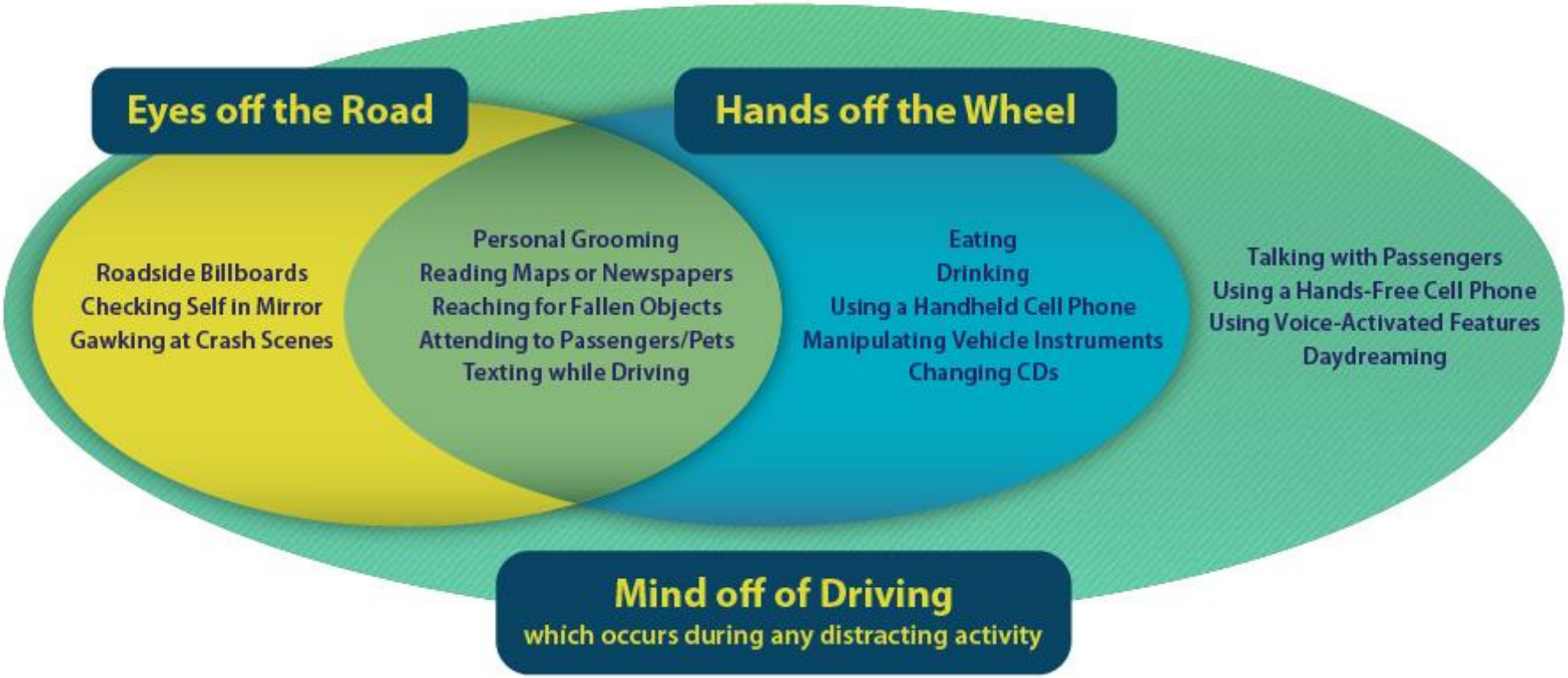
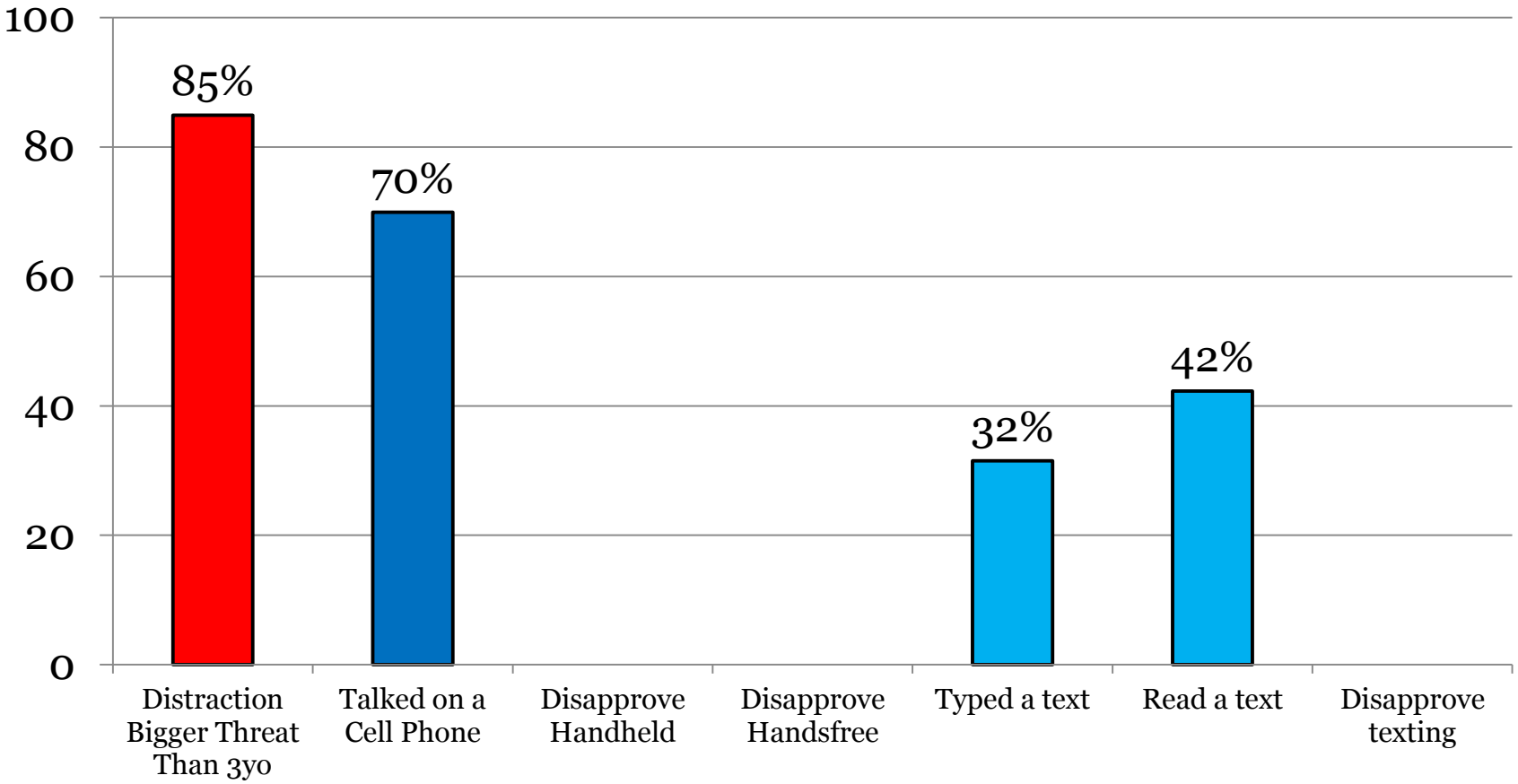
Understanding Distraction



