COUNTERMEASURES FOR REDUCING ALCOHOL IMPAIRED DRIVING FATALITIES

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EARLY HISTORY OF ALCOHOL-IMPAIRED DRIVING IN THE U.S.

- 1899 – First recorded motor vehicle fatality
- 1904 - First editorial on drinking and driving
- 1910 – First DWI Law enacted in NY
- 1914 – Widmark (Sweden) correlates alcohol in bodily fluids and impairment
- 1919 – Prohibition
- 1932 – Widmark establishes impairment based upon BAC
- 1933 – Prohibition repealed
- 1934 – Heise publishes research on effects of alcohol on driving
- 1936 – Norway adopts first illegal per se law based upon BAC at .05 g/dL

RECENT HISTORY OF ALCOHOL-IMPAIRED DRIVING IN THE U.S.

- 1982- Presidential Commission Against Drunk Driving established
- 1984 – Minimum Drinking Age (MDA) 21 Law adopted by Congress
- 1990 – U.S. Supreme Court approves of sobriety checkpoints
- 1995 – Zero Tolerance Law for drivers under 21 adopted
- 2000 - .08 BAC National standard adopted by Congress

CURRENT HISTORY OF ALCOHOL-IMPAIRED DRIVING IN THE U.S.

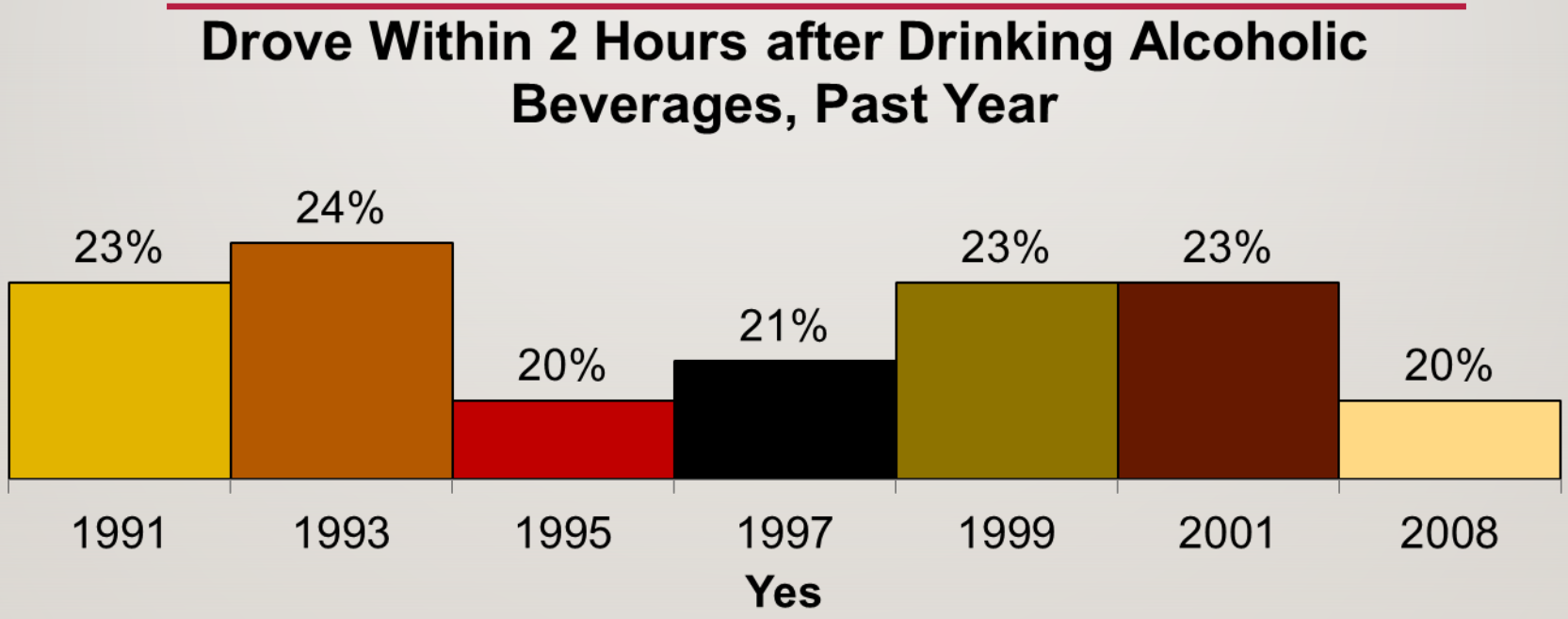
- 2005 – NM adopts Mandated Interlocks for all convicted DWI offenders
- 2006 – SAFETEA-LU Reauthorization
- 2006 – STOP ACT Legislation
- 2006 – MADD Campaign to Eliminate Drunk Driving
- 2008 – DADSS Research Funding Initiated
- 2012 – Moving Ahead for Progress in the 21st Century (MAP-21) reauthorization
- 2015 – Flexible Affordable Safe Transportation FAST Act (continued through 2020)
- 2021 – Infrastructure Investment and Jobs Act (IIJA)

IMPAIRED DRIVING PROBLEM IN AMERICA

WHAT DO PEOPLE SAY ABOUT DRINKING AND DRIVING?

NATIONAL SURVEY OF DRINKING & DRIVING-2008

[MOULTON ET AL., 2010, DOT HS 811 343]

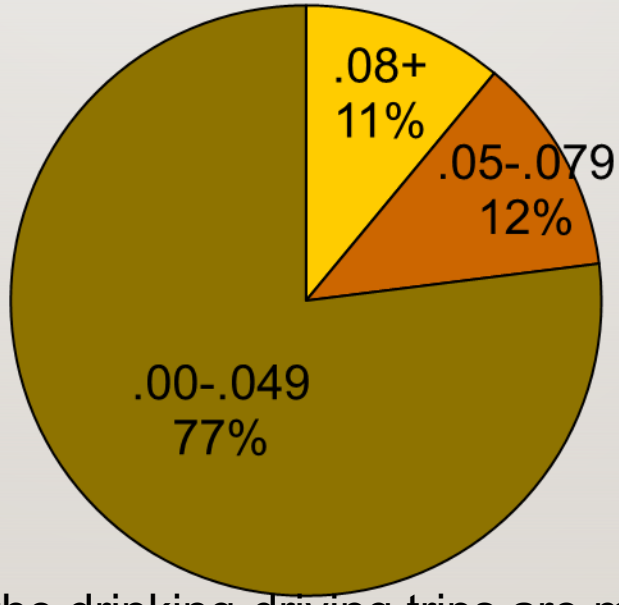


Q33: In the past 12 months, have you ever driven a motor vehicle within two hours after Drinking alcoholic beverages? [Base: all respondents age 16-64; 1999 n=2406, 1993 [N=3590, n=3471, 1997 n=3358, 1999 n=4264, 2001 n=5073]

NATIONAL SURVEY OF DRINKING & DRIVING-2001

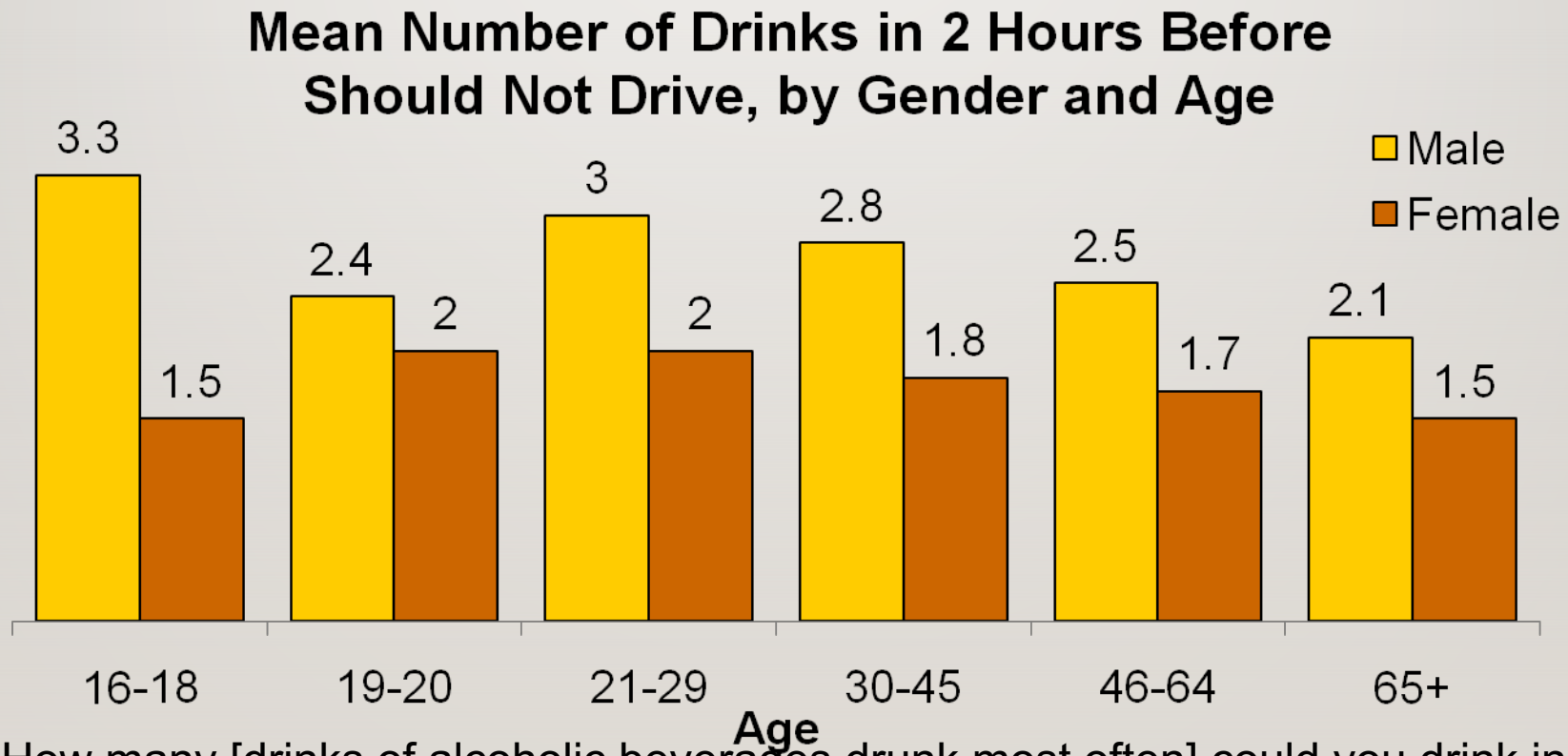
[THE GALLUP ORGANIZATION, MARCH 2003, DOT HS 809 549]

Percent of all Drinking-Driving Trips by Calculating Estimate of BAC



While the vast majority (77%) of the drinking-driving trips are made by drivers with BAC levels below .05, about one in ten (11%), or nearly 94 million trips are made by a driver with a BAC of .08 or higher.

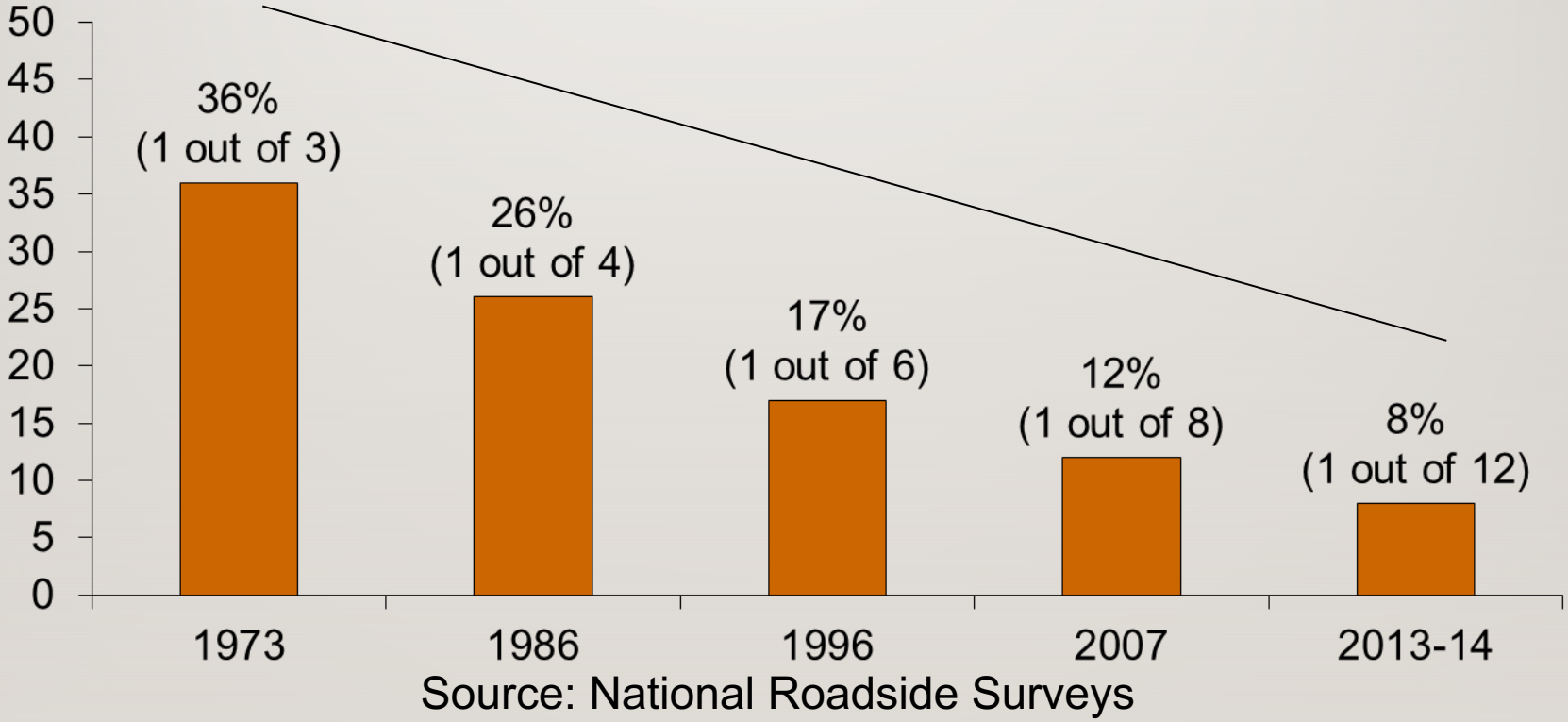
NATIONAL SURVEY OF DRINKING & DRIVING- 2001



