

American Public Health Association Meeting November 18, 2003



Behavior, Lifestyle and
Social Determinants of Health

Public Health and the Epidemic of Motor Vehicle Crashes

Jeffrey W. Runge, M.D.
Administrator

National Highway Traffic
Safety Administration

Motor Vehicle Traffic Crashes as a Leading Cause of Death in the United States, 2000

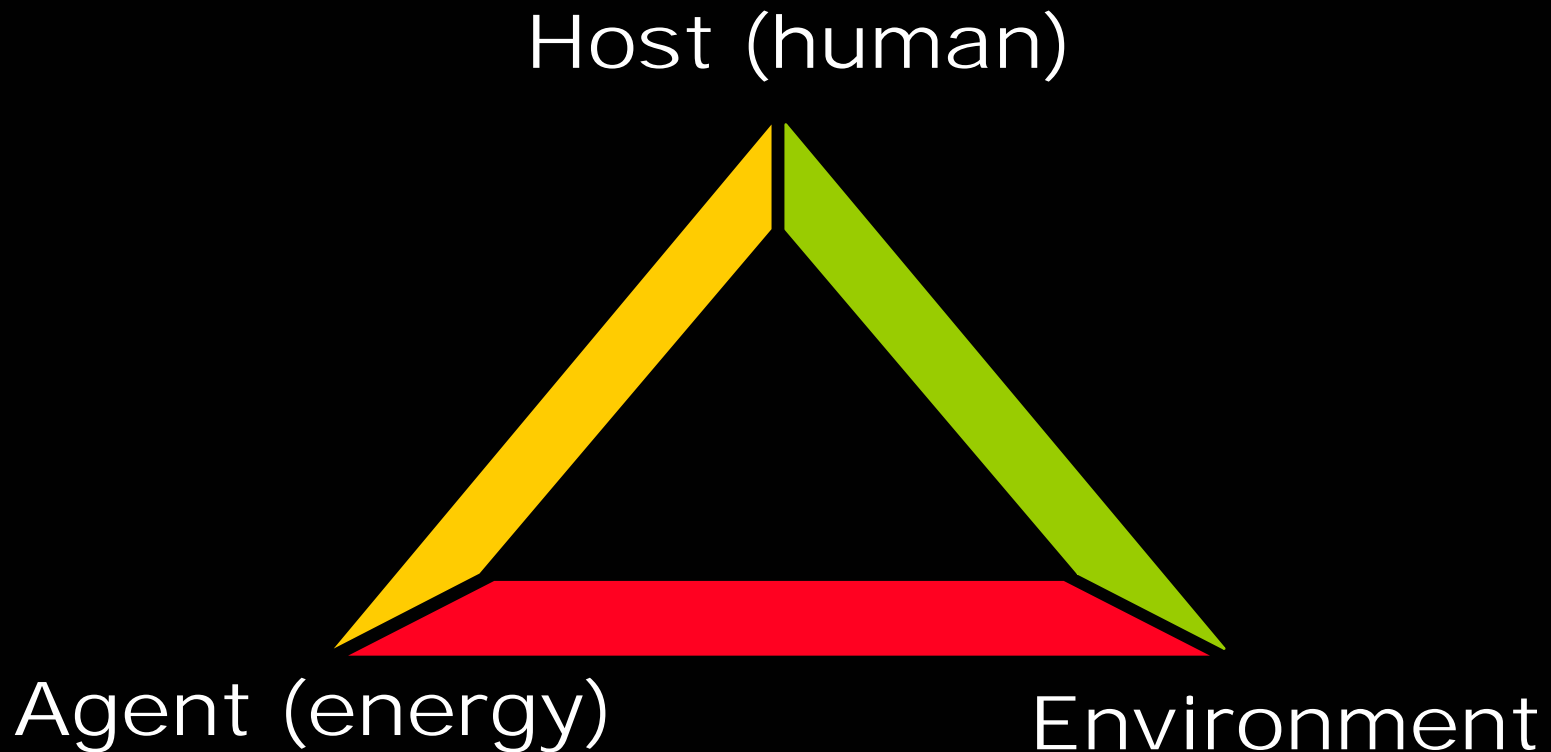
RANK	Cause of Death by Age											Years of Life Lost ¹
	Infants Under 1	Toddlers 1-3	Young Children 4-7	Children 8-15	Youth 16-20	Young Adults 21-24	Other Adults			Elderly 65+	All Ages	
							25-34	35-44	45-64			
1	Perinatal Period 13,918	Congenital Anomalies 447	MV Traffic Crashes 567	MV Traffic Crashes 1,681	MV Traffic Crashes 5,873	MV Traffic Crashes 3,982	MV Traffic Crashes 6,716	Malignant Neoplasms 16,520	Malignant Neoplasms 137,039	Heart Disease 593,707	Heart Disease 710,760	Malignant Neoplasms 23% (8,468,700)
2	Congenital Anomalies 5,743	MV Traffic Crashes 430	Malignant Neoplasms 426	Malignant Neoplasms 827	Homicide 2,476	Homicide 2,385	Suicide 4,792	Heart Disease 13,181	Heart Disease 98,879	Malignant Neoplasms 392,366	Malignant Neoplasms 553,091	Heart Disease 22% (8,091,669)
3	Other 3,639	Accidental Drowning 427	Smoke Exposure 202	Suicide 489	Suicide 1,911	Suicide 1,900	Homicide 4,274	MV Traffic Crashes 6,757	Stroke 15,967	Stroke 148,045	Stroke 167,661	Stroke 5% (1,708,035)
4	Oth/Unsp Nontransport 572	Homicide 323	Accidental Drowning 200	Homicide 431	Malignant Neoplasms 794	Malignant Neoplasms 788	Malignant Neoplasms 3,916	Suicide 6,562	Diabetes 14,140	Obstructive Pulmonary 106,375	Obstructive Pulmonary 122,009	MV Traffic Crashes 5% (1,674,868)
