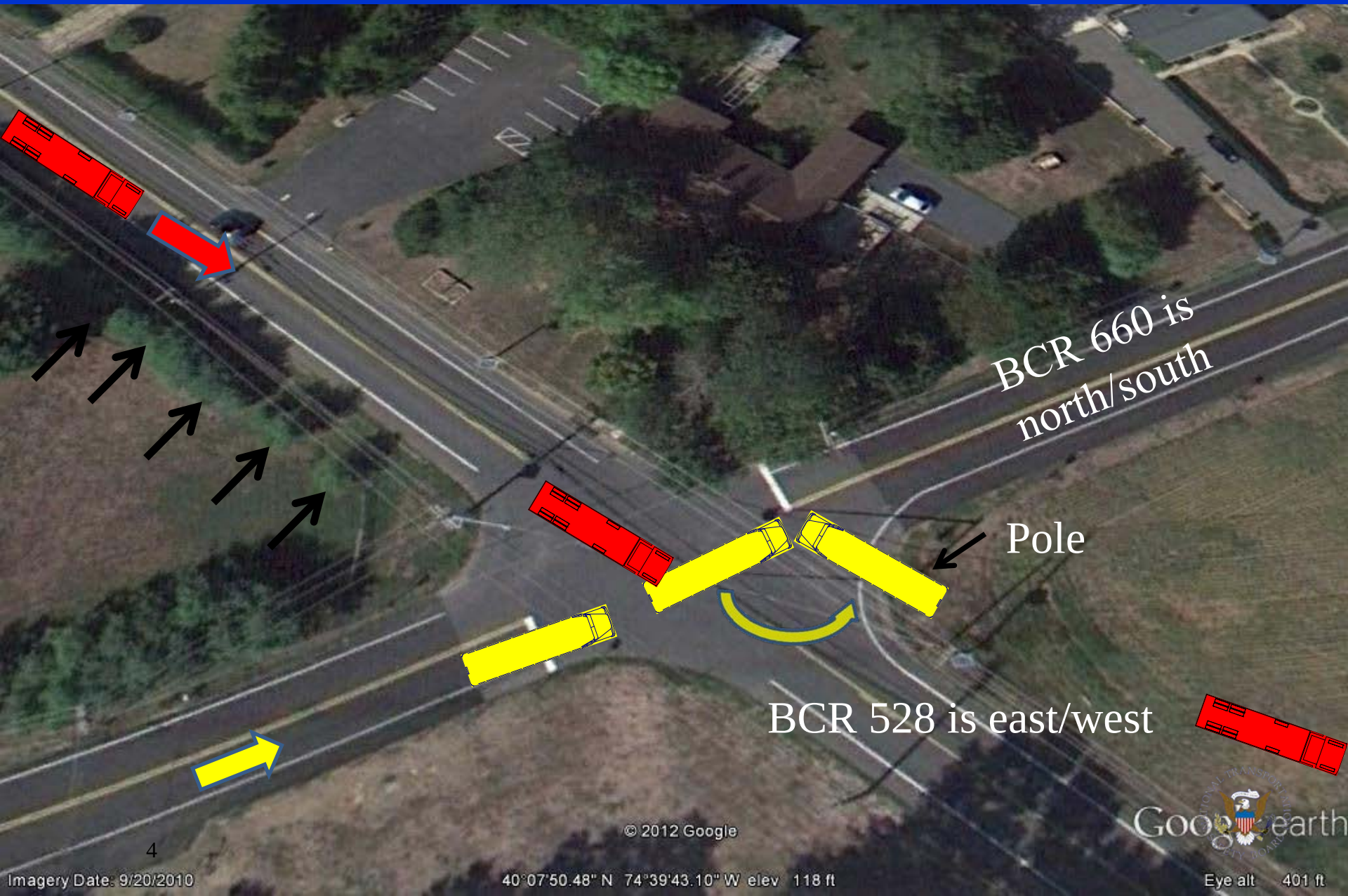
Source: www.dui-usa.drinkdriving.org

Accelerate DADSS implementation

Chesterfield School Bus and Truck Collision (2012) - Animation



Chesterfield School Bus and Truck Collision (2012)



Bus Driver

- Sleep
  - < 5 hours
  - Below human norm (7-9 hours)
  - Chronic partial sleep restriction
- Chronic pain
- Alcohol use
- Combination of 3 sedating medications
  - Clonazepam (anti-anxiety)
  - Desvenlafaxine (anti-depressant)
  - Tramadol (pain reliever)