Q31: How many [drinks of alcoholic beverages drunk most often] could you drink in two hours before you should not drive? [Base: drivers who drink**]

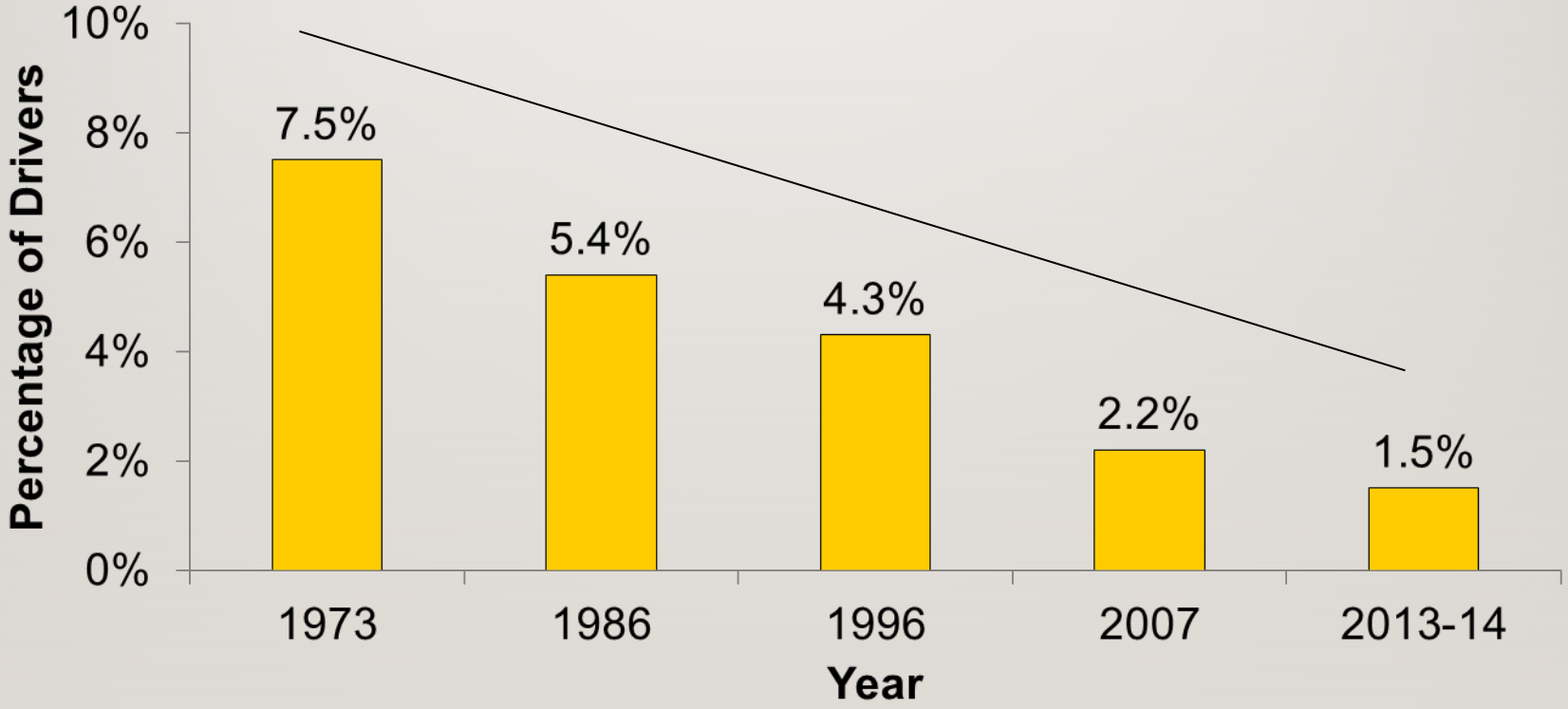
WHAT PERCENT OF DRIVERS ON US ROADS ARE DRINKING AND/OR HAVE OTHER DRUGS?

PERCENT OF DRIVERS ON THE ROAD WITH POSITIVE BAC LEVELS (BAC ≥ .01) (WEEKEND EVENINGS)



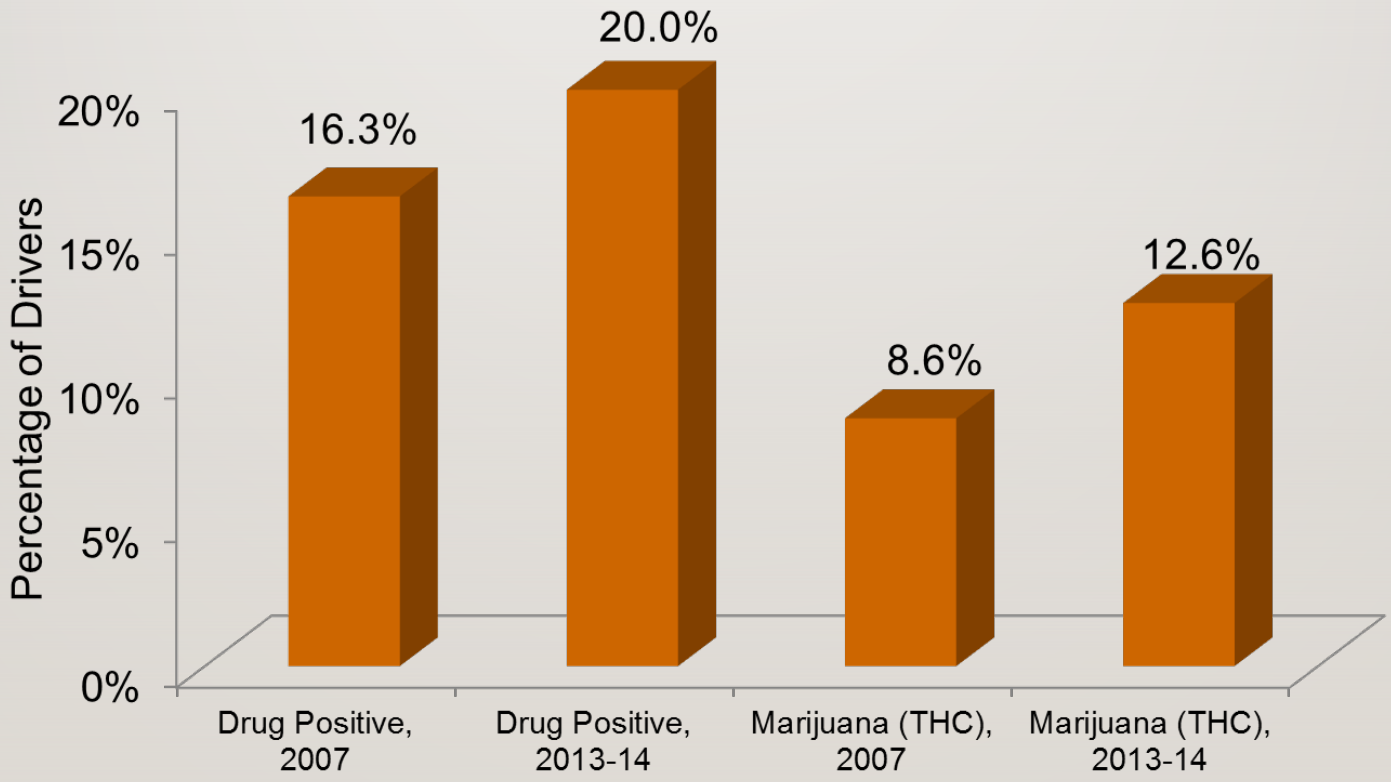
Source: National Roadside Surveys

PERCENTAGE OF WEEKEND NIGHTTIME DRIVERS WITH BACS ≥ 0.08 G/DL* IN THE FIVE NATIONAL ROADSIDE SURVEYS



*During the period from 1973 through 1996, the States had BAC limits that ranged from 0.08 to 0.15 g/dL

PERCENTAGE OF DRIVERS ON U.S. ROADS IN 2007 AND 2013-14 WITH DRUGS OTHER THAN ALCOHOL (ORAL FLUID AND BLOOD)



CURRENT IMPAIRED DRIVING PROBLEM IN THE UNITED STATES

- Over 10,000 killed in crashes involving intoxicated drivers (BACs≥.08 g/dL) each year.
- Over 300,000 people injured in drinking driving crashes.
- Over $129.7 billion in annual costs to society.
- Less than 1,000,000 drivers arrested annually for DWI or DUI (646,607 in 2020).

ALCOHOL-IMPAIRED DRIVING FATALITIES

Alcohol-Impaired driving fatalities occur in crashes where at least one driver has a BAC equal to or greater than the illegal per se limit in every State (.08 g/dL). There were **10,142 (28%) people killed in 2019** in alcohol-impaired driving crashes out of a total of **36,096** traffic fatalities.

Source: Overview of Motor Vehicle Crashes in 2020. NHTSA (March 2022). DOT HS 813-266

ALCOHOL-IMPAIRED DRIVING FATALITIES

In **2020**, there were **11,654 (30%)** people killed in alcohol impaired driving crashes out of **38,824** traffic fatalities. There is another increase in 2021.

In **2021**, there were **42,915** total fatalities, an increase of **10.5%**. The alcohol impaired fatalities are not yet available from NHTSA, but if it remained steady at 30%, then there were **12,875** killed in alcohol impaired fatal crashes.

Sources: NHTSA: Overview of Motor Vehicle Crashes in 2020. NHTSA (March 2022). DOT HS 813-266

Early estimates of motor vehicle traffic fatalities and fatality rate by sub-categories in 2021 (May 2022) DOT HS 813 298).

ALCOHOL-IMPAIRED DRIVING FATALITIES TEXAS 2020

In **2020**, there were **1,495 (39%)** people killed in alcohol impaired driving crashes out of **3,874** traffic fatalities in **Texas.** [In 2011 it was 40%]

This compares to **179 (27%)** people killed in alcohol-impaired driving crashes out of **652** traffic fatalities in **Oklahoma** in **2020**.

Other alcohol-impaired driving fatality percentages in 2020:

Arizona – 28% **California – 30%** **Montana – 45%**

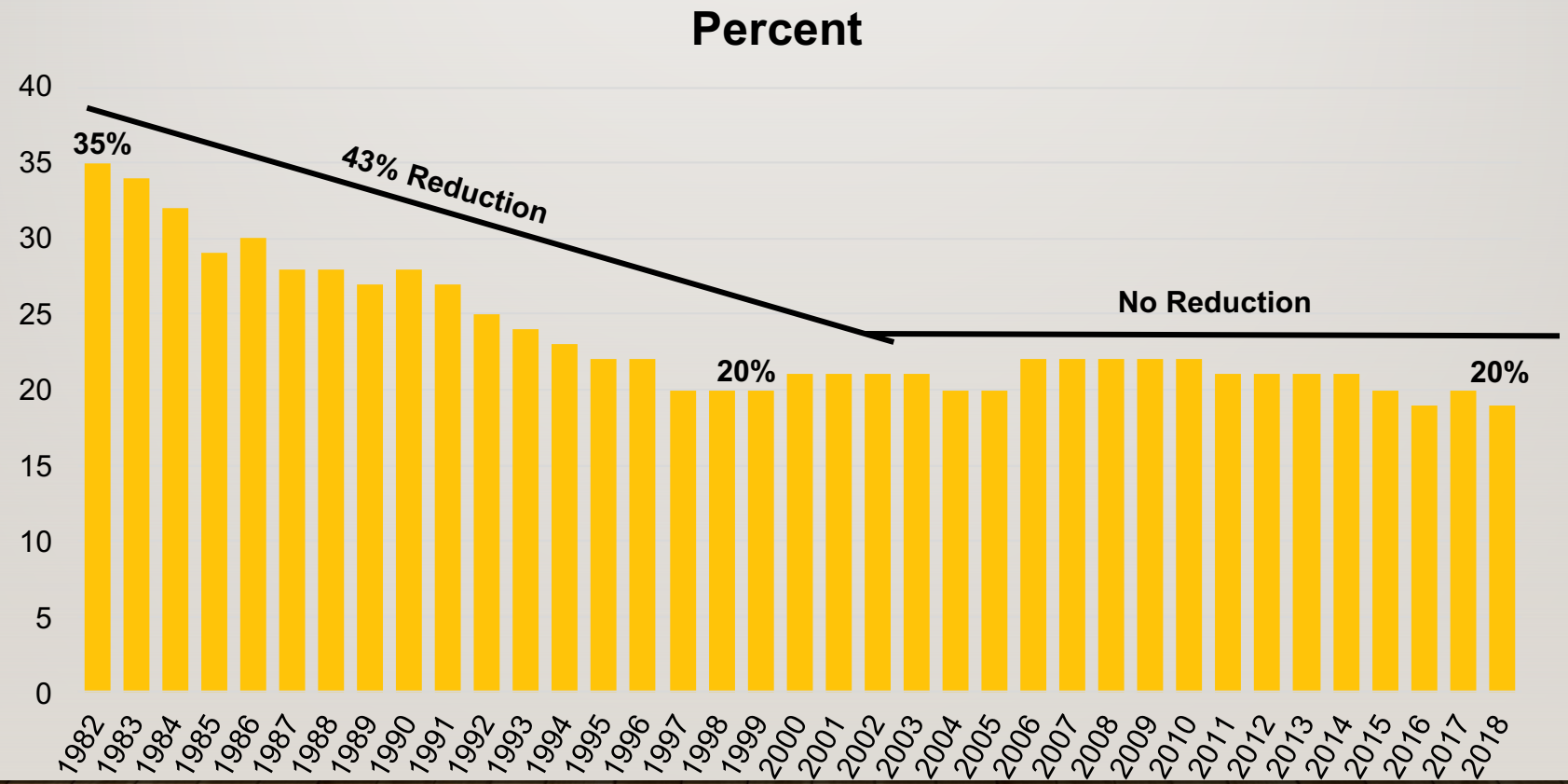
New Mexico – 33% **Louisiana – 28%**

Sources: NHTSA: State Alcohol-Impaired Driving Estimates 2020 Data DOT HS 813 301.