www.exchange.aaa.com/safety/distracted-driving
AAA Public Affairs, 2013

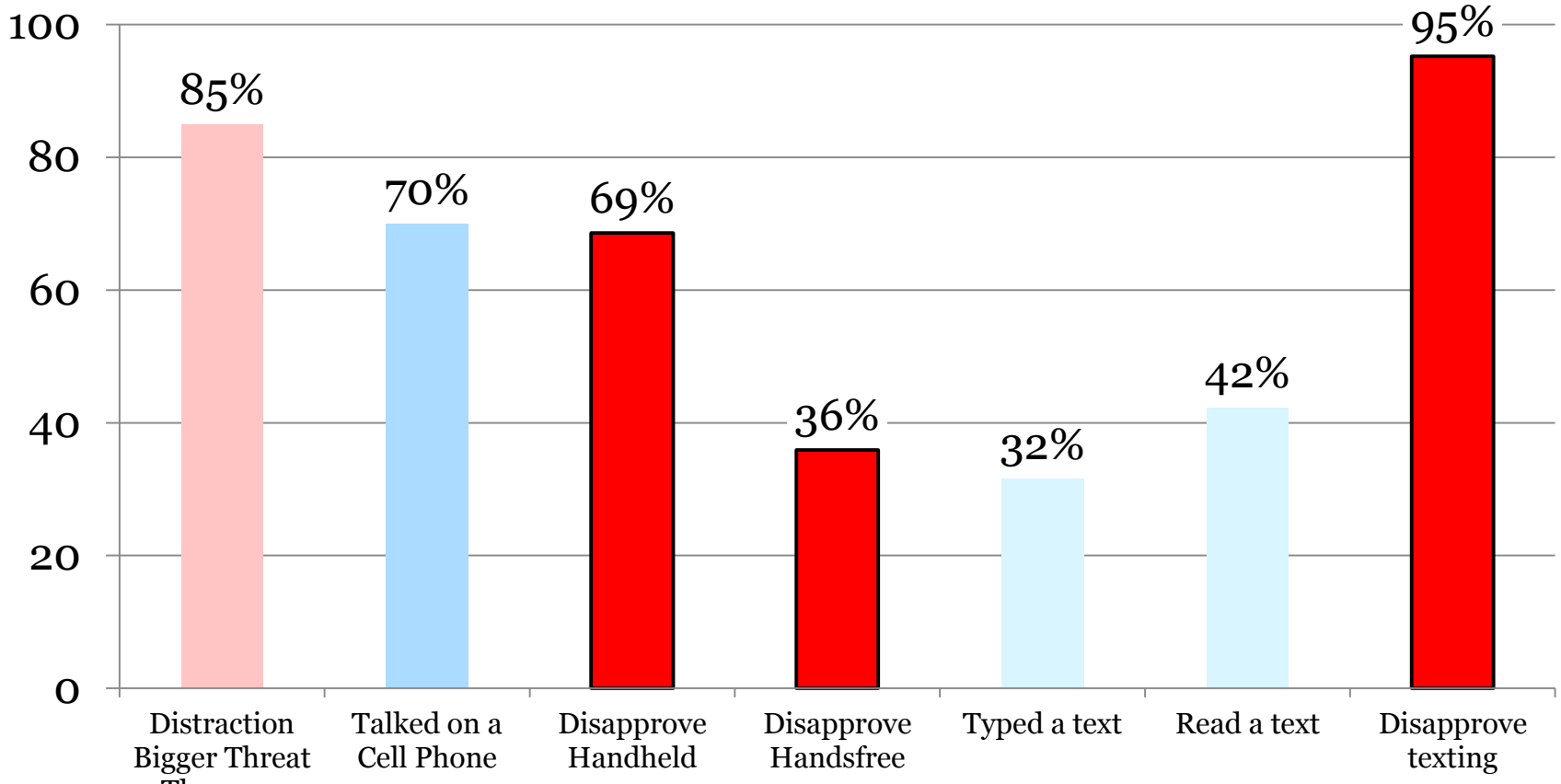
AAA Foundation 2015 Traffic Safety Culture Index