CDL Medical Exam Process

- Did Report:
  - Heart Disease & medication
  - Heart surgery
  - Digestive problems & medication
  - Depression & medication
  - Spinal injury/disease
  - Regular alcohol use
- Did NOT Report:
  - Chronic low back pain
  - Alcoholism/alcohol abuse
  - Tramadol
  - Oxycodone

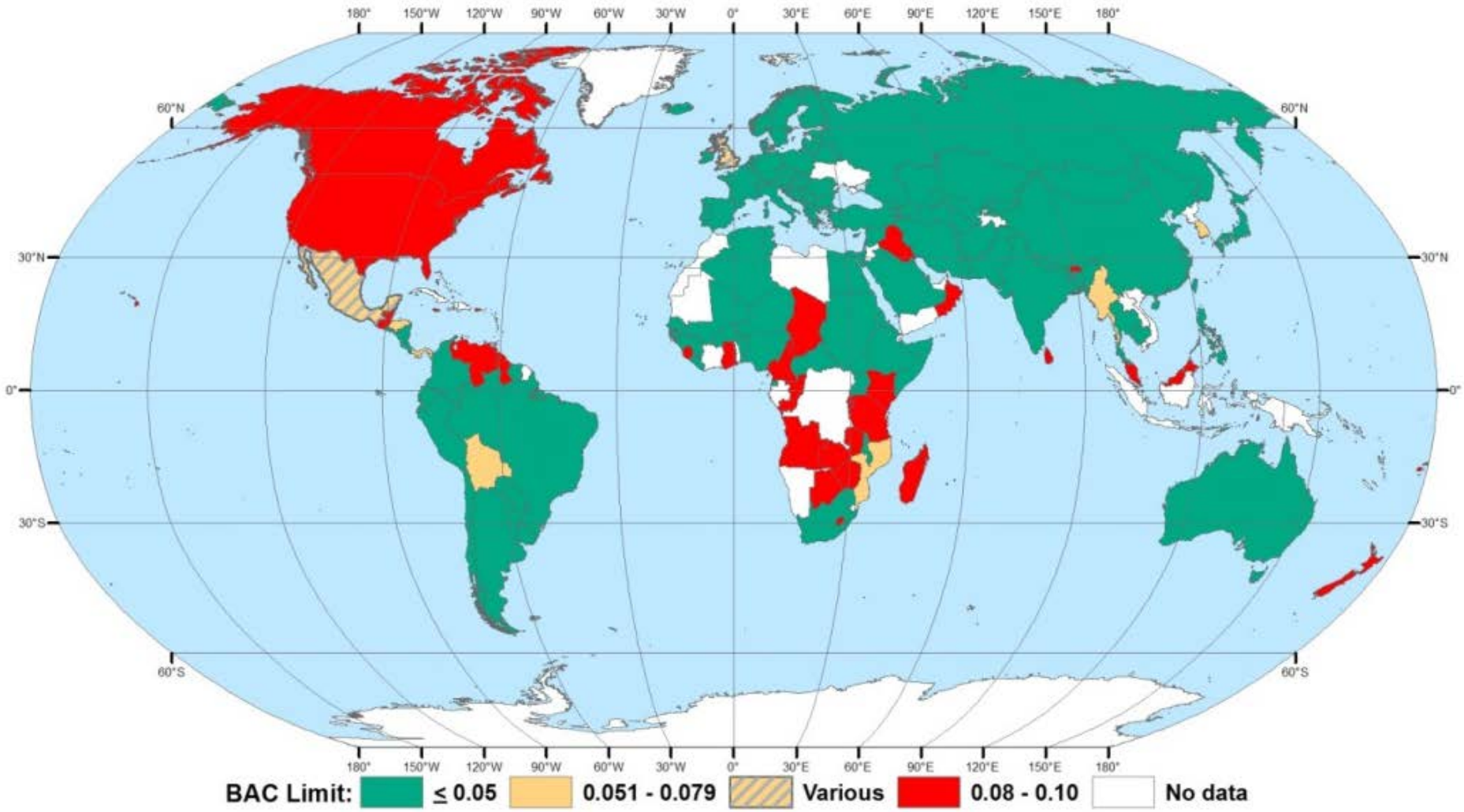
Probable Cause

- Failure to observe truck
  - Fatigue from sleep debt and poor sleep quality
  - Sedative side effects from prescription medications
  - Other contributing factors

NTSB *Reaching Zero* Report

- Reducing the per se BAC limit for all drivers – 0.05
- Conducting high-vis enforcement of impaired driving laws and incorporating passive alcohol sensing technology into enforcement efforts
- Expanding the use of in-vehicle devices to prevent operation by an impaired driver
- Using DWI courts and other programs to reduce recidivism by repeat DWI offenders
- Establishing measurable goals for reducing impaired driving and tracking progress toward those goals.