ALCOHOL-IMPAIRED DRIVING FATALITIES
1982-2019 [BAC≥.08]
UNITED STATES

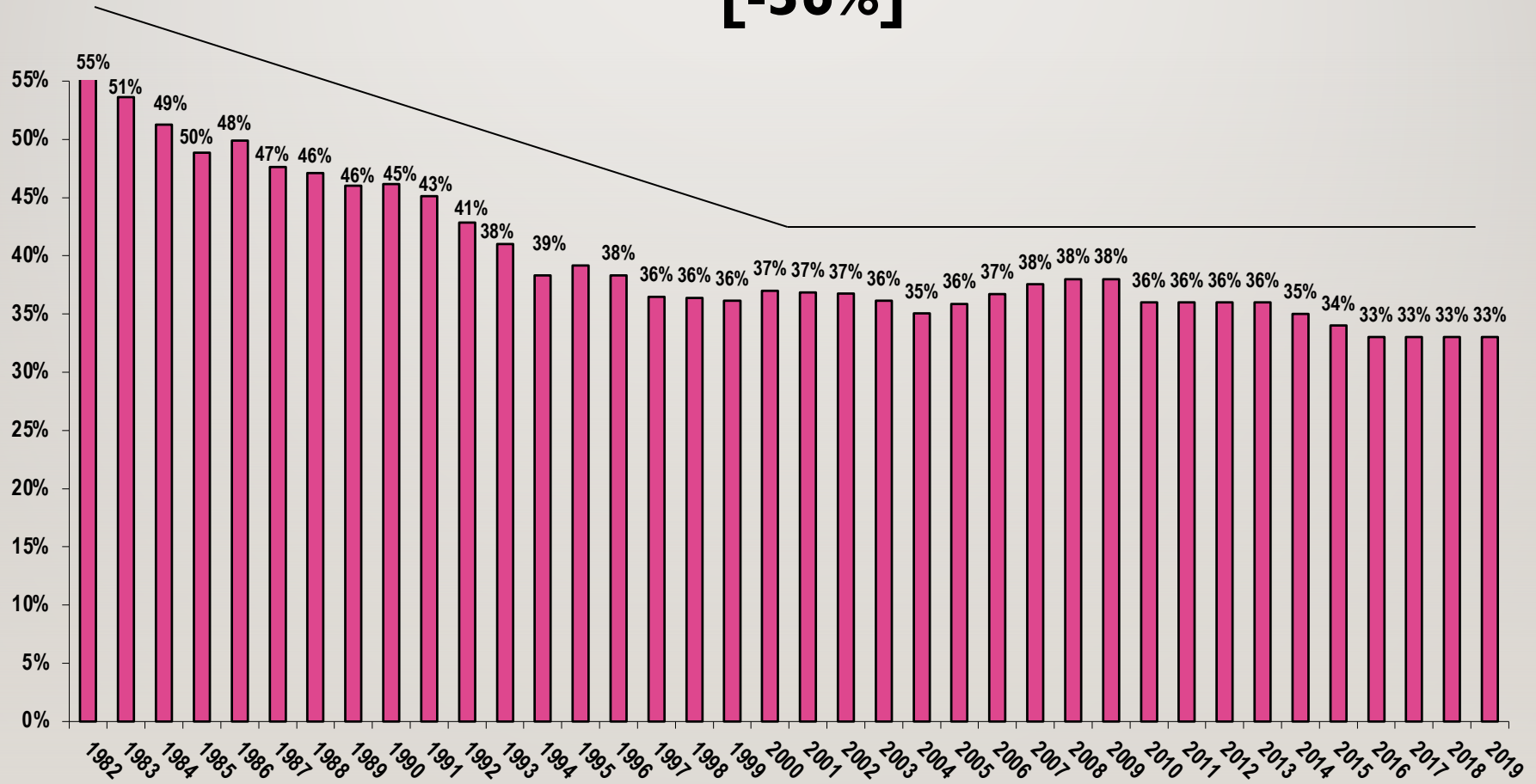
Year	Total Traffic Fatalities	Alcohol-Impaired Fatalities	Percent
1982	43,945	21,113	48
1983	42,589	20,051	47
1984	44,257	19,638	44
1985	43,825	18,125	41
1986	46,087	19,554	42
1987	46,390	18,813	41
1988	47,087	18,611	40
1989	45,582	17,521	38
1990	44,599	17,705	40
1991	41,508	15,827	38
1992	39,250	14,049	36
1993	40,150	13,739	34
1994	40,716	13,390	33
1995	41,817	13,478	32
1996	42,065	13,451	32
1997	42,013	13,757	30
1998	41,501	12,546	30
1999	41,717	12,555	30
2000	41,945	13,324	32
2001	42,196	13,290	31
2002	43,005	13,472	31
2003	42,884	13,096	31
2004	42,836	13,099	31
2005	43,510	13,582	31
2006	42,708	13,491	32
2007	41,059	12,998	32
2008	37,423	11,711	31
2009	33,808	10,839	32
2010	32,885	10,228	31
2011	32,367	9,878	31
2012	32,561	10,322	31
2013	32,719	10,076	31
2014	32,675	9,967	31
2015	35,092	10,265	29
2016	37,461	10,497	28
2017	37,133	10,874	29
2018	36,560	10,511	29
2019	36,096	10,142	28

PROPORTION OF ALL DRIVERS INVOLVED IN FATAL CRASHES ESTIMATED TO HAVE BEEN LEGALLY INTOXICATED (BAC ≥ 0.08 G/DL), 1982-2018, UNITED STATES

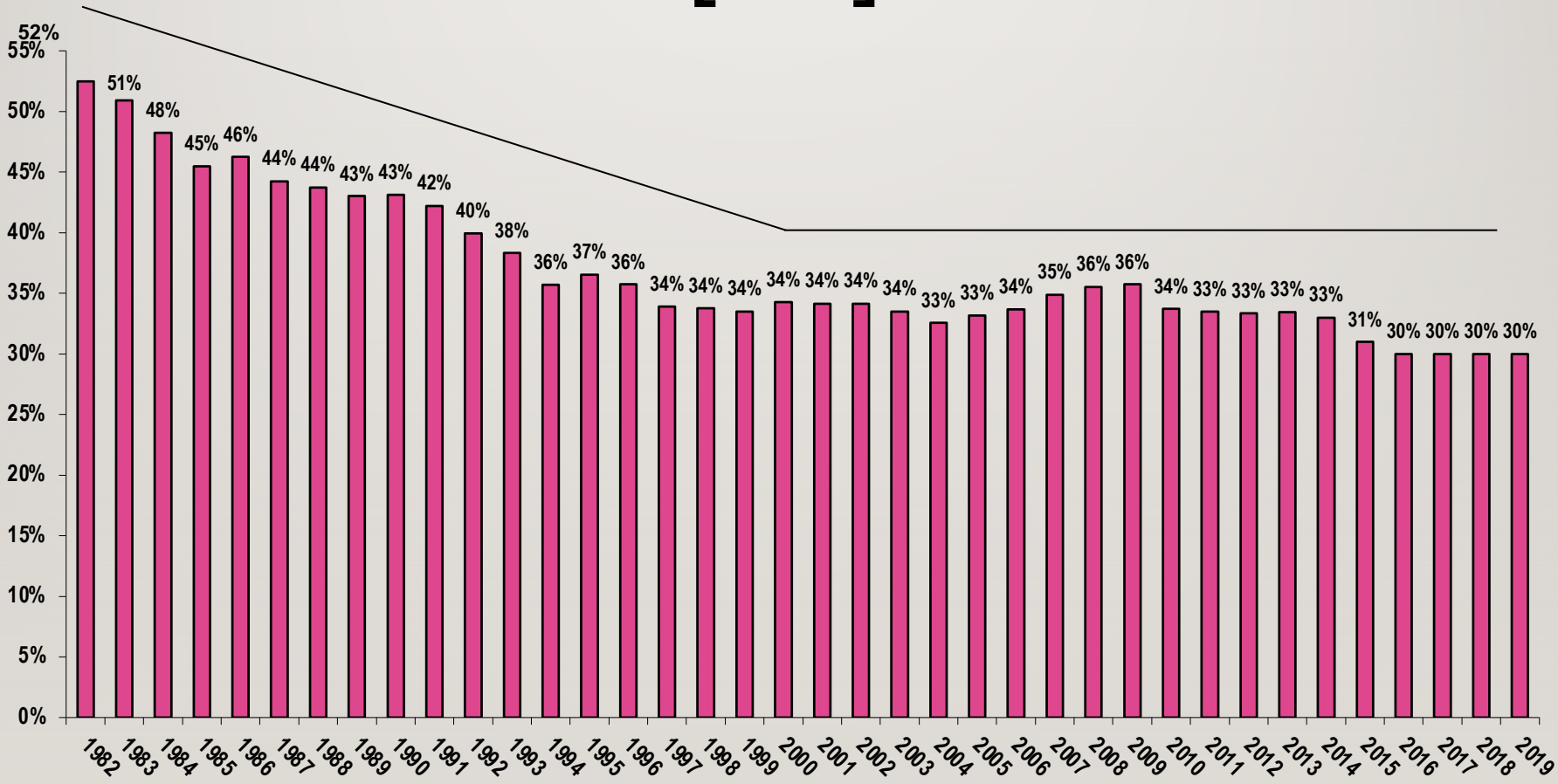


EVERY BAC LEVEL IN FATAL CRASHES SHOW THE SAME PATTERN AND THE SAME TREND

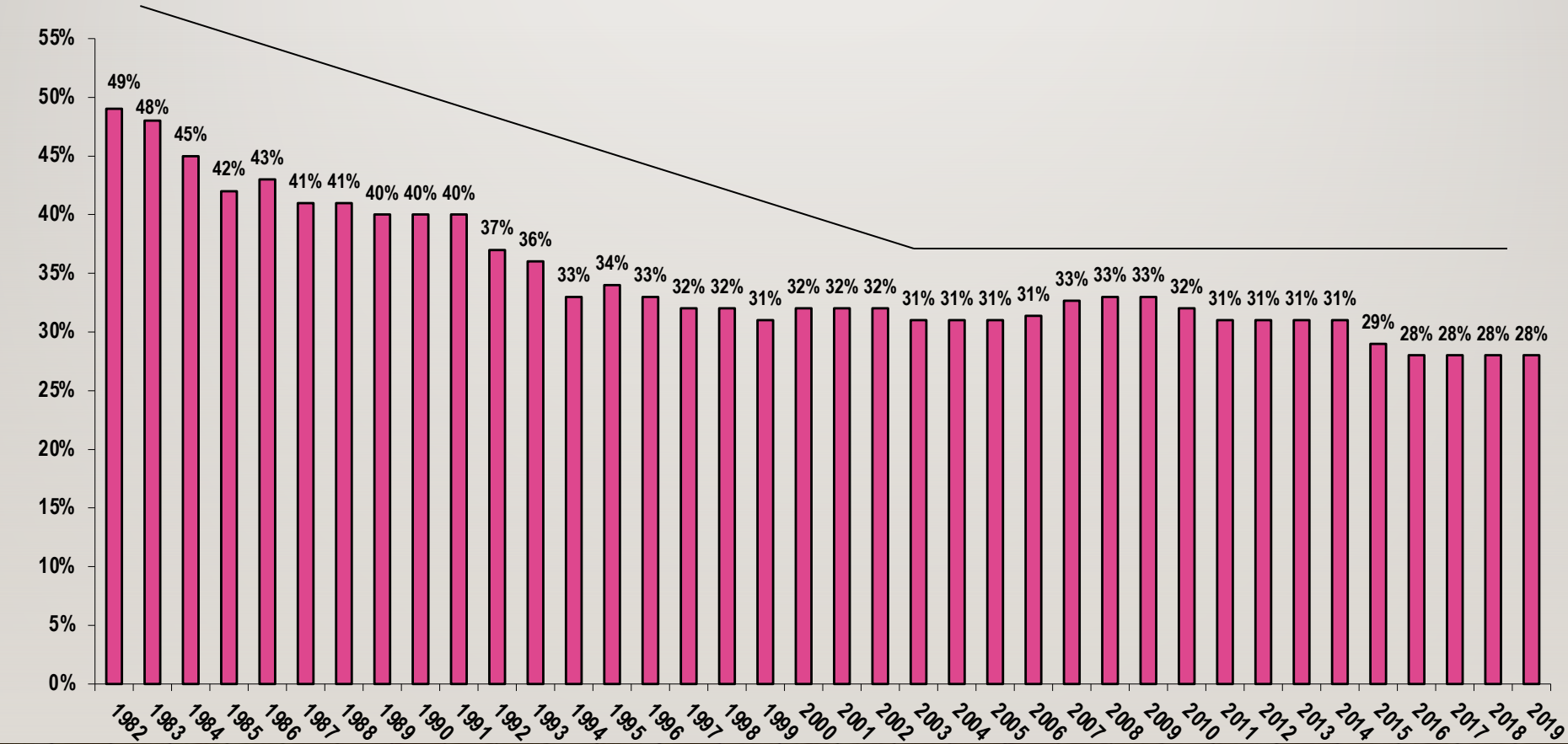
PROPORTION OF ALL *FATALLY* INJURED DRIVERS ESTIMATED TO HAVE SOME ALCOHOL (BAC ≥ .01), 1982-2019 [-36%]