5	Heart Disease 493	Malignant Neoplasms 312	Nervous Disease 183	Nervous Disease 374	Accidental Poisoning 468	Accidental Poisoning 669	Heart Disease 2,958	HIV 5,919	Obstructive Pulmonary 13,990	Pneumonia 57,011	Diabetes 69,301	Obstructive Pulm Disease 4% (1,414,309)
6	Homicide 349	Other 228	Congenital Anomalies 173	Congenital Anomalies 330	Heart Disease 443	Heart Disease 519	HIV 2,437	Accidental Poisoning 4,663	Liver Disease 12,428	Diabetes 52,414	Pneumonia 63,548	Prenatal Period 3% (1,080,590)
7	Nervous Disease 293	Oth/Unsp Nontransport 222	Homicide 127	Accidental Drowning 300	Other 380	Other 444	Accidental Poisoning 2,380	Liver Disease 3,371	MV Traffic Crashes 8,583	Alzheimer's 48,993	Alzheimer's 49,558	Suicide 3% (1,032,765)
8	Pneumonia 280	Smoke Exposure 221	Oth/Unsp Nontransport 112	Heart Disease 269	Accidental Drowning 366	Oth/Unsp Nontransport 286	Other 1,554	Homicide 3,320	Suicide 8,382	Mental Retardation 36,656	MV Traffic Crashes 41,995	Diabetes 3% (970,832)
9	Septicemia 274	Nervous Disease 209	Heart Disease 89	Oth/Unsp Nontransport 239	Nervous Disease 330	Nervous Disease 249	Oth/Unsp Nontransport 895	Other 2,987	Other 5,395	Nephritis 31,225	Mental Retardation 38,882	Other 2% (825,216)
10	Other Respiratory 254	Heart Disease 163	Other 75	Metabolic Disorder 174	Oth/Unsp Nontransport 322	Accidental Drowning 221	Injury Intent Unk. 679	Stroke 2,599	HIV 5,381	Septicemia 24,786	Nephritis 37,251	Homicide 2% (792,291)
ALL*	28,035	4,195	2,823	6,933	15,727	14,021	40,451	89,798	401,187	1,799,825	2,403,351	All Causes 100% (36,067,102)