National sample of American drivers age 19 and older

www.aaafoundation.org/2015-traffic-safety-culture-index-0

“Do As I Say Not As I Do”



National sample of American drivers age 19 and older

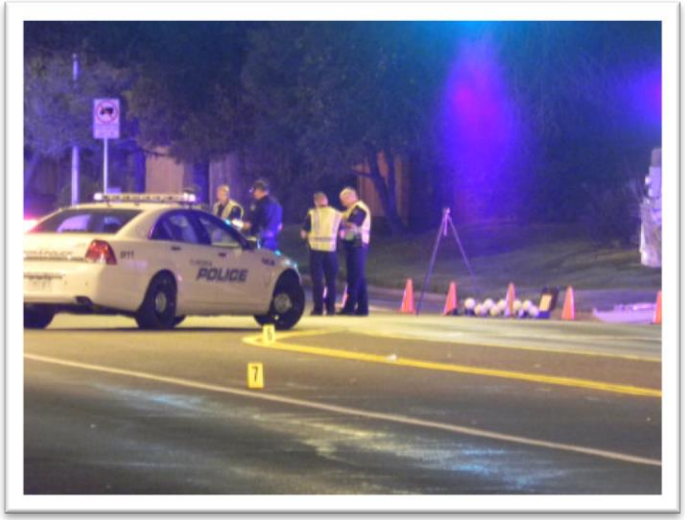
AAA Foundation 2015 Traffic Safety Culture Index
www.aaafoundation.org/2015-traffic-safety-culture-index-0

Crash impact is probably under-estimated

2013 National Statistics			
	Fatal crashes	Estimated Injury crashes	Police-reported crashes
Distraction-affected crashes	**10% of all fatal** (N=3,179)	**18% of all estimated injury** (N= 431,000)	**16% of all police-reported** (N=967,000)
Cell phone in use	**1.2% of all fatal** (N=404)	*Distracted Driving 2014, NHTSA* https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812260	

Data collection: probably under-reported

- Police can't tell
- Drivers won't say
- Dead men tell no tales
- Records subpoenaed only (maybe) w/fatality
- Police crash reports vary



Road Map…

- Distracted Driving: What's the Problem?
- What Does Research Tell Us?
- Public Education
- Laws and Legislation
- Enforcement
- What's on the Horizon?

What does the research say about risk?

Odds Ratio for Secondary Tasks in the 100-Car Study

Type of Secondary Task	Odds Ratio
Reaching for a moving object	**8.82**
Insect in Vehicle	6.37
Looking at External Object	**3.70**
Reading	**3.38**
Applying Makeup	**3.13**
Dialing a Hand Held Device	**2.79**
Inserting/retrieving CD	2.25
Eating	1.57
Reaching for a Non-Moving Object	1.38
Talking/Listening to a Hand-Held Device	1.29
Drinking from an Open Container	1.03
Other Personal Hygiene	0.70
Adjusting the Radio	0.50
Passenger in the Adjacent Seat	**0.39**
Child in Rear Seat	0.33

Crash risks doubles when a driver when looks away from the road for two or more seconds

Table 2. Odds Ratio for Secondary Tasks in the 100-Car Study (see Klauer, et al., 2006; p. 30) **Bold=statistically significant**

www.nhtsa.gov/DOT/NHTSA/NRD/Multimedia/PDFs/Crash%20Avoidance/2006/DriverInattention.pdf

Manual texting while driving

- Text messaging drivers **6 times** more likely to crash– University of Utah, 2009
  www.unews.utah.edu/old/p/121809-3.html

- Truckers who are texting – **23 times** more likely to have a crash or near-crash event - Virginia Tech Transportation Institute, 2009
  www.vtnews.vt.edu/articles/2009/07/2009-571.html

Cell phone use while driving

- Cell phone use, **both handheld and hands-free**: roughly quadruples crash risk
  www.aaafoundation.org/cell-phones-and-driving-research-update

- Simulators vs. naturalistic driving – complementary not exclusive

MENTAL DISTRACTION RATING SYSTEM

Even with your eyes on the road and your hands on the wheel, mental distractions dangerously affect drivers behind the wheel.