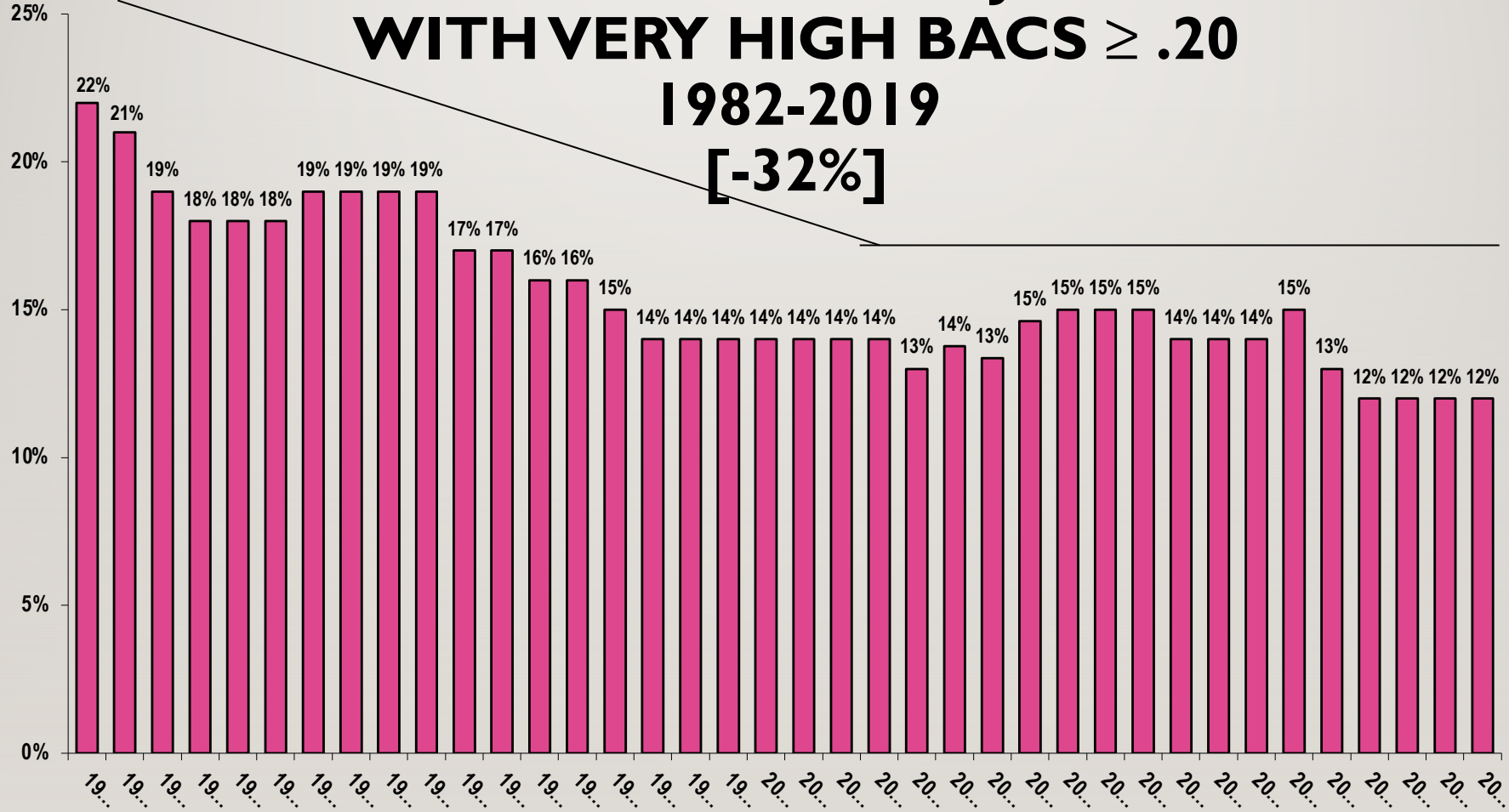
PROPORTION OF ALL *FATALLY* INJURED DRIVERS ESTIMATED TO HAVE IMPAIRING ALCOHOL (BAC ≥ .05), 1982-2019 [-35%]



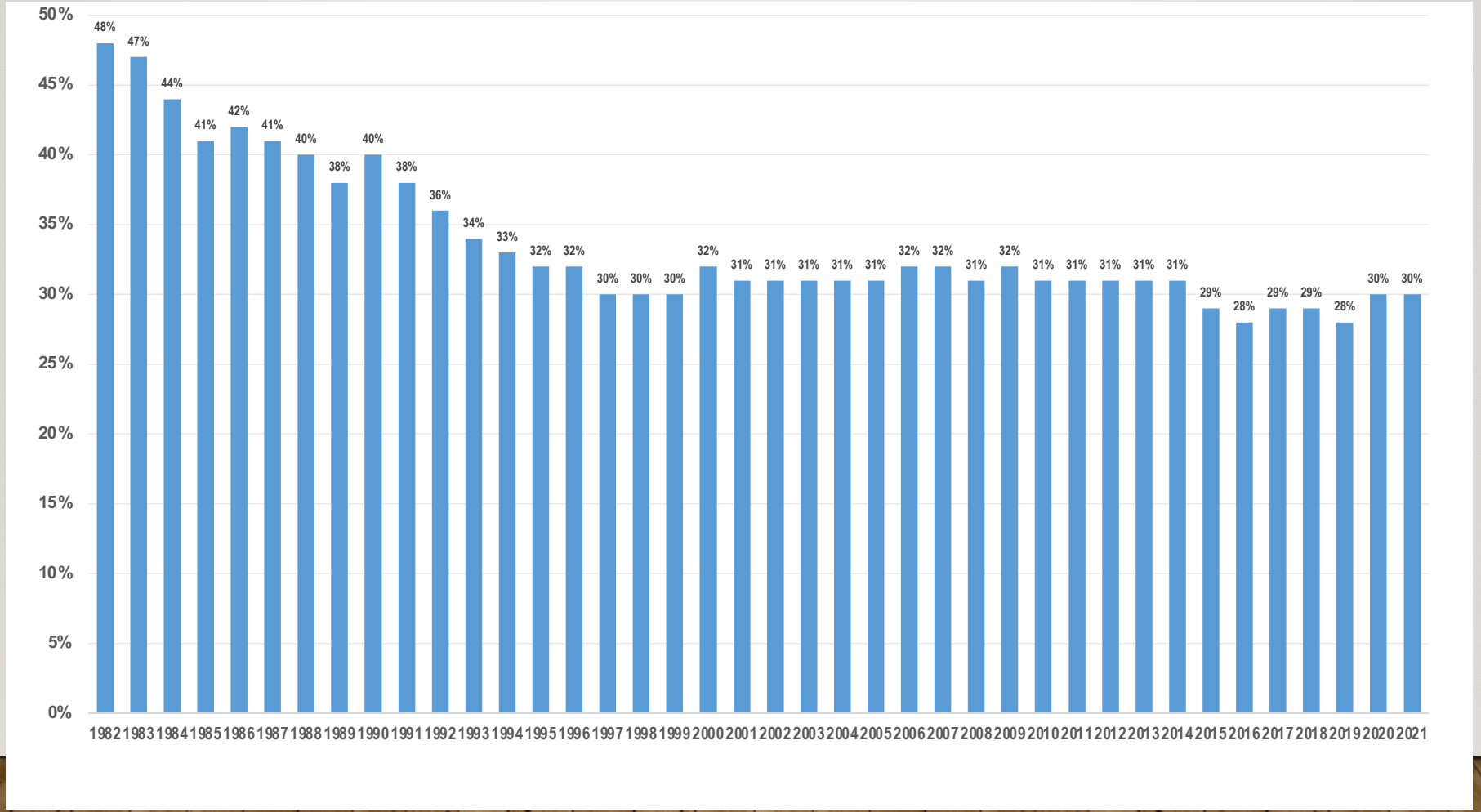
PROPORTION OF ALL *FATALLY* INJURED DRIVERS ESTIMATED TO HAVE BEEN LEGALLY INTOXICATED (BAC ≥ .08), 1982-2019 [-35%]



PROPORTION OF *FATALLY* INJURED DRIVERS WITH VERY HIGH BACS ≥ .20 1982-2019 [-32%]

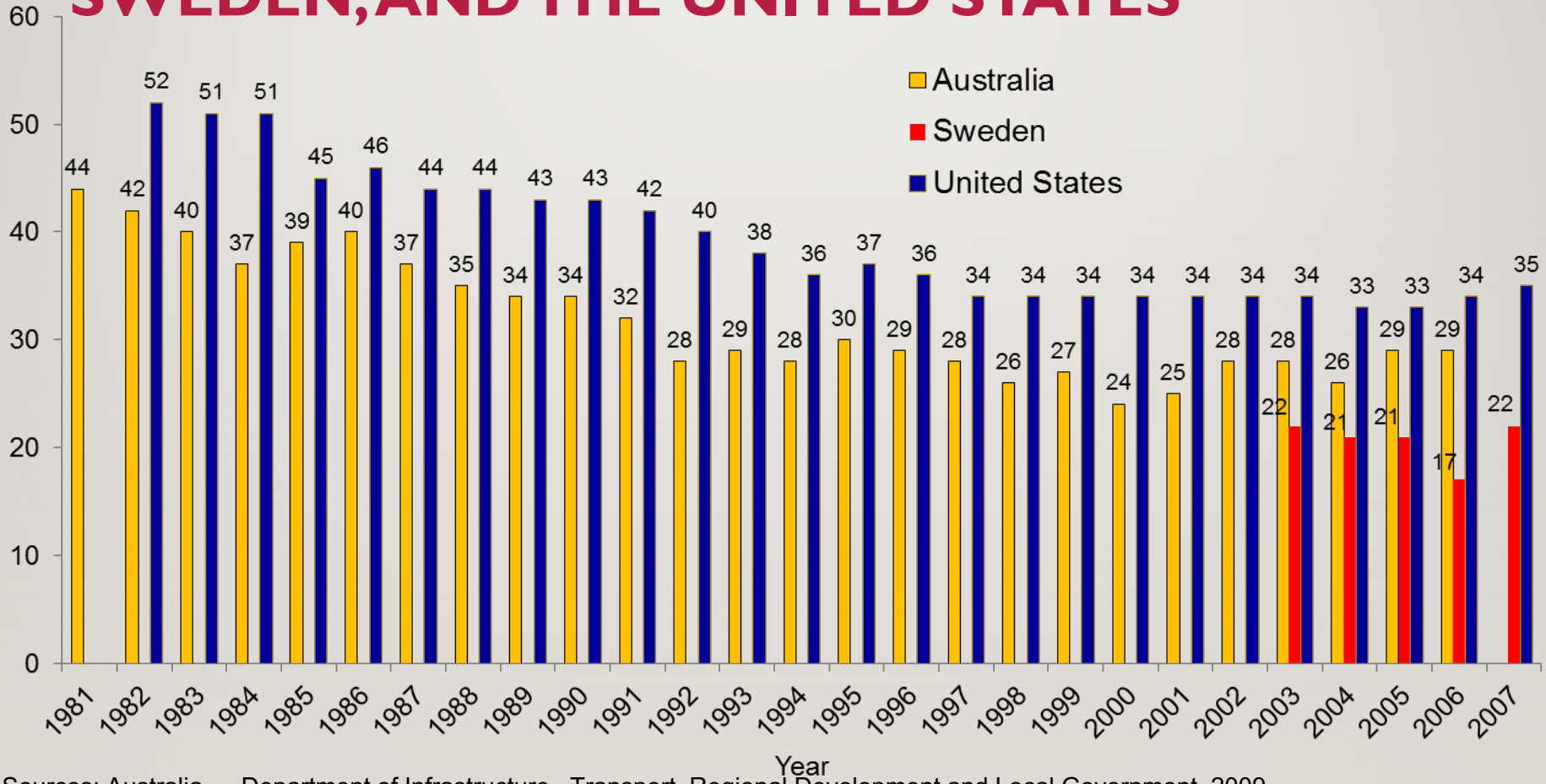


Proportion of Annual Traffic Fatalities Involving an Impaired Driver: 1982-2021 [BAC>.08 g/dL], United States from 48% to 30% (-37%)



OTHER HIGH INCOME COUNTRIES ARE DOING BETTER IN REDUCING IMPAIRED DRIVING

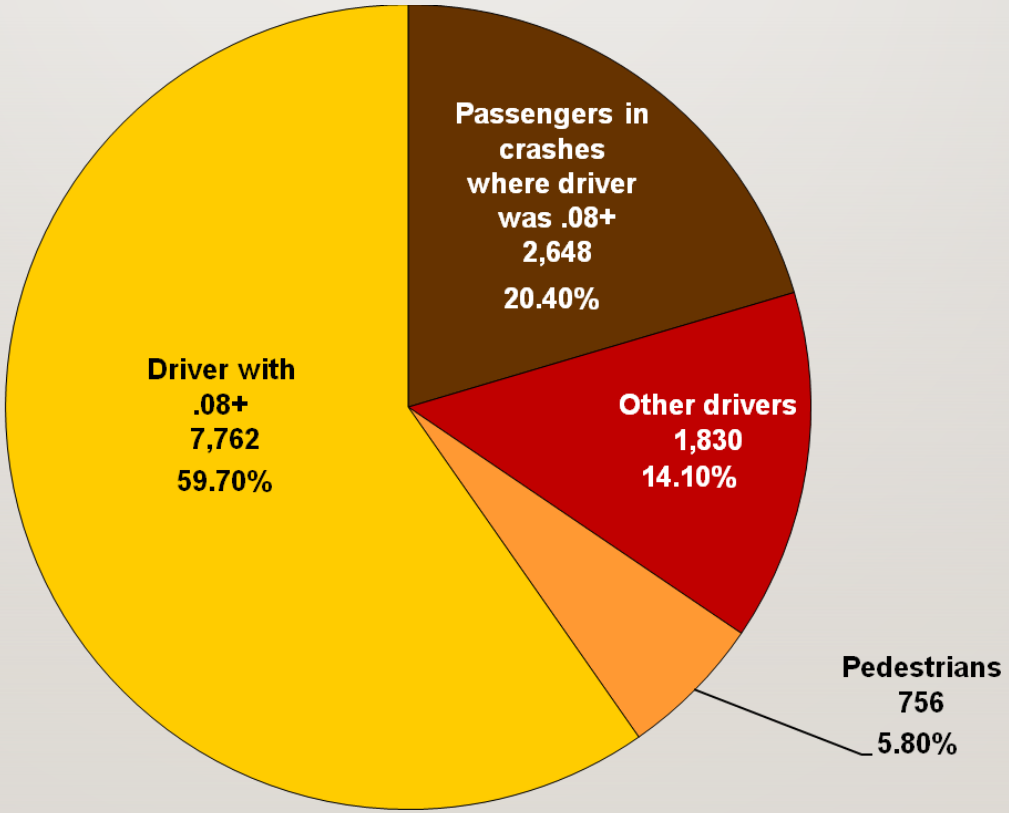
PERCENTAGE OF FATALLY INJURED DRIVERS WITH A BAC OF .05 OR MORE IN AUSTRALIA, SWEDEN, AND THE UNITED STATES