Sources: National Center for Health Statistics Mortality Data 2000

Note: Causes of death classification based on NHTSA (Revised 70 Causes of Death listing). *Not a total of top 10 causes of death.

Epidemiologic Triangle Injury Prevention

Injury is a disease process



Haddon Matrix

Human

Vehicle

Environment

Pre-Event



Event



Post-Event

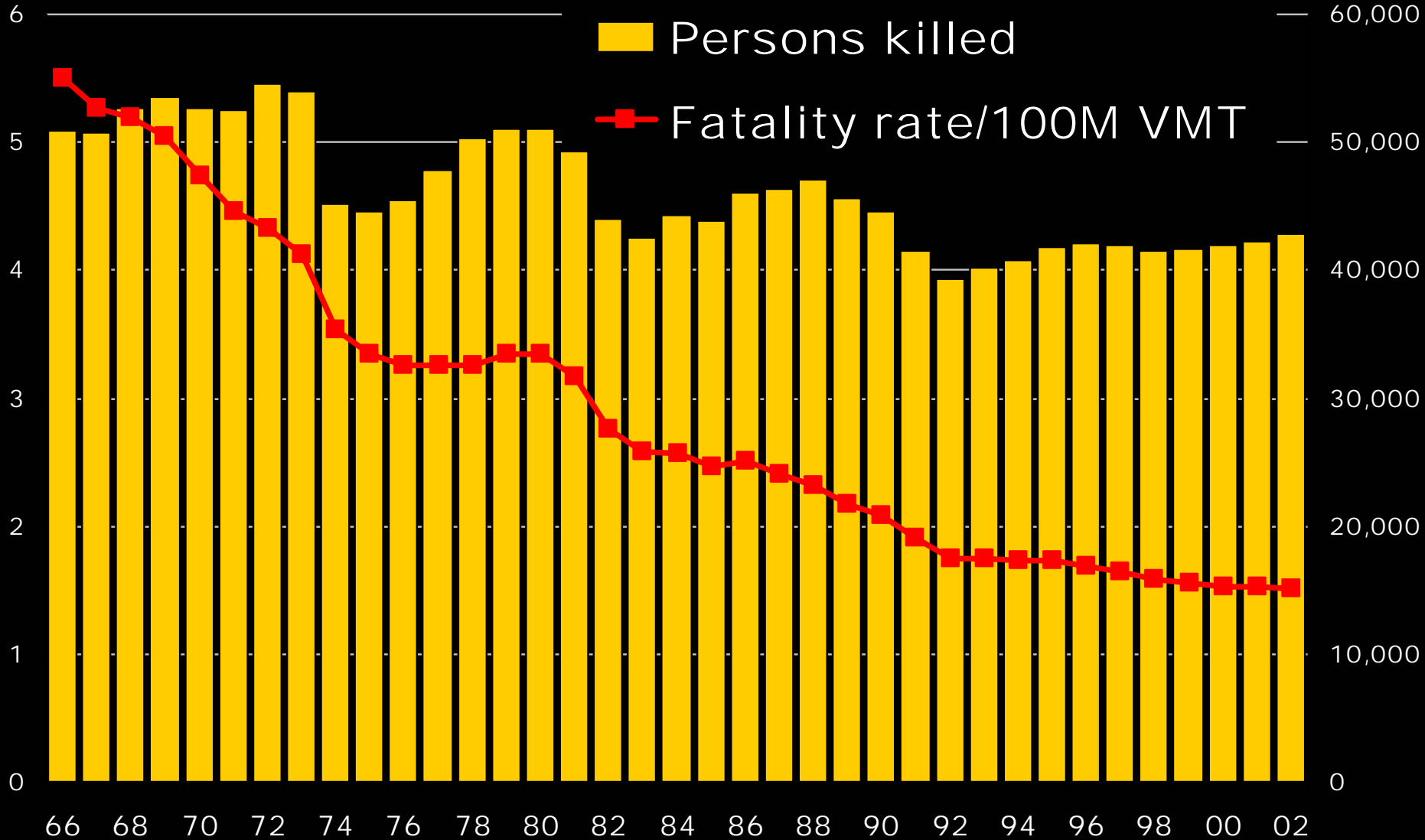


Persons Killed and Injured in Crashes

	Year		% Change
	2001	2002	
Persons Killed	42,196	42,815	+1.5%
Persons Injured	3,033,000	2,926,000	-3.5%



Persons Killed and Rate per 100M VMT



1.0 Fatalities

per 100M VMT by 2008



**U.S. Department
of Transportation**



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**U.S. Department
of Transportation**