AAA.com/distraction

Phase 1 Key Findings

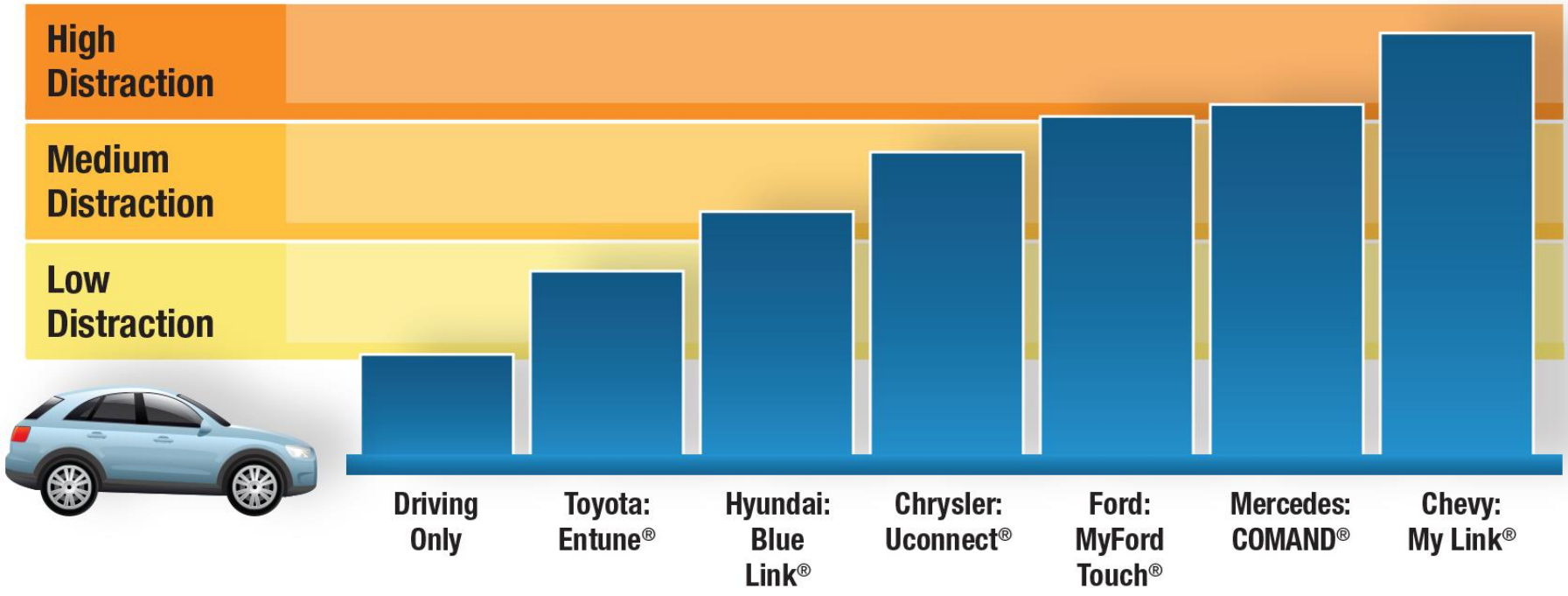
- Cognitive distraction exists and can be measured
- Cell phone use impairs driving ability
- Cognitive distraction can be a risk even if a driver is using a hands-free system
- Speech-based in-vehicle interactions rated the most cognitively distracting