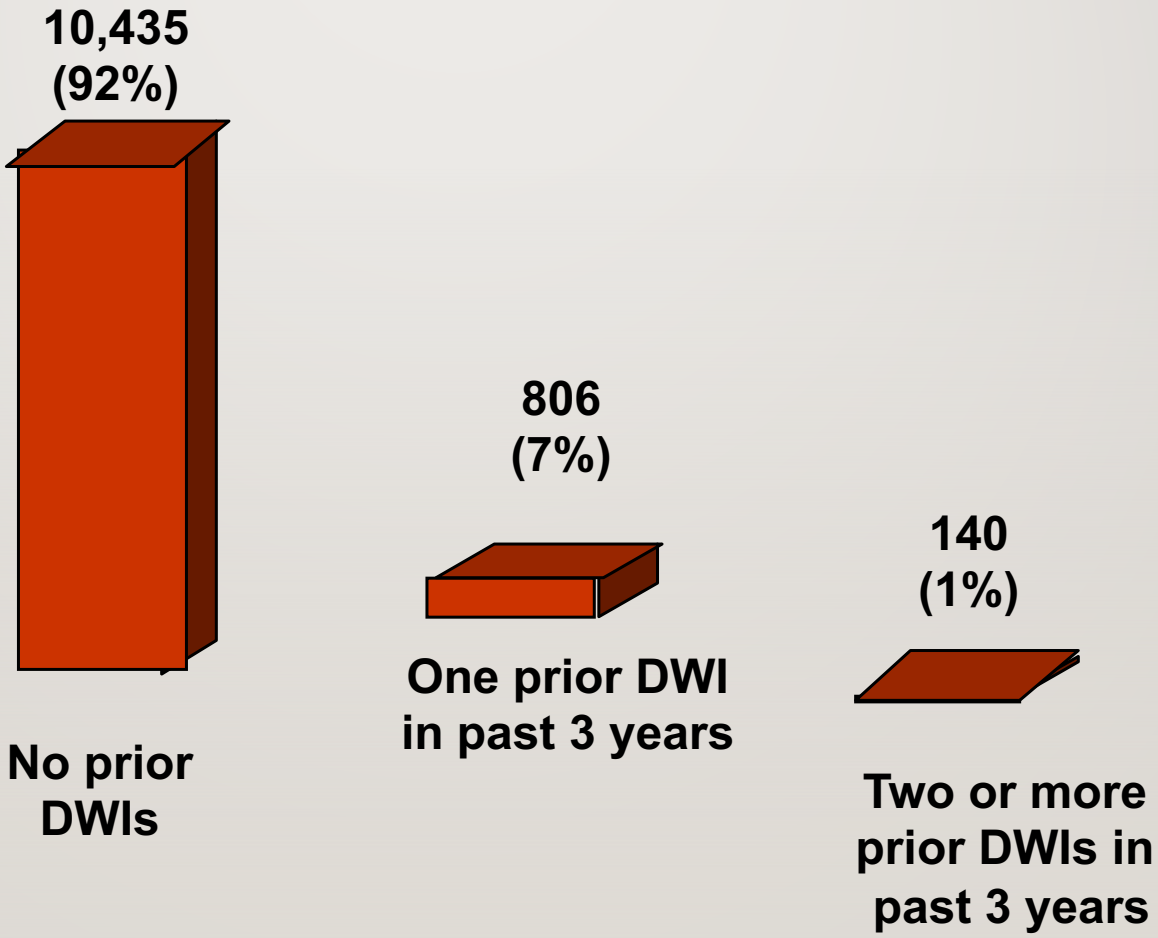
Sources: Australia — Department of Infrastructure, Transport, Regional Development and Local Government, 2009.
United States — Fatality Anaysis Reporting System.
Sweden — Department of Forensic Genetics and Forensic Toxicology, Linköping, Sweden

ALCOHOL IMPAIRED DRIVING FATAL CRASHES

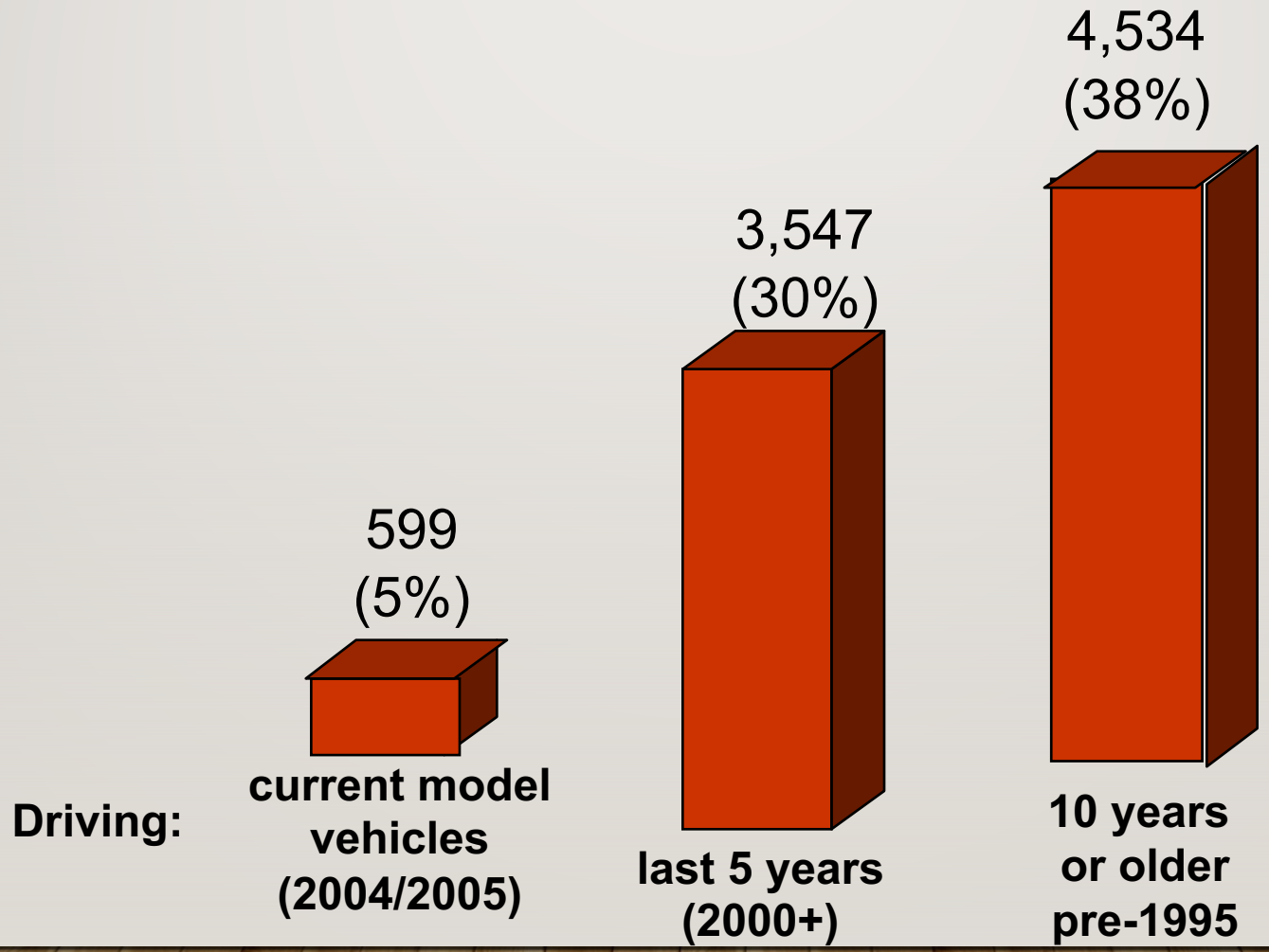
FATALITIES IN CRASHES INVOLVING INTOXICATED DRIVERS (BAC≥.08 G/DL), 2007 (N=13,036)



IMPAIRED DRIVERS (BAC≥.08+) IN FATAL CRASHES: 2004 (N=11,813)



DRUNK DRIVERS (BAC=.08+) IN FATAL CRASHES: 2004 (N=11,813)



ALCOHOL AND DRUG PRESENCE IN SERIOUSLY INJURED DRIVERS: BEFORE AND DURING THE PANDEMIC

	BEFORE COVID-19	DURING COVID-19
ALCOHOL:	21.8%	29.2%
CANNABIS:	20.8%	32.7%
OPIOIDS:	7.5%	13.9%

DWI PREVENTION APPROACHES AND COUNTERMEASURES

IMPAIRED DRIVING PROBLEM: PUBLIC HEALTH APPROACH UNDER THREE HEADINGS

- 1) **Primary prevention**: Reducing/preventing risky drinking and risky driving
- 2) **Secondary prevention**: Reducing/Preventing people from combining drinking and driving
- 3) **Tertiary prevention**: Reducing/Preventing convicted impaired drivers from drinking and driving again

MAIN FACTORS CONTRIBUTING TO DECLINE FROM 1982-1997

- Deterrence, including enforcement practices, administrative license revocation, and lower BAC limits [Secondary Prevention]
- Raising the drinking age to 21 [Primary Prevention]
- Increased public awareness and activism [Primary, Secondary, Tertiary Prevention]
- Reduction in per capita alcohol consumption [Primary Prevention]
- Socioeconomic factors (age of drivers; unemployment rates; recessions; etc.)

PRIMARY PREVENTION

REDUCING RISKY DRINKING AND RISKY DRIVING

PRIMARY PREVENTION: OBJECTIVES

- Limit alcohol availability
- Adopt and enforce alcohol policies
- Reduce driving under high risk conditions

Alcohol Policy Effects on Alcohol-Related Crashes

- Minimum drinking age of 21 reduces underage 21 drinking driver rates in fatal crashes (-16% to -20%).

  (Fell, Fisher, et al., 2009) (O'Malley and Wagenaar, 1991)

- Higher alcohol prices yield lower traffic deaths and cirrhosis mortality. (Cook and Tauchen, 1982)

- 10% increase in price yields a 5% decrease in consumption (Wagenaar, Salois & Komro, 2009)

- Reducing alcohol outlet densities by 20% lowers alcohol-involved crashes by 6%.

  (Gruenewald et al., 1996)

Other than illegal to possess and illegal to purchase alcohol if you are under age 21, what other MLDA-21 laws are there in the States?

20 KEY COMPONENTS OF UNDERAGE DRINKING LAWS IN THE UNITED STATES

MLDA 21 Law Components	# States with Law
CORE LAWS:	
• Apply to Youth	
• **Possession**	**51**
• **Purchase/attempt to purchase**	**48**
EXPANDED LAWS:	
• Apply to Youth	
• Consumption	35
• Internal possession	9
• **Use and lose driving privileges**	**40**
• Use of fake ID illegal	51
• Apply to Youth Driving	
• **Zero tolerance**	**51**
• GDL with night restrictions	51

20 KEY COMPONENTS OF UNDERAGE DRINKING LAWS IN THE UNITED STATES

MLDA 21 Law Components	# States with Law
• Apply to Providers	
• Furnishing/selling	51
• Age 21 for on-premises Server (all 3 beverage types)	13
• **Age 21 for on-premises Bartender (all 3 beverage types)**	**24**
• Age 21 for off-premises Seller	23
• Keg registration	31
• **Beverage Service Training**	**38**
• **Retail Support Provisions for Fake ID**	**45**
• Hosting underage drinking parties	28
• **Dram Shop Liability**	**45**
• **Social Host Civil Liability**	**33**

20 KEY COMPONENTS OF UNDERAGE DRINKING LAWS IN THE UNITED STATES

MLDA 21 Law Components	# States with Law
• Apply to Manufacturers of Fake ID	
• Transfer/production of Fake ID illegal	24
• Apply to State	
• State control of alcohol (at least 1 beverage)	11

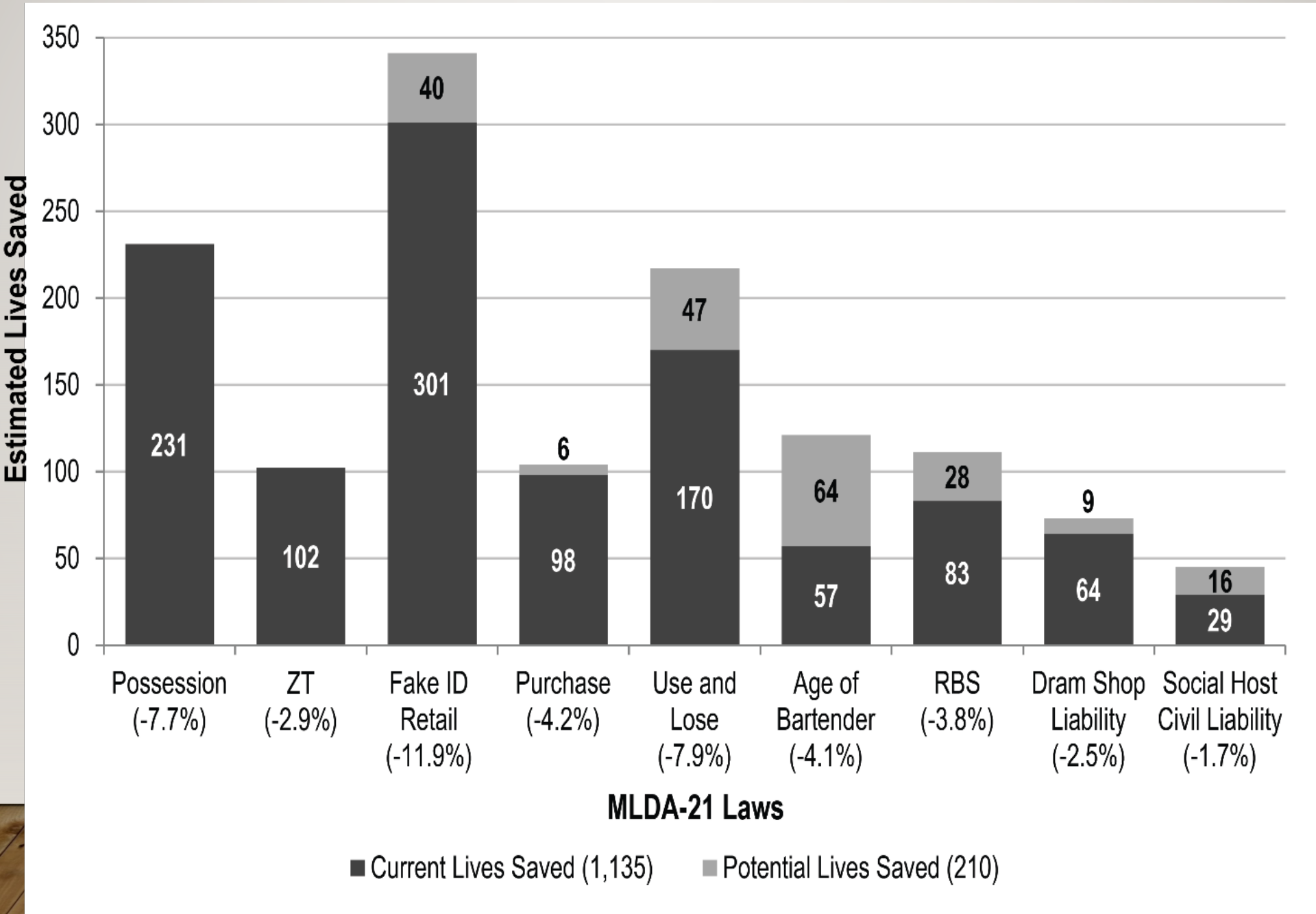
20 KEY COMPONENTS OF UNDERAGE DRINKING LAWS IN THE UNITED STATES

- Utah has all 20 MLDA-21 Components
- Kentucky has only 9 out of the 20 laws
- Texas has 12 of the 20 laws
- Only 5 laws have been adopted by all 50 States and DC

5 MLDA-21 LAWS ADOPTED BY ALL STATES AND DC IN THE UNITED STATES

- Illegal to possess alcohol
- Illegal to use a fake ID to purchase alcohol
- Zero Tolerance (BAC>.02) for driving
- Graduated Driver Licensing System
- Illegal to furnish alcohol to persons under age 21

WHICH OF THE 20 MLDA-21 LAWS HAVE BEEN EFFECTIVE?