**Federal Highway
Administration**



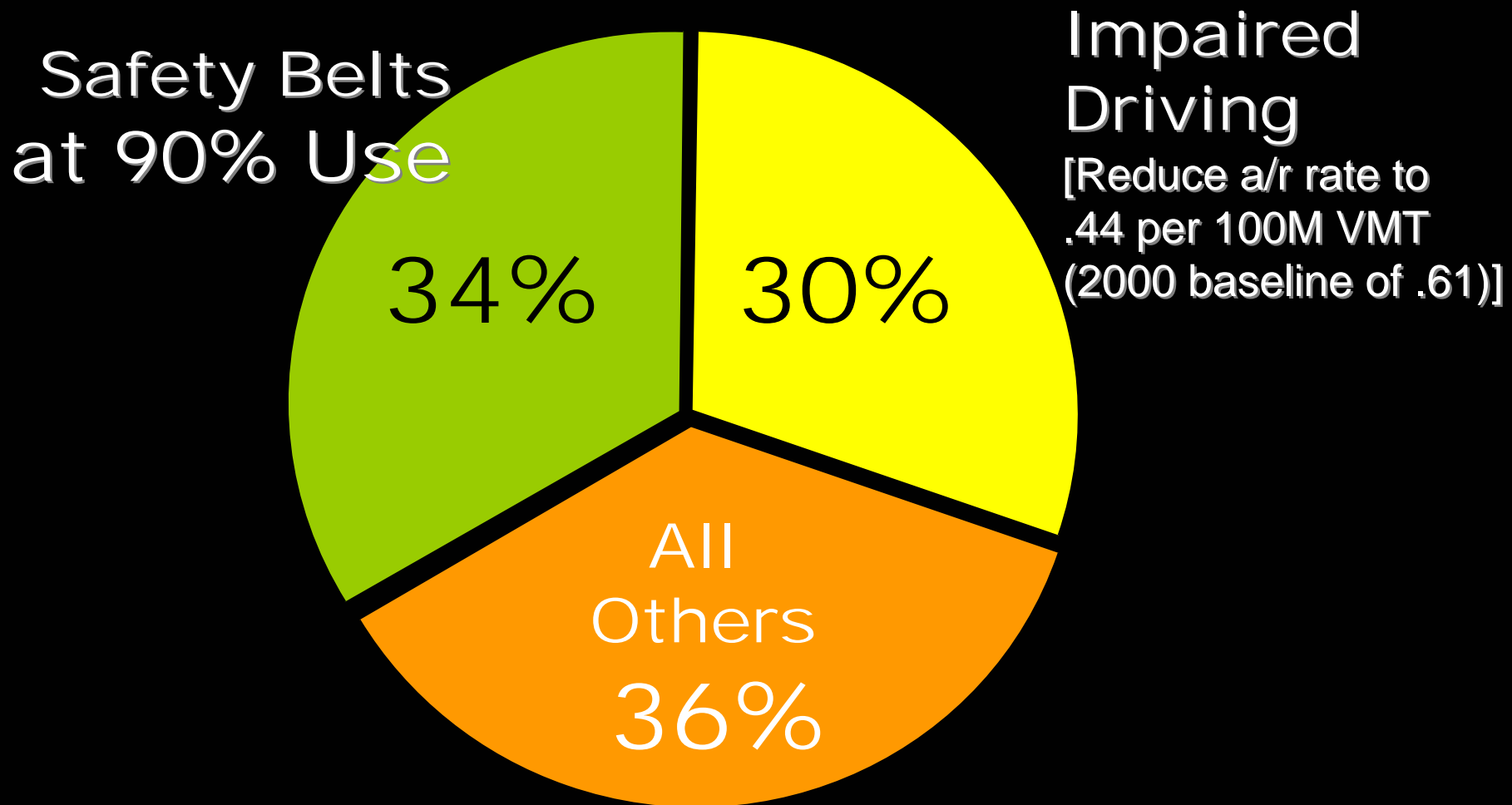
Economic Cost of Crashes



\$230 Billion Total

- **\$33 billion medical cost**
- **\$81 billion lost productivity**
- **\$51 billion for impaired driving**
- **\$20 billion failure to use belts**