https://vimeo.com/67329578

AAA Cognitive Distraction Research

Phase II

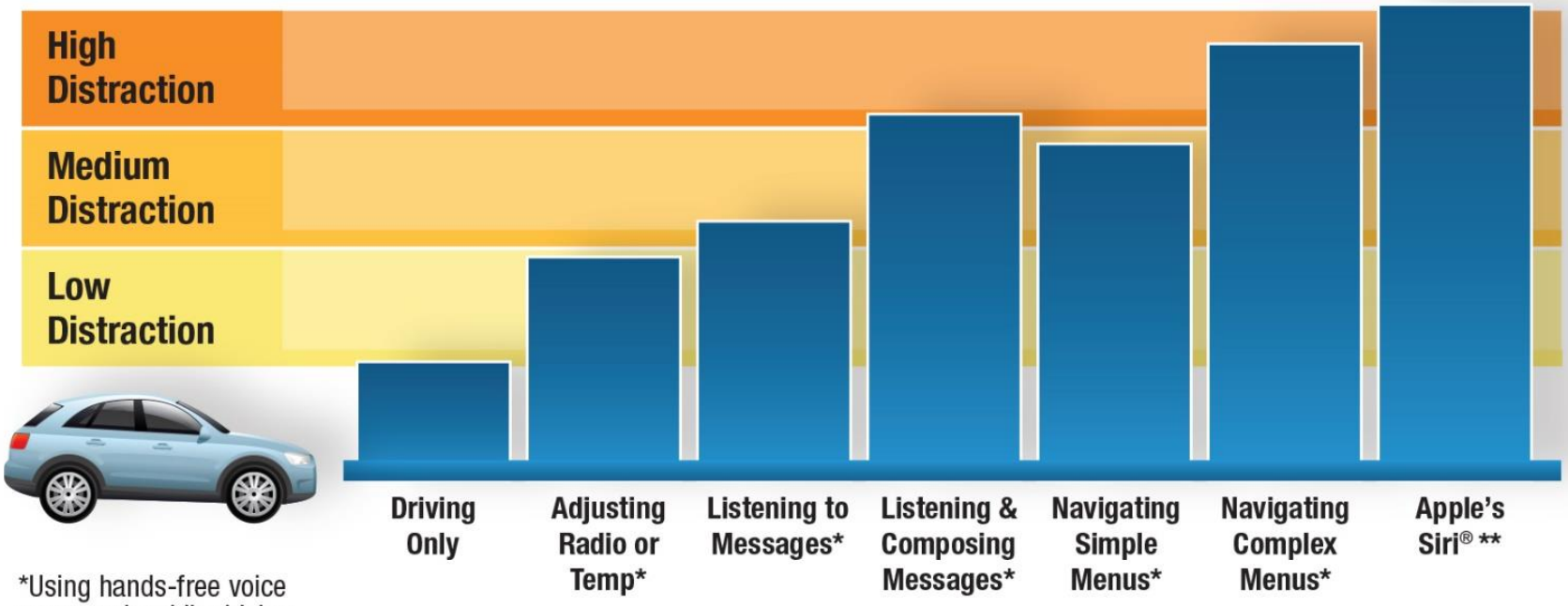
Mental Distraction Levels by System



AAA Foundation for Traffic Safety

https://youtu.be/67RxEfd-3TA

Mental Distraction Levels by Task



*Using hands-free voice commands while driving.

**Version iOS7 at time of research.

Evaluated sending/receiving texts, updating Facebook/Twitter and checking calendar by using voice commands while driving.

AAA Foundation for Traffic Safety

AAA

AAA Foundation for Traffic Safety www.AAA.com/distraction

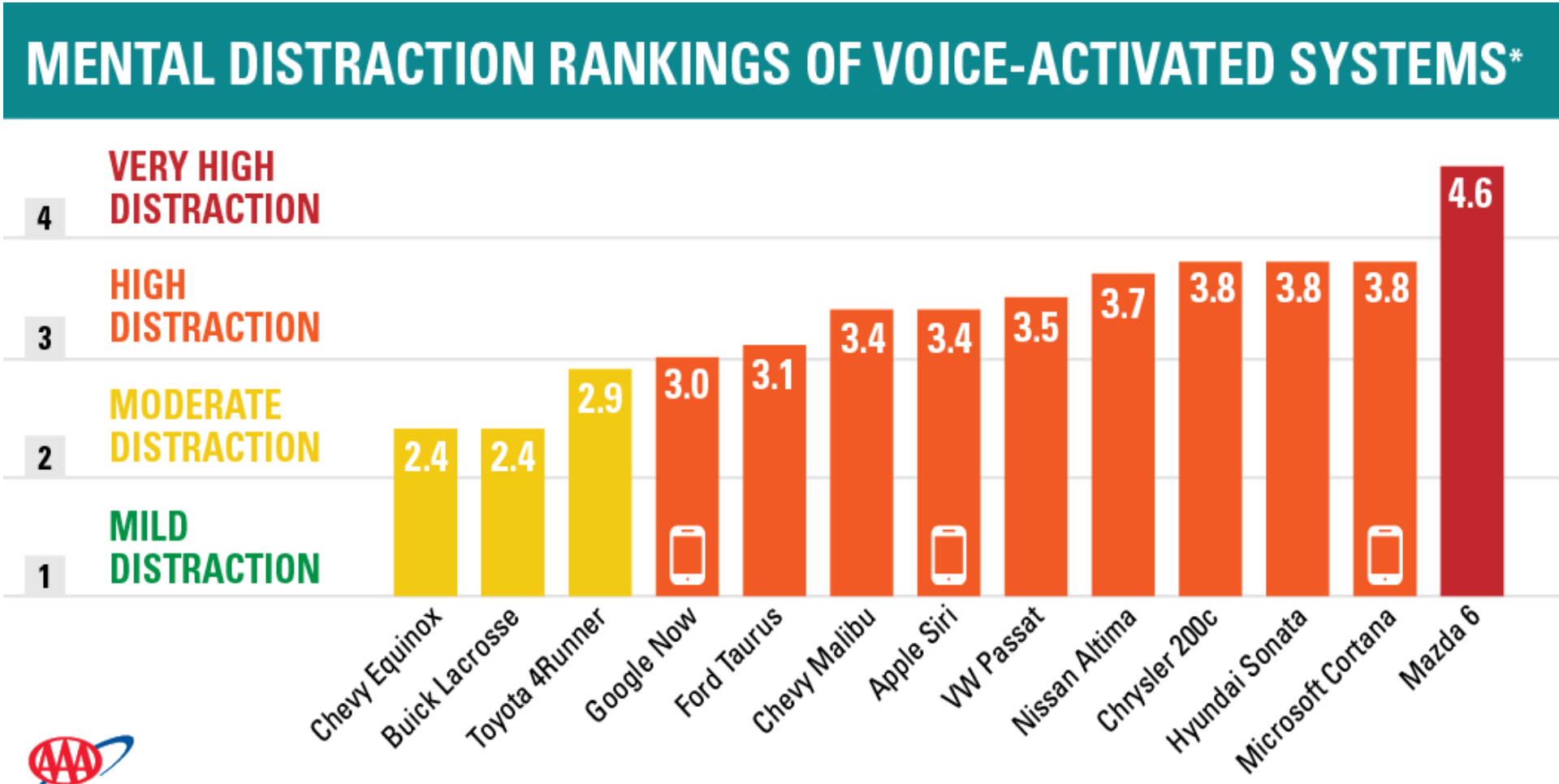
AAA Cognitive Distraction Research

Phase III:

- Does practice matter?
- Does age matter? Do all drivers experience cognitive distraction equally?
- Do differing in-vehicle systems and mobile voice assistants vary in terms of levels of distraction?