Estimated Lives Saved
350
300
250
200
150
100
50
0
231
102
301
40
98
6
170
47
57
64
83
28
64
9
29
16
Possession (-7.7%)
ZT (-2.9%)
Fake ID Retail (-11.9%)
Purchase (-4.2%)
Use and Lose (-7.9%)
Age of Bartender (-4.1%)
RBS (-3.8%)
Dram Shop Liability (-2.5%)
Social Host Civil Liability (-1.7%)
MLDA-21 Laws
Current Lives Saved (1,135)
Potential Lives Saved (210)

WHICH MLDA-21 LAWS HAS TEXAS ADOPTED?

1. **Illegal to possess alcohol**
2. **Illegal to purchase alcohol**
3. Illegal to consume alcohol
4. **Use & Lose**
5. **Illegal to use a fake ID to purchase alcohol**
6. **Zero Tolerance (BAC>.02) for driving**
7. Graduated Driver Licensing System
8. Illegal to furnish alcohol to persons under age 21
9. **Responsible Beverage Service Training**
10. **Fake ID Retailer Support**
11. **Dram Shop**
12. **Social Host**

SECONDARY PREVENTION

PREVENT THE COMBINATION OF DRINKING AND DRIVING

SECONDARY PREVENTION: OBJECTIVES

- Separate drinking from driving
- Adopt impaired driving laws
- Enforce laws
- Deter drivers from drinking and driving

LAWS THAT HAVE SHOWN IMPACT

- Illegal Per Se BAC laws (lowering from .15 to .10 and then to .08 and now to .05 in Utah)
- Administrative License Revocation (ALR)
- Minimum Legal Drinking Age (MLDA-21)
- Zero Tolerance (.02 BAC) for Youth
- Vehicle Sanctions (interlock, impoundment, immobilization)
- Primary Seat Belt Laws

GENERAL DETERRENCE

- **Administrative License Revocation (ALR)** – the State DMV suspends the driver's license for 30-90 days for having a BAC over the limit (Swift & Sure). Studies show a **6%-13% decrease** in alcohol-related fatalities associated with ALR.
- **Lowering the Per Se Illegal BAC Limit** – the State gets tougher on drunk driving. When lowered to .10 BAC, studies showed a **5%-8% reduction** in alcohol-related fatalities. When lowered to .08 BAC, studies showed a median 8% reduction.
- **Mandatory Fines for DWI** – recent research shows **reduction** in alcohol-related fatalities of **8%** associated with mandatory fine policies (Wagenaar et al., 2007).

DWI ENFORCEMENT IN THE UNITED STATES

- 1.4, 1.3, 1.1, 1.0, 0.6 million drivers arrested for DWI
- 1 DWI arrest for every 170 licensed drivers
- **1 DWI arrest for every 1016 trips taken by drivers with BACs ≥ .08**
- 1 crash for every 788 trips taken by drivers with BACs ≥ .08
- 130-140 DWI arrests for every driver with a BAC ≥ .08 involved in a fatal crash
- Sources: FBI; FHWA; Zaloshnja, Miller, Blincoe (2013); NHTSA, FARS

DUI ENFORCEMENT

- Number of DUI arrests per 10,000 population was negatively associated with the ratio of impaired driving to non-impaired driving crashes (p=.035).
- **A 10% increase in the DUI arrest rate was associated with a 1% reduction in the impaired driving crash rate.**
- Similar results were obtained for an increase in the number of sworn officers.

TERTIARY PREVENTION

MANAGING THE DUI OFFENDER

TERTIARY PREVENTION: OBJECTIVES

- Change convicted DUI offender's risky behavior.
- Protect the public from the risk presented by DUI offenders while their behavior is being modified.

WHICH SANCTIONS WORK?

- **Licensing Actions** – especially ALR
- **Vehicle Actions** – separating the vehicle from the driver
- **Intensive Supervision Probation** – frequent monitoring of offender compliance with program
- **Mandatory Fines** – especially if fine money can be used to pay for DWI offender programs
- **DUI Court** – frequent contact with the judge, treatment, ISP, lifestyle changes

EFFECTIVE STRATEGIES PROVIDING MULTIPLE ALTERNATIVES TO JAIL

- House Arrest
- DUI courts
- **Transdermal BAC Monitoring**
- South Dakota 24/7 Sobriety Program
- Alcohol Ignition Interlocks

WHAT HAS WORKED WORLDWIDE? TRANSPORTATION RESEARCH BOARD (TRB) REVIEW

A Combination of:

- Activism
- Legislation
- Enforcement
- Sanctions and Public Information

Result has been a change in the norm!

WHERE ARE WE NOW?

- Progress has clearly leveled off
- Awareness and concern has declined
- Enforcement has declined with decreasing resources
- Youth laws not being enforced
- Many laws being eroded or ignored
- Seat belt use among drinking drivers is low
- Other priorities and competing public health issues
- Recreational marijuana use is being legalized
- Impaired (alcohol & drug) driving and speeding has increased during the 2020-2021 pandemic

SO WHAT CAN BE DONE IN THE FUTURE?

DRIVER ALCOHOL DETECTION SYSTEM FOR SAFETY [DADSS]

- Funding from the government and auto industry

Two Prototypes being tested:

  - Tissue Spectrometry – touch-based system using near infrared to identify BAC in the dermis
  - Breath-Based – Infrared spectroscopy sensors measuure BAC in driver's breath only (not passenger)

- Objective: Reliable system to be standard in all vehicles in the future (~10 years). Vehicle will start but not drive if driver BAC is over the set limit for that vehicle and State

AUTONOMOUS (SELF-DRIVING)VEHICLES

- Will eliminate most of the driver errors due to alcohol or other drug impairment.
- However, not clear how some drunk drivers will behave in an autonomous vehicle.
- In many instances (extreme intoxication), someone else will need to set the destination in the vehicle.
- Much more research is needed on this issue.

TRANSPORTATION RESEARCH BOARD NATIONAL ACADEMIES OF SCIENCES, ENGINEERING AND MEDICINE (2015 WORKSHOP)

- Results of a Workshop Sponsored by the Transportation Research Board Committee on Alcohol, Other Drugs and Transportation (ANB50) held on August 24-25, 2015.
- Workshop was attended by 26 experts in impaired driving research and policy. 16 of the 26 submitted their top three priorities after the workshop.

EIGHT EFFECTIVE ALCOHOL POLICY STRATEGIES DISCUSSED (2015)

1. Increase alcohol taxes
2. Re-engage the public
3. Lower illegal BAC limit for driving to .05
4. Implement in-vehicle alcohol detection systems (DADSS)
5. Expand screening and brief interventions in medical facilities
6. Impose administrative sanctions for BACs=.05-.08
7. Require alcohol ignition interlocks for all alcohol impaired driving offenders
8. Increase the frequency of sobriety checkpoints including legislation to allow them in states where prohibited

THREE TOP PRIORITY ALCOHOL POLICY STRATEGIES

1. Impose administrative sanctions for drivers with BACs = .05 to .08

2. Adopt All Offender Alcohol Ignition Interlock Laws

3. Increase the frequency of sobriety checkpoints

LOWER THE BAC LIMIT FROM .08 GRAMS/DECILITER TO .05

RATIONALE FOR .05 BAC

- Is not typically one or two drinks after work.
- Is a level at which critical driving skills are impaired.
- Is a level above which the risk of a crash is increased significantly.
- Is a level which most industrialized countries have adopted.
- Is an effective measure which can reduce alcohol-related fatalities.

THE EVIDENCE:

- Lowering BAC limits reduces drinking driver fatal crashes:

  from .10 to .08.

  from .08 to .05.

  from adult limit to .02 for youth.

- General public does not think anyone should drive after two or three drinks.
- Most people are impaired at .05 BAC.
- Relative risk of crash is statistically significant at .05 BAC.

ALCOHOL AND THC

- The odds of being in a crash for drivers with **THC (marijuana) in their systems is 1.05** (adjusted for age & gender) compared to drivers with no THC.
- The odds of being in a crash for a driver with a **BAC = .05 is 2.07** (adjusted for age & gender) compared to drivers with a BAC = .00.
- The odds of being in a crash for drivers with a BAC = .08 is 3.93 (adjusted for age & gender) compared to drivers with a BAC = .00.
- The odds of being in a crash for drivers with a BAC = .15 is 12.18 (adjusted for age & gender) compared to drivers with a BAC = .00.

Source: NHTSA, Compton & Berning (2015), DOT HS 812-117

STUDIES OF THE EFFECTS OF LOWERING THE ILLEGAL BAC LIMIT TO .05

Australia (Homel, 1994)	Percent drivers with positive BACs in weekend fatal crashes decreased 13% pre-post law implementation but did not affect weekday fatal crashes
Australia (Henstridge et al., 1997)	Lowering the BAC limit to .05 resulted in an 11% decrease in alcohol-related fatal crashes and significant reductions in the number of non-fatal crashes
Japan (Nagata, et al., 2008)	Resulted in 38% decrease in alcohol-related crashes of all severities
Sweden (Norstrom, 1997)	10% reduction in alcohol-related fatal crashes and significant reductions in single vehicle crashes and all crashes associated with lowering limit to .05

ILLEGAL PER SE BAC LIMITS FOR DRIVING

Country	BAC Limit
Australia	.05
Austria	.05
Belgium	.05
Denmark	.05
Finland	.05
France	.05
Germany	.05
Italy	.05
Spain	.05

[Source: WHO 2012]

OBJECTIVE OF STUDY FUNDED BY NIAAA (FELL & SCHERER, 2017)

Determine whether lowering the BAC limit from .08 g/dL to .05 g/dL will be an effective policy in the United States.

CONCLUSIONS

- The meta-analysis found no significant effect of lowering the BAC limit on ***alcohol consumption***

CONCLUSIONS

- Lowering the BAC limit to .05 (or lower) resulted in a significant **11.1%** decline in ***fatal alcohol-related crashes*** according to the meta-analysis.

CONCLUSIONS

- It is estimated that **1790 lives could be saved** each year if ***all states lowered the BAC limit to .05 in the U.S.***

IMPLICATIONS FOR .05 BAC

- Progress in reducing impaired drivers in fatal crashes has stalled since 1997 and fatalities have increased in 2020 and 2021
- It will be at least 10 years before technological solutions can be implemented (e.g. DADSS, autonomous cars)
- Currently over10,000 deaths each year due to impaired driving. 100,000+ more people will die in the next 10 years if the status quo is maintained
- **A .05 BAC limit is a countermeasure that is proven to have a significant effect on the problem**

ADOPT ALL-OFFENDER ALCOHOL IGNITION INTERLOCK LAWS

ALCOHOL IGNITION INTERLOCKS

- **Reduces DWI recidivism by about 65%** for offenders with interlocks (who sometimes use alternative vehicles) compared to similar offenders who did not get the interlock.
- **Reduces recidivism by 70%** for first-time DWI offenders (on, then off).
- **Reduces recidivism by 55%** for multiple DWI offenders (on, then off).
- If installed on all vehicles of offenders, would probably prevent 95% of DWI behavior during installation period.

INSURANCE INSTITUTE FOR HIGHWAY SAFETY

Effects of All-Offender Alcohol Ignition Interlock Laws on Recidivism and Alcohol-Related Crashes [State of Washington]

McCartt, Eichelberger, Leaf (2013)

- ***Recidivism rates reduced by 12%*** for interlocked offenders
- ***Crash reductions*** associated with all-offender law suggests they can have a ***general deterrent effect***

INSURANCE INSTITUTE FOR HIGHWAY SAFETY

State alcohol ignition interlock laws and fatal crashes

Eric Teoh, IIHS, James Fell, NORC

Michael Scherer, PIRE, Danielle Wolfe, IIHS

Traffic Injury Prevention, 2021, 22, 8, 589–592.

- All-Offender Laws associated with ***16%*** fewer drivers with BACs≥.08 involved in fatal crashes compared to no law
- Repeat and High BAC Laws: 8% reduction compared to no law

STATES WITH MANDATORY INTERLOCK LAWS FOR ALL CONVICTED DWI OFFENDERS

34 STATES PLUS DC:

AL, AK, AR, AZ, CO, CT, DE, DC, HI, ID, IL, IA, KS, KY, LA, ME, MD, MS, MO, NE, NV, NH, NJ, NM, NY, OK, OR, RI, TN, **TX**, UT, VT, VA, WA, WV

INTERLOCK LAW IN TEXAS

- Mandatory interlock for convicted first offenders if license suspension is imposed (but not during ALS or to reinstate the license)
- Mandatory interlock for convicted repeat offenders during license suspension and in order to reinstate their license when prior conviction occurred within past 5 years

INTERLOCK LAW IN OKLAHOMA

- Mandatory interlock for convicted first offenders in order to drive during ALS and during post conviction license suspension and to reinstate the license
- Mandatory interlock for convicted repeat offenders during post-conviction license suspension and in order to reinstate their license.