Predicted Lives Saved by Countermeasure



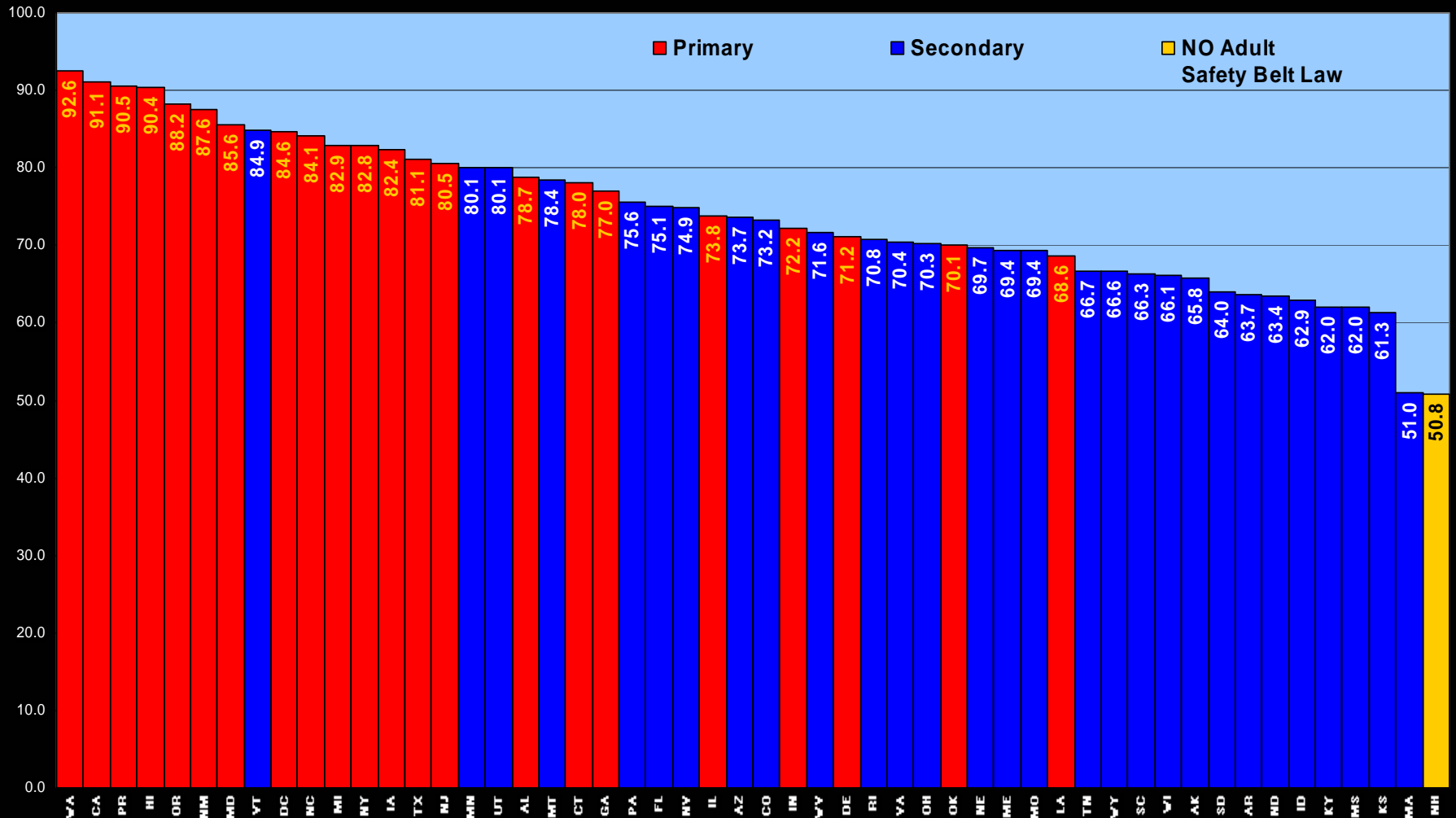
Highway Safety Priorities

- Increase safety belt use
- Reduce impaired driving
- Improve data
- **Reduce rollovers**
- **Improve vehicle compatibility**

Highway Safety Priorities

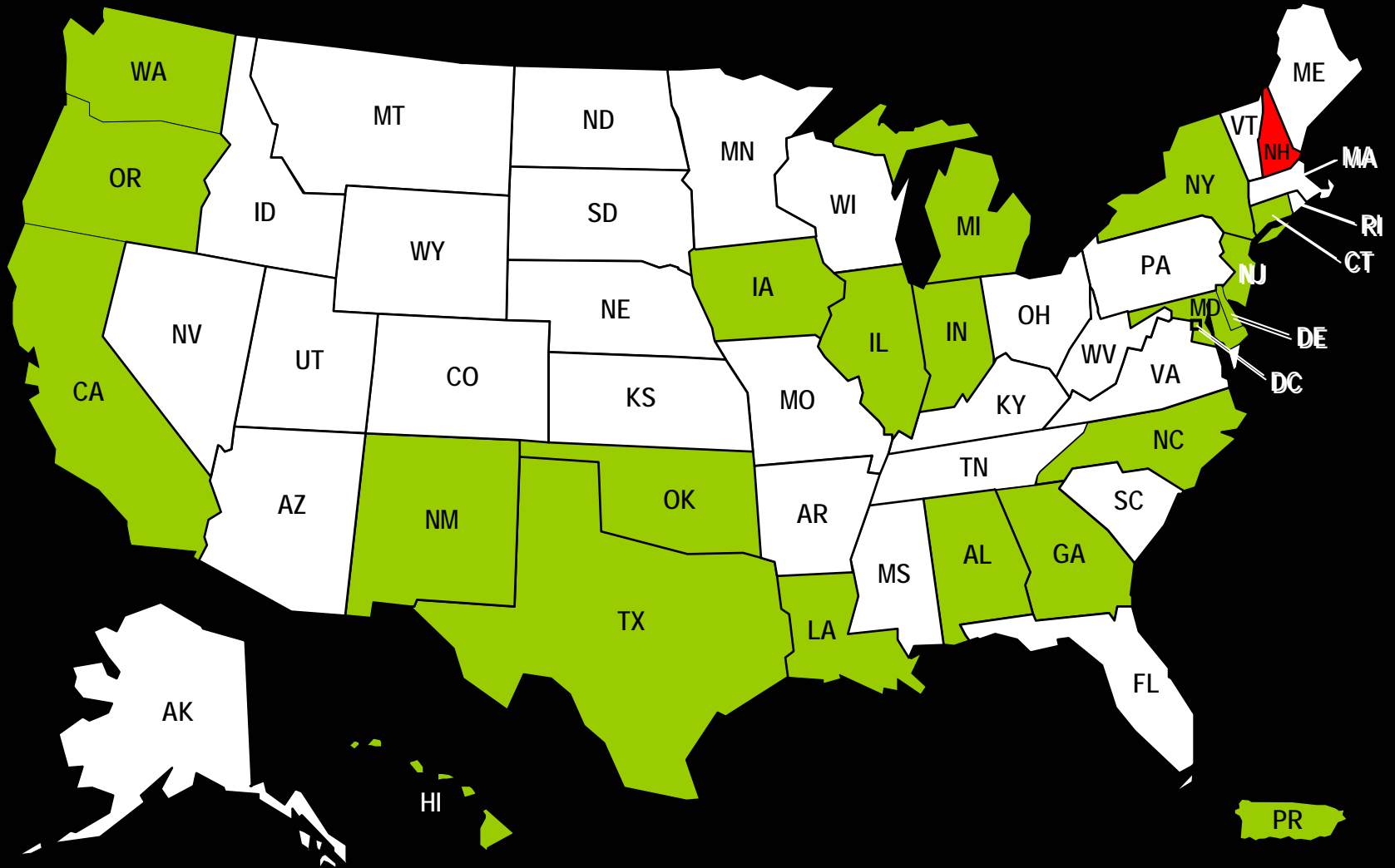
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Safety Belt Use Rates By Law Type and State (2002 Rates)