AAA Cognitive Distraction Research

Phase III: Findings



Source: AAA Foundation for Traffic Safety

*Mental distraction rankings when using voice-commands to make calls or change music while driving. Includes 2015 model-year vehicles.

MENTAL DISTRACTIONS CAN LAST AS LONG AS 27 SECONDS

after using voice commands on cars and phones to make a call, send a text or change the music.

AAA Recommendations

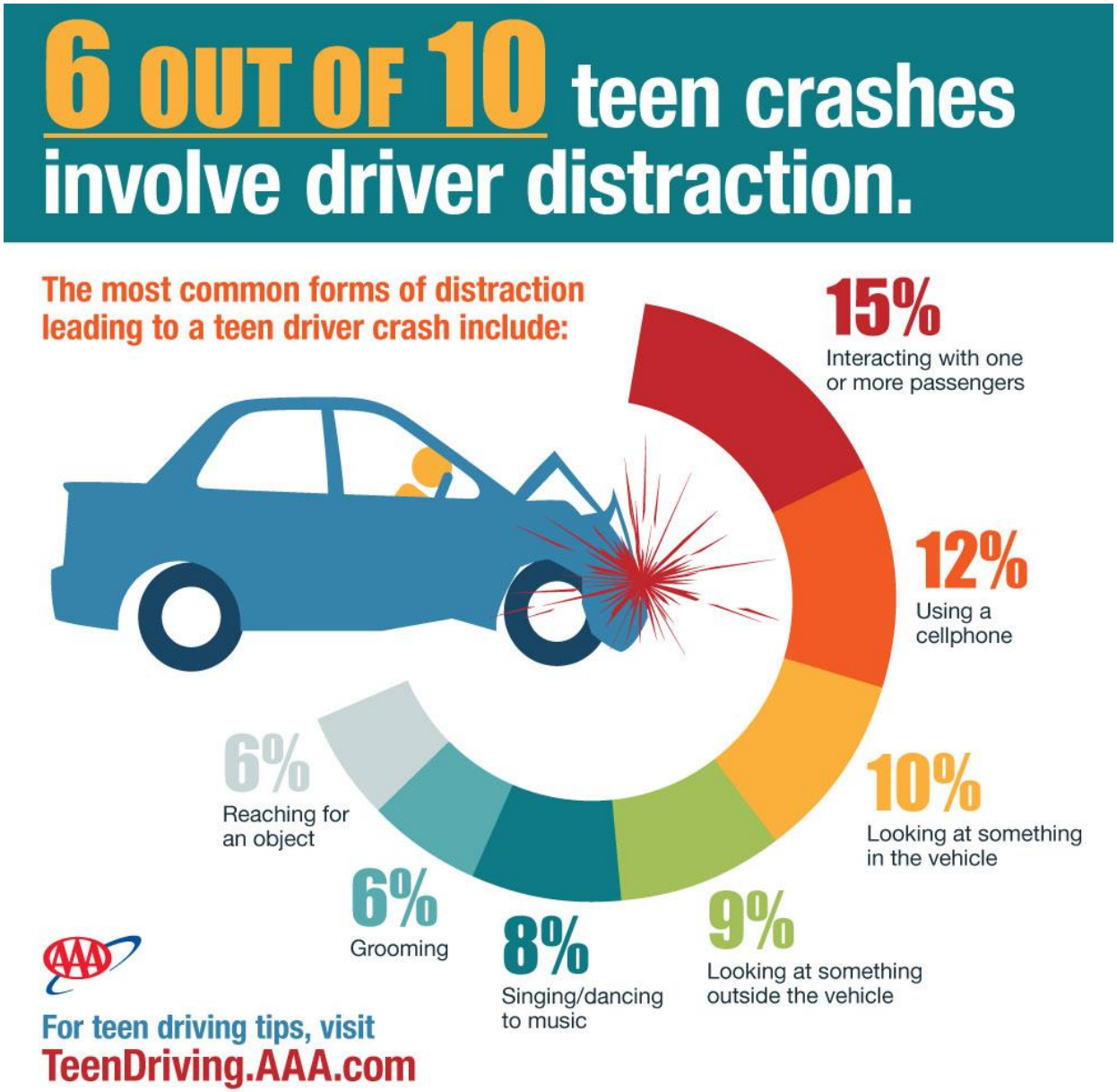
Developers:

- Design simpler systems
- Interactions should be no more demanding than listening to the radio or an audiobook
- Interactions that are high-risk or unrelated to driving should be disabled during driving

AAA Recommendations

Motorists:

- Hands-free is not risk free
- Drivers should limit use of voice-driven technologies to tasks related to driving



Teen drivers using cell phones:
An average of 4.1 seconds out of final 6 seconds before a crash looking away from the road.

Over half of all cell phone read-end crashes: driver exhibited no reaction at all before impact

Teen Drivers Risk Death with Young Passengers

A 16- or 17-year-old driver's **RISK OF BEING KILLED IN A CRASH** increases when there are young passengers in the vehicle.