INTERLOCK ISSUES

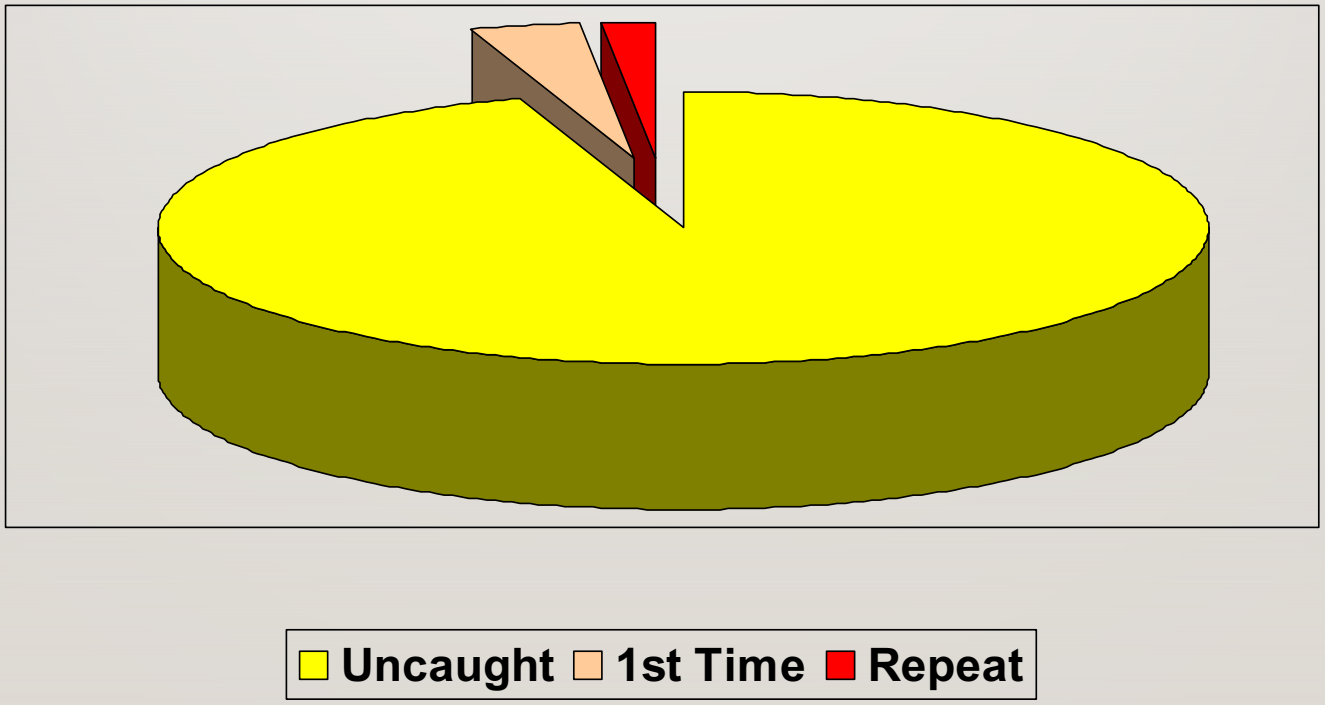
- Interlock penetration for convicted DWI offenders ranges from 10% in some states up to 50% in other states.
- Once the interlock is removed, recidivism returns to the same level as pre-interlock according to most studies.
- Except for two studies, there is a lack of evidence of a general deterrent effect.

OVERCOMING BARRIERS

- Increasing the interlock penetration rate should increase the general deterrent effect.
- Enact more severe alternatives to the interlock. Force offenders to choose interlock, continuous alcohol monitoring (e.g., SCRAM ankle bracelet) or house arrest.
- Use offender performance (lock-outs) to extend time on the interlock.

CONDUCT MORE FREQUENT SOBRIETY CHECKPOINTS

ESTIMATED % OF DWI'S CAUGHT
(ONE YEAR PERIOD)



RESEARCH SHOWS THAT INCREASED ENFORCEMENT WORKS

- **General deterrence:**
  - Routine, daily enforcement of impaired-driving laws
  - Highly visible enforcement campaigns
  - Sobriety checkpoints wherever possible
  - Media campaigns to make the public aware

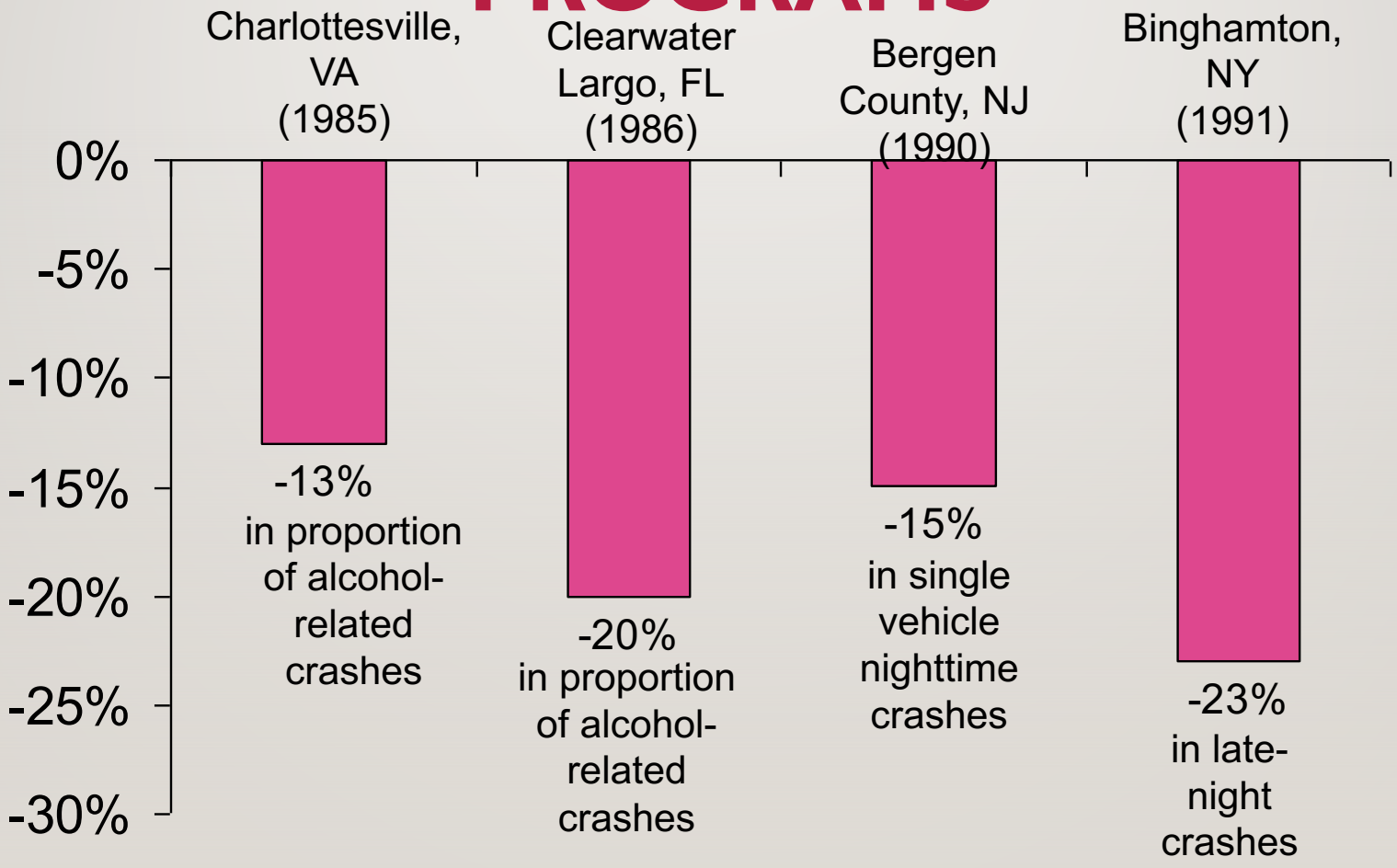
Studies from CDC show that checkpoints reduce alcohol-related crashes by 9% [4%-17%]

THE EFFECTS OF DRINK-DRIVING CHECKPOINTS ON CRASHES: A META-ANALYSIS (ERKE, GOLDENBELD, VAA, 2009)

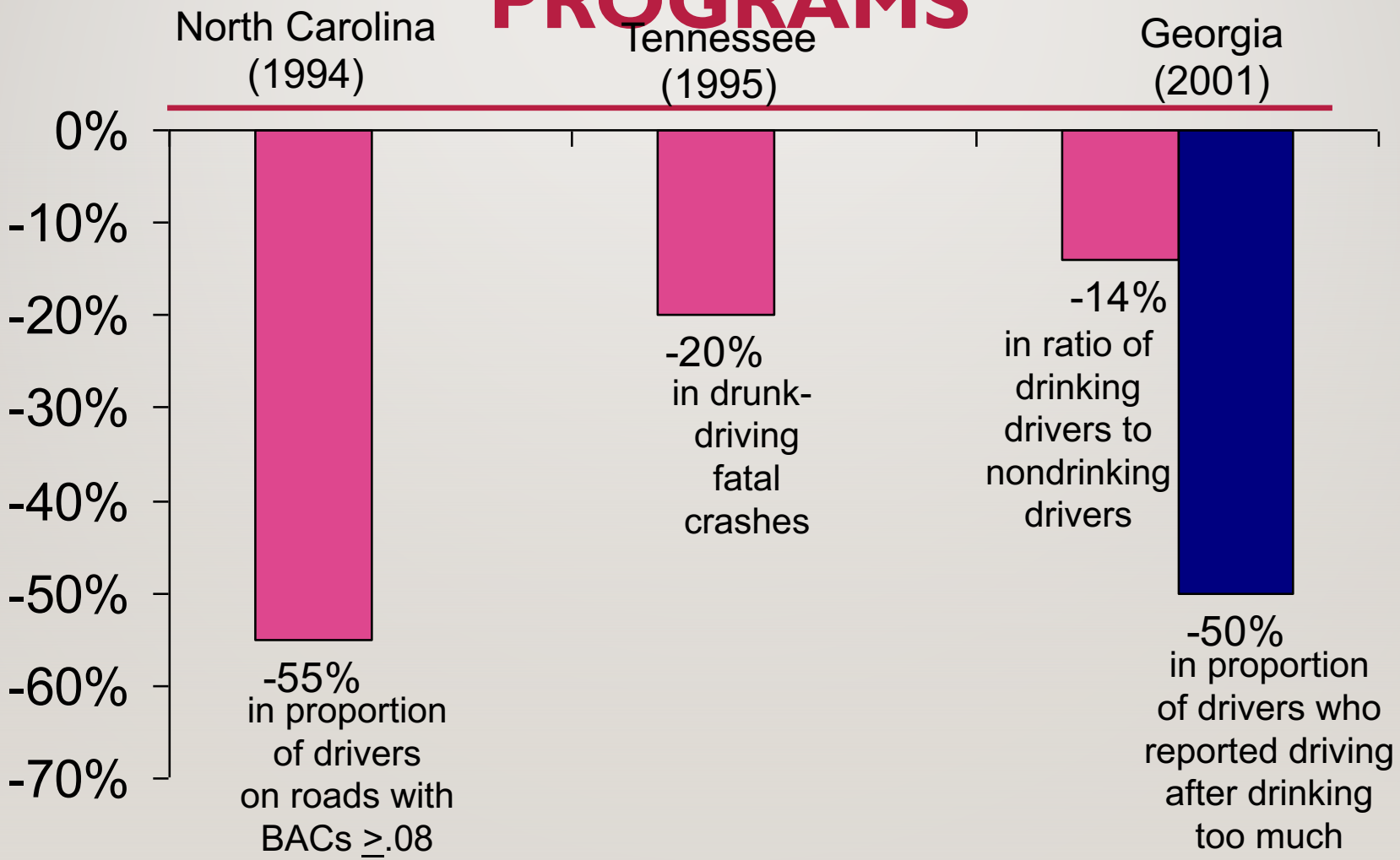
DUI Checkpoints and Random Breath Testing (RBT): 40 studies included in the meta-analysis:

- Crashes involving alcohol reduced by ***17%*** at a minimum
- All crashes (alcohol and non-alcohol) reduced by ***10%-15%***
- Australian RBT more effective