NTSB Recommendation on .05 BAC



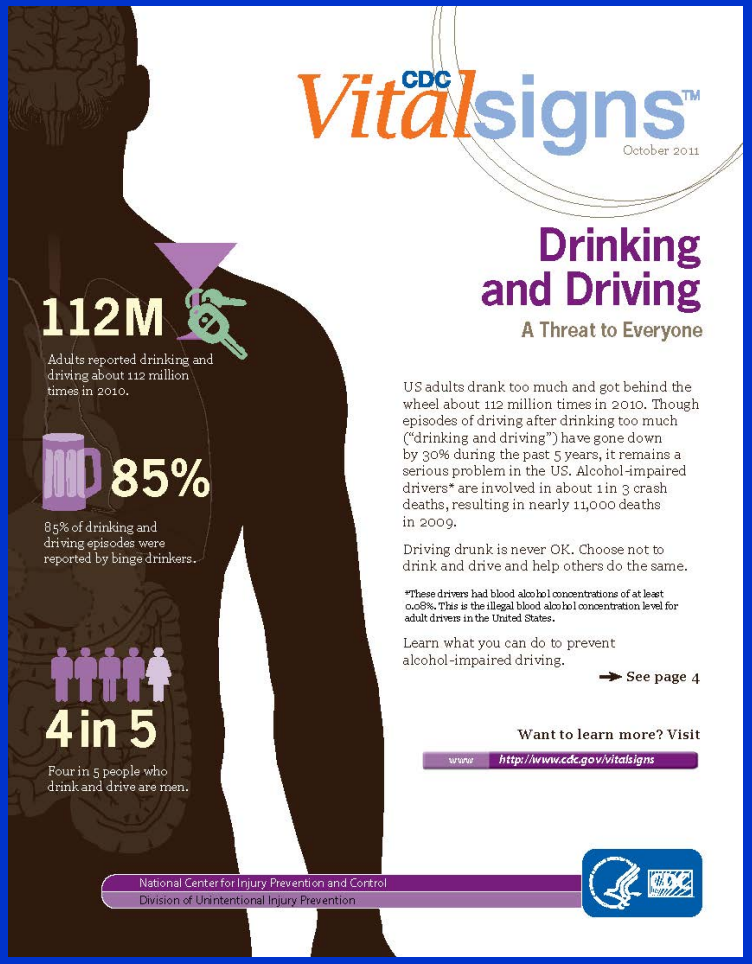
Map of BAC limits worldwide showing most countries at .05 BAC or below.

Interventions (Misuse)

	Substances Intentionally taken primarily for psychoactive effects	Medications Taken to treat/address some medical condition
Medications	Limit access Improved access to treatment Better Data	Improved warnings/more specific information Appropriate prescriptions Better Data
Illicit drugs	Enforcement, limit access Improved access to treatment Better Data	NA
Other substances (Glue, "spice", etc)	Improved education Enforcement, limit access Improved access to treatment	NA
Combinations (drug/drug, drug/alcohol)	?	?

CHALLENGES

Resources



CDC Vitalsigns™

October 2011

Drinking and Driving

A Threat to Everyone

112M

Adults reported drinking and driving about 112 million times in 2010.

85%

85% of drinking and driving episodes were reported by binge drinkers.

4 in 5

Four in 5 people who drink and drive are men.

US adults drank too much and got behind the wheel about 112 million times in 2010. Though episodes of driving after drinking too much ("drinking and driving") have gone down by 30% during the past 5 years, it remains a serious problem in the US. Alcohol-impaired drivers* are involved in about 1 in 3 crash deaths, resulting in nearly 11,000 deaths in 2009.

Driving drunk is never OK. Choose not to drink and drive and help others do the same.

*These drivers had blood alcohol concentrations of at least 0.08%. This is the illegal blood alcohol concentration level for adult drivers in the United States.

Learn what you can do to prevent alcohol-impaired driving.

→ See page 4

Want to learn more? Visit

www http://www.cdc.gov/vitalsigns

National Center for Injury Prevention and Control
Division of Unintentional Injury Prevention

www.ntsb.gov
www.cdc.gov
www.thecommunityguide.org
www.samhsa.gov
www.niaaa.nih.gov
www.nsc.org
and others…

THANK YOU