Compared to driving without any passengers, **THE RISK**:

QUADRUPLES when carrying **3 or more passengers** younger than 21

DOUBLES when carrying **2 passengers** younger than 21

INCREASES by 44 % when carrying **1 passenger** younger than 21

DECREASES by 62 % when an adult age 35+ is in the vehicle

Adults 35+

Passengers under 21

Teen Drivers (ages 16 or 17)

AAA Foundation for Traffic Safety

"Teen Driver Risk in Relation to Age and Number of Passengers" AAA Foundation for Traffic Safety, MAY 2012

Teens and Cell Phone Use…

Age	Reported Using Phone While Driving	Reported Using Phone Fairly Often / Regularly While Driving
16-18	58 percent	20 percent
19-24	72 percent	27 percent
25-39	82 percent	43 percent
40-59	72 percent	30 percent
60-74	51 percent	15 percent
75+	31 percent	7 percent

Teens and Texting…

Age	Reporting Sending Text or Email While Driving	Reported Sending Text or Email Fairly Often / Regularly While Driving
16-18	31 percent	7 percent
19-24	42 percent	11 percent
25-39	45 percent	10 percent
40-59	24 percent	4 percent
60-74	7 percent	2 percent
75+	1 percent	1 percent

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AAA Foundation 2010 Study

- Focused on texting while driving by drivers age 17-26:
- Such drivers:
  - Are aware of distracted driving and anti-distraction laws
  - Engage in distracting activities and recognize them as so
  - Harbor heroic assumptions about their own driving abilities

Values Ladder

Sad (4%)
Shame (14%)
Guilt (41%)
Angry (5%)
Scared (9%)
Stupid (27%)

Get a ticket or be fined (6%)
Accident (39%)
Injure someone (9%)
Less focused (22%)
Kill someone (22%)

Eating or drinking (10%)
Looking at a GPS/ Map (9%)
Answering a phone call (7%)
Writing a text (20%)
Looking for music to play (16%)
Reading a text (11%)

Message Architecture

Peace of Mind

Creates guilt and shame because I/You knew better

Causes accidents than can injury or take a life

Texting

Key Findings

- Young people KNOW, and KNOW better
- Most susceptible and responsive to messaging that directly confronts them with the tragic consequences of not acting on what they know
- Evoking emotions of “guilt” and “stupidity” (their own words) they would feel if their actions were to cause a crash

www.aaafoundation.org/distracted-driving-message-development-and-testing-heart-mind-strategies-project

Road Map…

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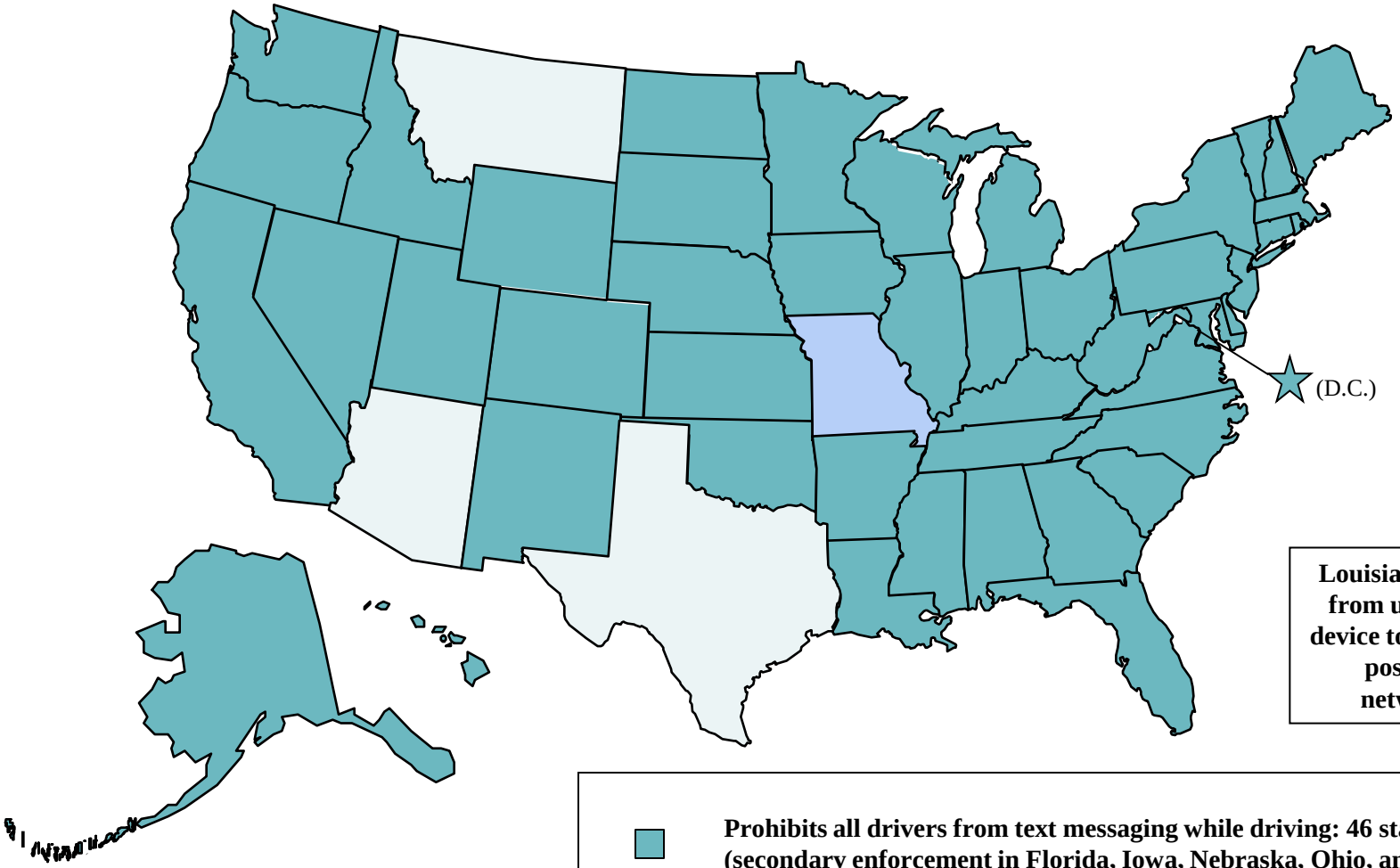
Text Messaging Bans