*Maine and New Hampshire did not report use rates for 2002 based on observational surveys consistent with NHTSA's Uniform National Criteria. Rates shown in the chart for these States are statistically derived estimates for 2001

State **Safety Belt** Laws 2003



Primary

Secondary

No Adult Safety Belt Law

Highway Safety Priorities

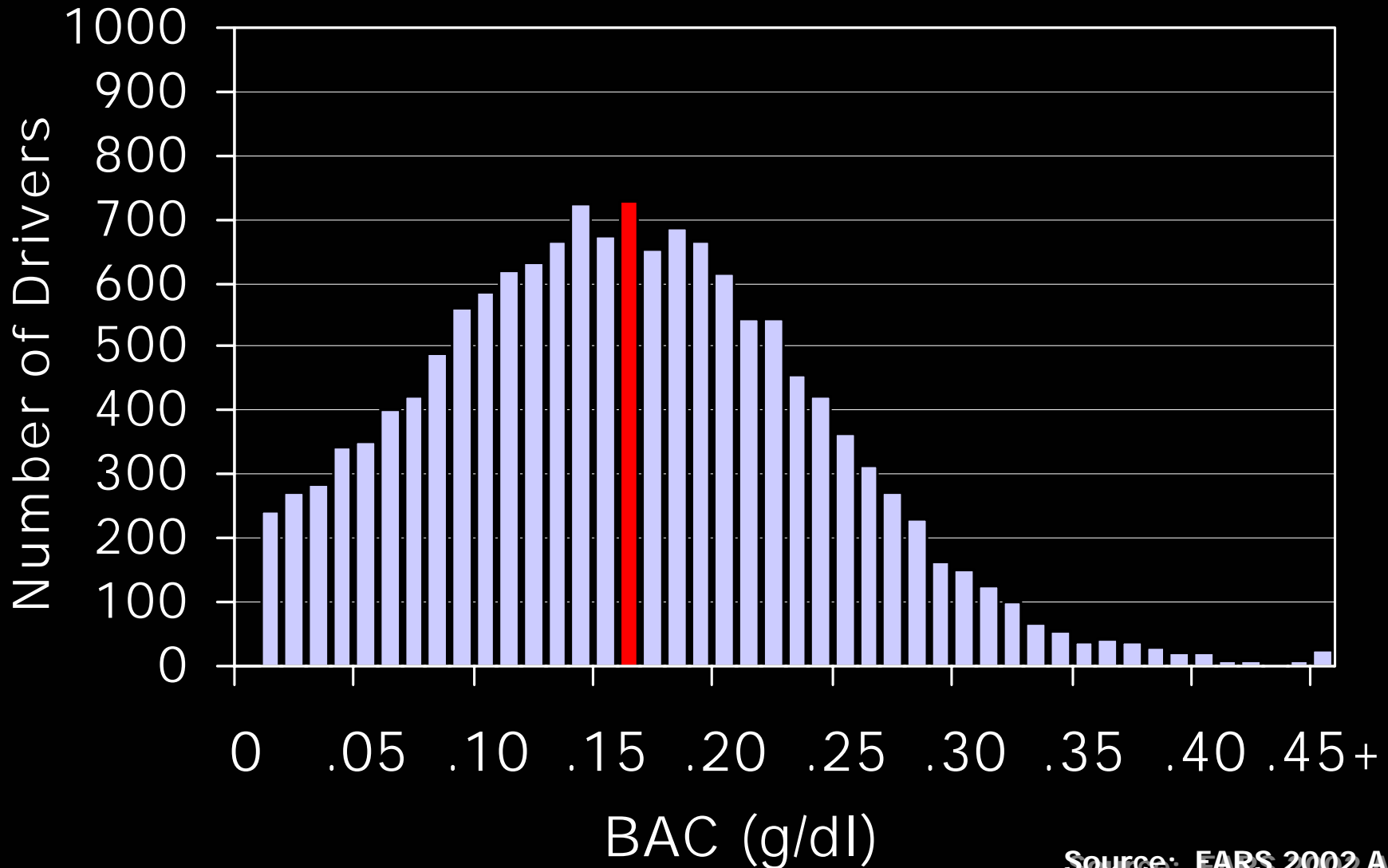
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Alcohol-Related Fatalities United States