EFFECTIVENESS OF COMMUNITY SOBRIETY CHECKPOINT PROGRAMS



EFFECTIVENESS OF STATEWIDE SOBRIETY CHECKPOINT PROGRAMS



PUBLICITY IS IMPORTANT

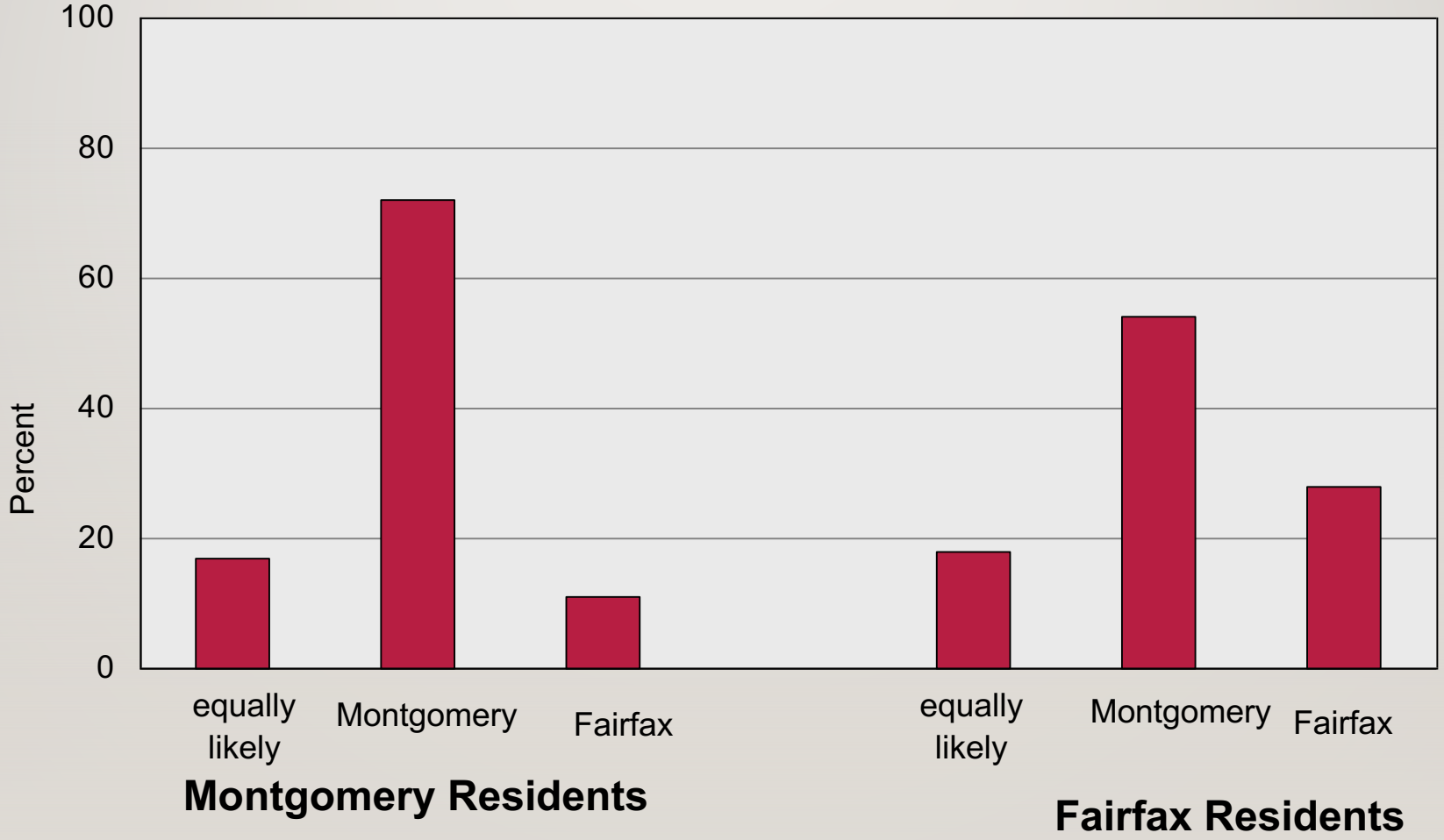
IT'S THE PERCEPTION, NOT NECESSARILY THE REALITY

ENFORCEMENT ACTIVITY IN FAIRFAX COUNTY, VA AND MONTGOMERY COUNTY, MD: (SUBURBS OF WASHINGTON, DC)

EARLY 1980S

	Fairfax	Montgomery
Number of sobriety checkpoints	**0**	**30-50**
DUI arrests per 10,000 drivers	**96**	**31**

COUNTY IN WHICH RESPONDENTS THOUGHT THEY WOULD BE MORE LIKELY TO BE ARRESTED FOR DRUNK DRIVING



CHECKPOINT STATUS AND BARRIERS IN THE U.S.

CHECKPOINT STATUS IN THE U.S.

- **38** states plus DC **conduct sobriety checkpoints**
- **12** states—checkpoints are **illegal, prohibited**, or not conducted
  - AK, ID, IA, MI, MN, MT, OR, RI, **TX**, WA, WI, WY
- **18** states conduct checkpoints on **weekly basis** somewhere in the state
  - AR, CA, FL, GA, HI, IL, KY, MD, MS, NE, NY, NC, PA, SD, VT, VA, WV

[Source: GHSA]

WEEKLY CHECKPOINTS VS. NO CHECKPOINTS 2011

- **12** states—checkpoints are illegal, prohibited, or not conducted
  - AK, ID, IA, MI, MN, MT, OR, RI, TX, WA, WI, WY
  - % of drivers in fatal crashes with BACs≥.08: **25%**
- **18** states conduct checkpoints on weekly basis somewhere in the state
  - AR, CA, FL, GA, HI, IL, KY, MD, MS, NE, NY, NC, PA, SD, VT, VA, WV
  - % of drivers in fatal crashes with BACs>.08: **20%**

SOURCE: GHSA and FARS

CHECKPOINT BARRIERS

Checkpoints are prohibited in 12 states

- However, highly publicized saturation patrols have had significant effects in Michigan and Iowa
- If drivers have the perception that they will get caught driving impaired, many will be deterred from drinking and driving.
- The keys to enforcement are visibility, publicity and detection.

CHECKPOINT BARRIERS

- **MYTHS**
- Resources for conducting checkpoints are excessive (money, personnel, equipment)
- Checkpoints yield few DWI arrests
- Public does not support checkpoints
- Checkpoints are risky for police and drivers

DEALING WITH THE BARRIERS

- Work with task forces, coalitions, attorney general, governor to overturn checkpoint prohibition (U.S. Supreme Court ruled them legal in 1990)
- Deploy smaller (4-5 officers) checkpoints (sobriety and safety belt) and/or multi-agency cooperation
- General deterrent value, not number of arrests that make checkpoints effective. Use equipment or technology that increases detection of DWI (e.g., passive alcohol sensors). Selling the "beyond the ticket" benefits (e.g., other arrests at checkpoints)

CHECKPOINTS DO NOT NEED 15-30 OFFICERS

LOW-STAFF CHECKPOINTS

- Study conducted in 4 rural counties in West Virginia.
- Low-staff checkpoints used 3-5 officers.
- Weekly checkpoints conducted in 2 experimental counties for one year.

LOW-STAFF CHECKPOINTS RESULTS

- Relative to drivers in the 2 comparison counties, the proportion of drivers on the roads in the experimental counties with BACs>=.05+ was 70% lower.
- The proportion of drivers on the roads in the checkpoint counties with BACs>=.08+ was 64% lower than the comparison counties.

“BEYOND THE TICKET” BENEFIT OF CHECKPOINTS

GEORGIA'S OPERATION ZERO TOLERANCE

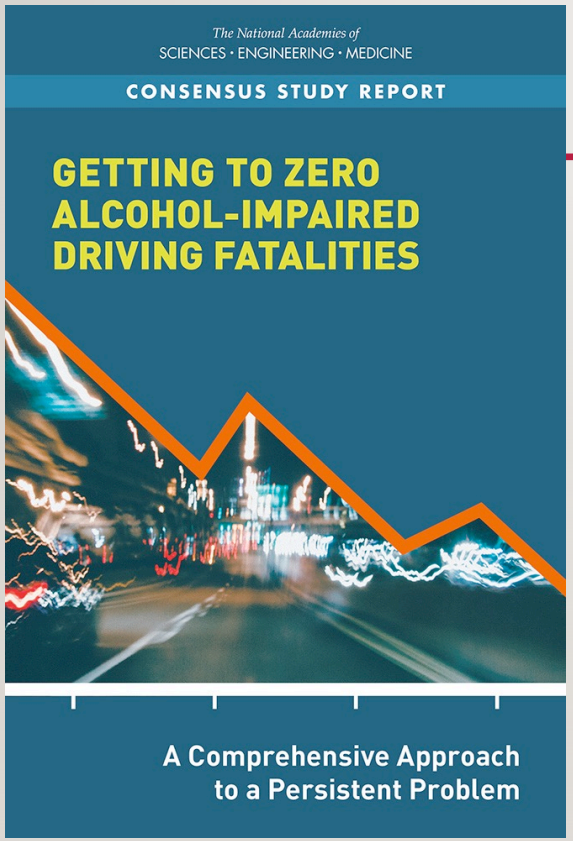
A STATEWIDE HIGHLY PUBLICIZED SOBRIETY CHECKPOINT PROGRAM (CHECKPOINTS 2000-2001)

• Checkpoints conducted	2,837
• Drivers checked	280,082
• Drivers arrested for DUI	2,322
• Seat belt violations	5,348
• Drug violation arrests	1,001
• Felony arrests	236
• Stolen vehicles recovered	57
• Suspended/Revoked Licenses	2,481
• Other traffic citations	14,776

DEALING WITH THE BARRIERS

- 75% of the public support weekly or monthly checkpoints in their community. Only 6% are against the use of checkpoints.
- Checkpoints are not as risky as traffic stops are for police or the driving public. They are well-lighted, involve multiple police cars and traffic is slowed down and controlled by police.

NASEM REPORT [2018]



Teutsch, SM, Geller, A & Negussie, Y (2018). Getting to Zero Alcohol-Impaired Driving Fatalities: A Comprehensive Approach to a Persistent Problem. Committee on Accelerating Progress to Reduce Alcohol-Impaired Driving Fatalities, National Academy of Sciences, Engineering and Medicine, The National Academies Press, Washington, DC. Doi: https://doi.org/10.17226/24951

UNDERUTILIZED EFFECTIVE STRATEGIES: NATIONAL ACADEMY OF SCIENCES, ENGINEERING AND MEDICINE REPORT 2018

- Increase alcohol taxes
- Alcohol policy enforcement (e.g., overserving)
- Lower the BAC Limit from .08 to .05
- Conduct frequent sobriety checkpoints
- Insurance discounts for DADSS
- Alternative transportation support
- DWI Courts
- Alcohol Ignition Interlocks

SUMMARY: HOW CAN WE RESUME PROGRESS?

- Primary Prevention: Enforce alcohol laws and policies (MLDA-21; RBS; etc.)
- Secondary Prevention: Lower the BAC Limit to .05; conduct frequent checkpoints using the PAS
- Tertiary Prevention: Employ two alternative sanctions to convicted offenders: drive with an interlock; don't drink at all (monitored by SCRAM)

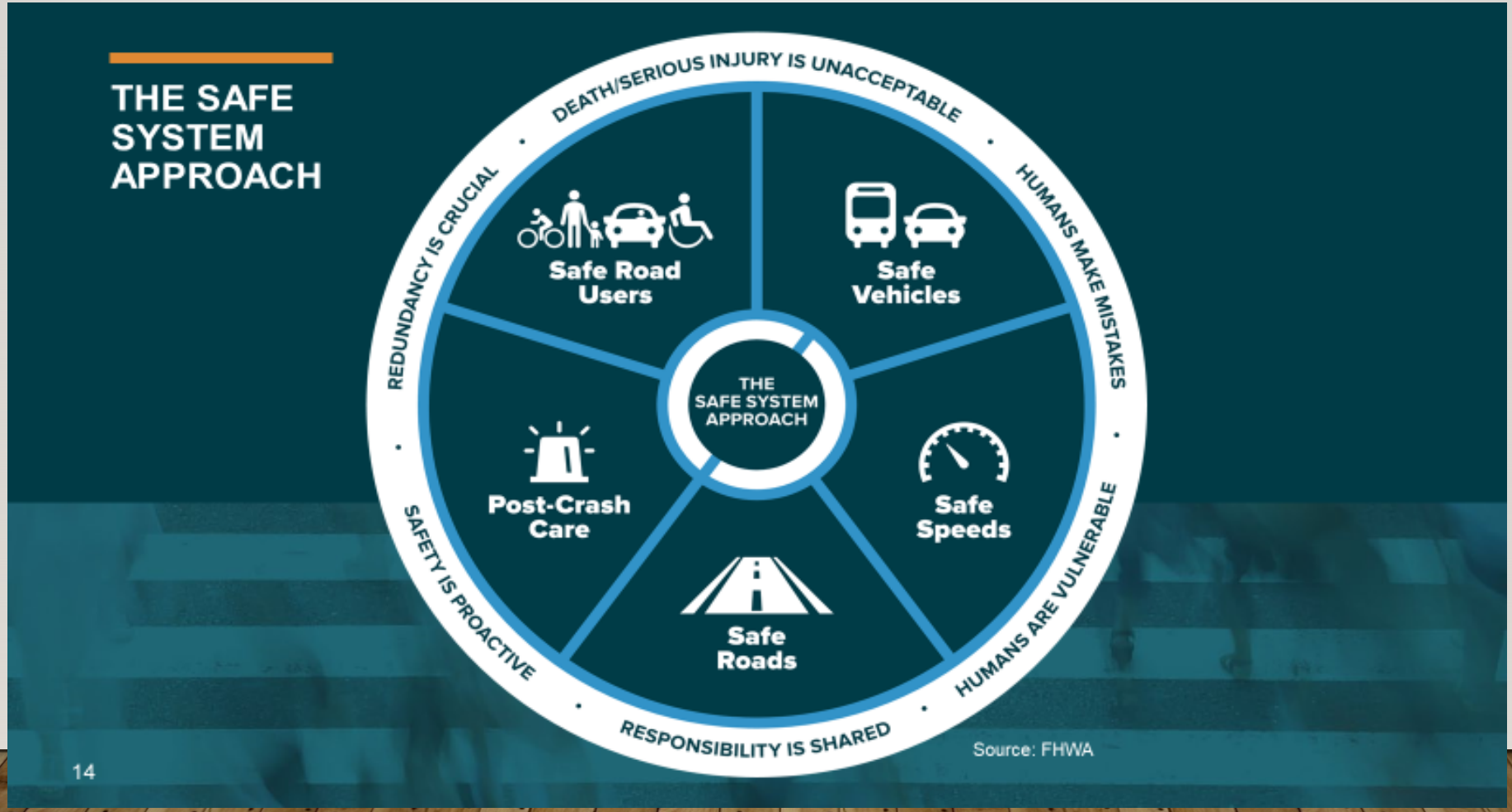
HOW CAN WE RESUME PROGRESS?

- Many countries around the world are committed to the vision of eliminating fatalities on their Nation's roads. The **Zero Deaths vision** is a way of describing how a combination of strategies is going to affect safety: Toward Zero Deaths.
- The goal was first adopted by Sweden in 1997
- The goal for most nations is Zero Traffic Fatalities by 2050.

HOW CAN WE RESUME PROGRESS?

- Vision Zero" has evolved across the world and is supported by the **World Health Organization** and the **United Nations**.
- The approach uses a data-driven multidisciplinary approach involving highway design, vehicle safety features and the integration of education, enforcement, engineering and emergency medical services (**www.TowardZeroDeaths.org**).

HOW CAN WE RESUME PROGRESS?



Questions?

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