	Year		%
	2001	2002	Change
Total Alcohol-Related	17,400	17,419	+0.1%
Alcohol Fat/100M VMT	0.63	0.62	
$0.01 \leq \text{BAC} \leq 0.07$	2,542	2,401	-5.5%
$\text{BAC} \geq 0.08$	14,858	15,019	+1.1%

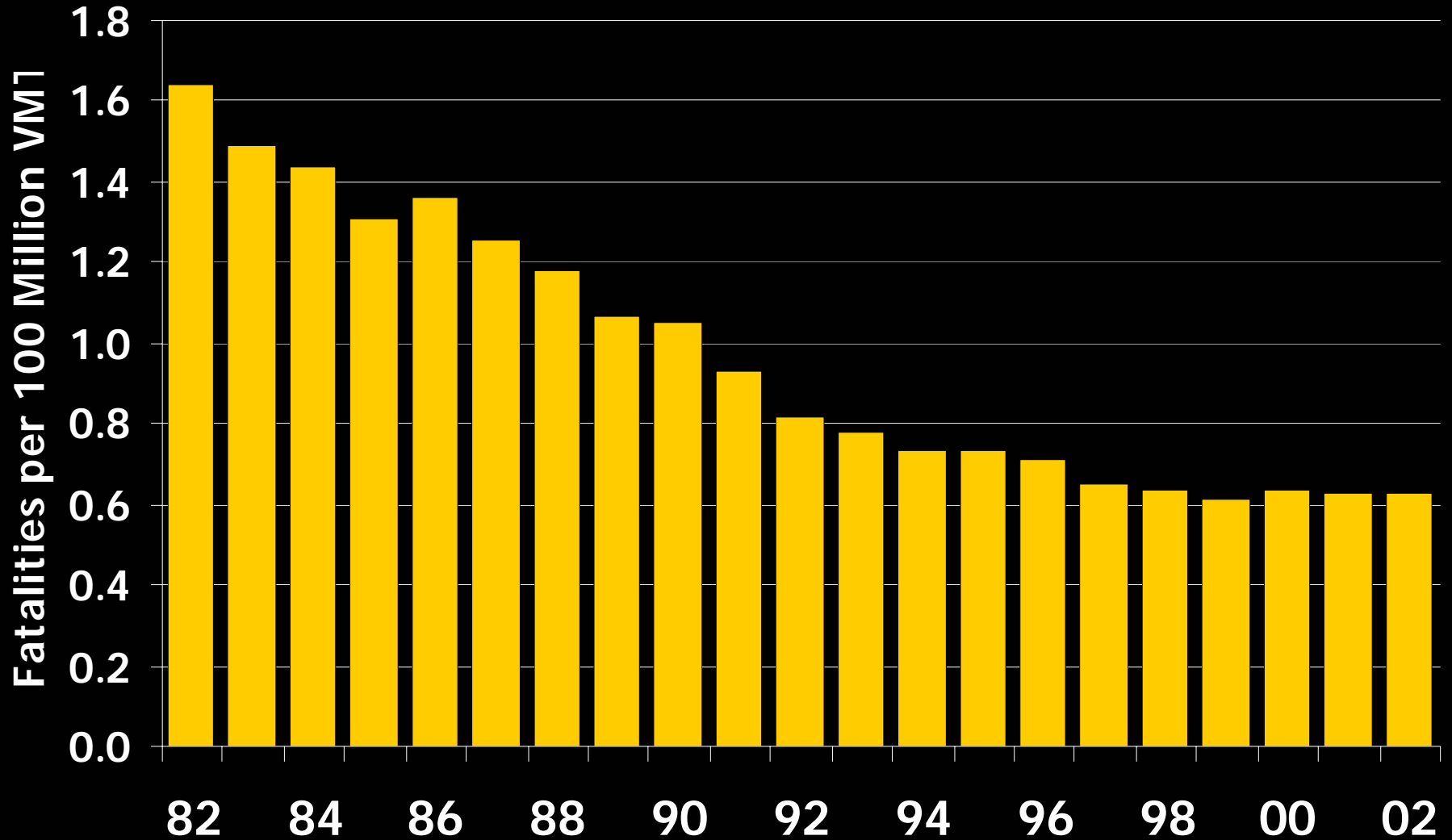
Source: FARS

BAC Levels for Alcohol Positive Drivers in Alcohol-Related Fatal Crashes, 2002



Source: FARS 2002 ARF

Alcohol-Related Fatality Rate



Strategies for Reducing Impaired Driving



High
Visibility
Enforcement



DWI Courts &
Special
Prosecutors



Screening &
Brief
Intervention

Strategy

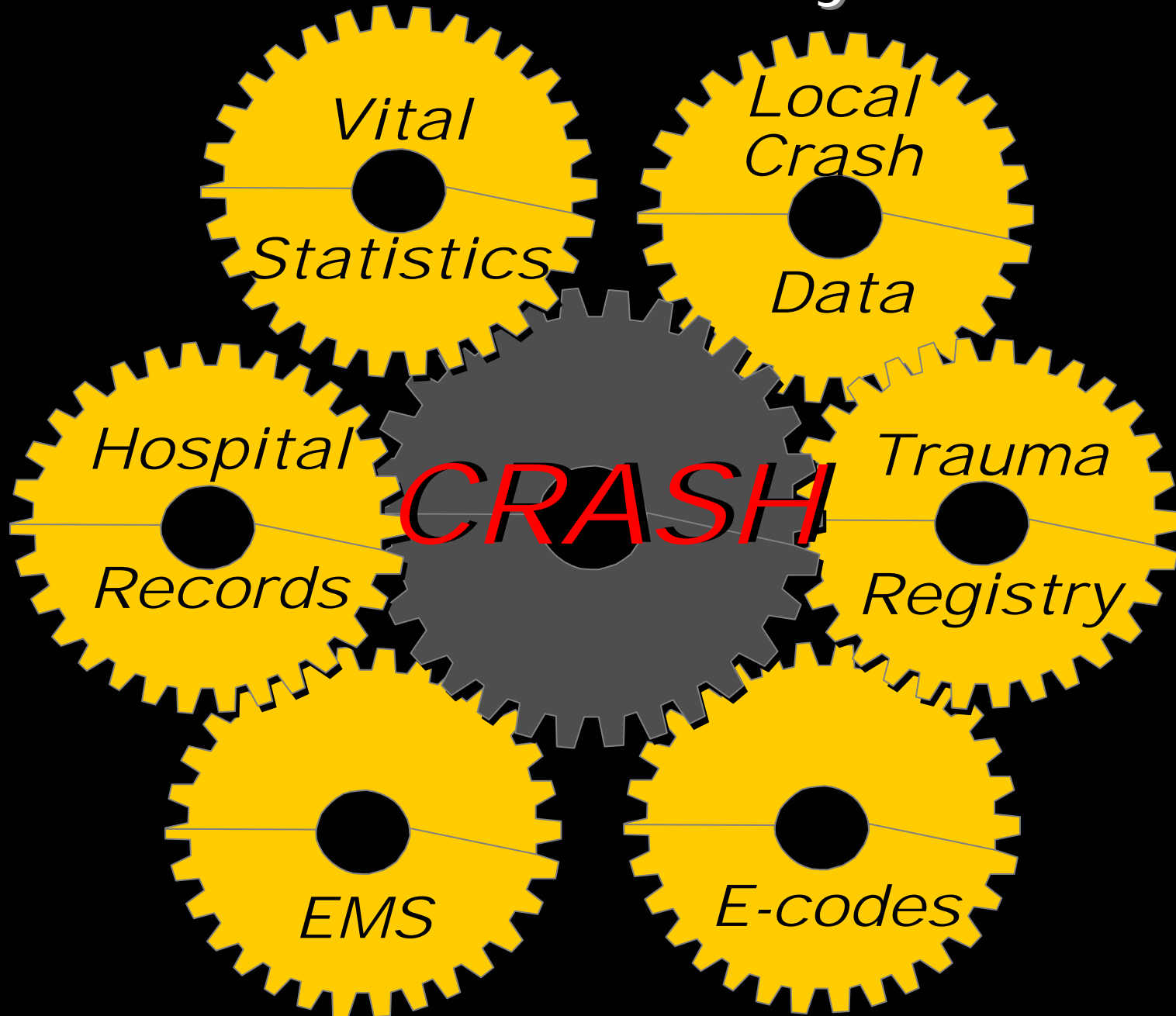


Screening &
Brief
Intervention

Highway Safety Priorities

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State and Community Traffic Data



nhtsa.dot.gov/safecommunities



SAFE COMMUNITIES

Nine agencies within the U.S. Department of Transportation are working together to promote and implement a safer national transportation system by combining the best injury prevention practices into the Safe Communities approach to serve as a model throughout the nation.



Safe Communities Service Center

The USDOT established the Safe Communities Service Center to serve as an information and technical assistance marketplace to advance Safe Communities nationwide. The Center provides one-stop shopping for local community needs for materials and resources related to building and strengthening Safe Communities.



Traffic Safety
IS
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People Saving People

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