Louisiana bans drivers from using a wireless device to access, read, or post to a social networking site

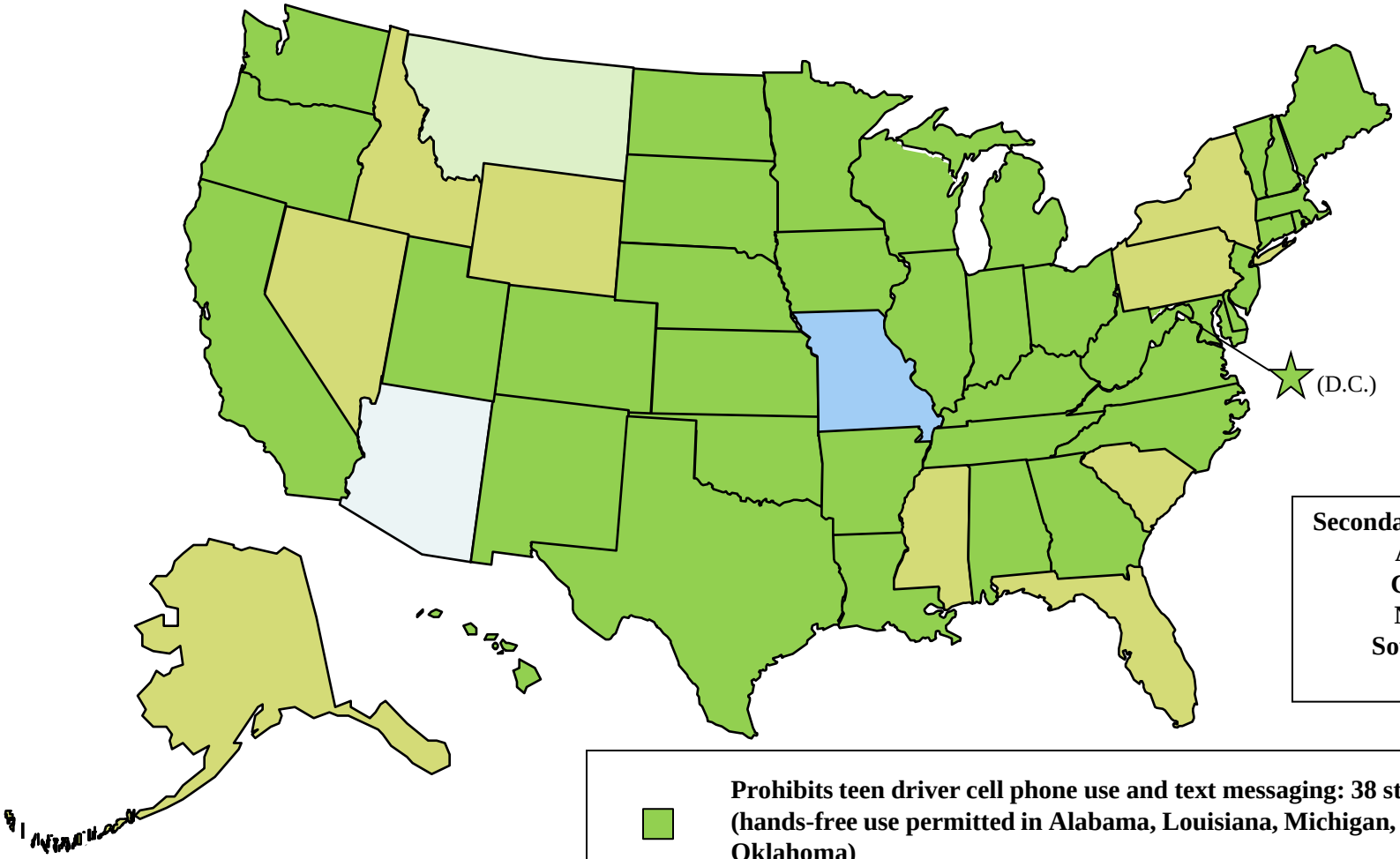
Prohibits all drivers from text messaging while driving: 46 states + D.C. (secondary enforcement in Florida, Iowa, Nebraska, Ohio, and South Dakota)

Prohibits text messaging for teen drivers only: 1 states

No law prohibiting all drivers from text messaging while driving: 3 states

AAA Public Affairs

Teen Wireless Bans



Secondary enforcement:
Arkansas
California
Nebraska
South Dakota
Virginia

Prohibits teen driver cell phone use and text messaging: 38 states + D.C. (hands-free use permitted in Alabama, Louisiana, Michigan, and Oklahoma)

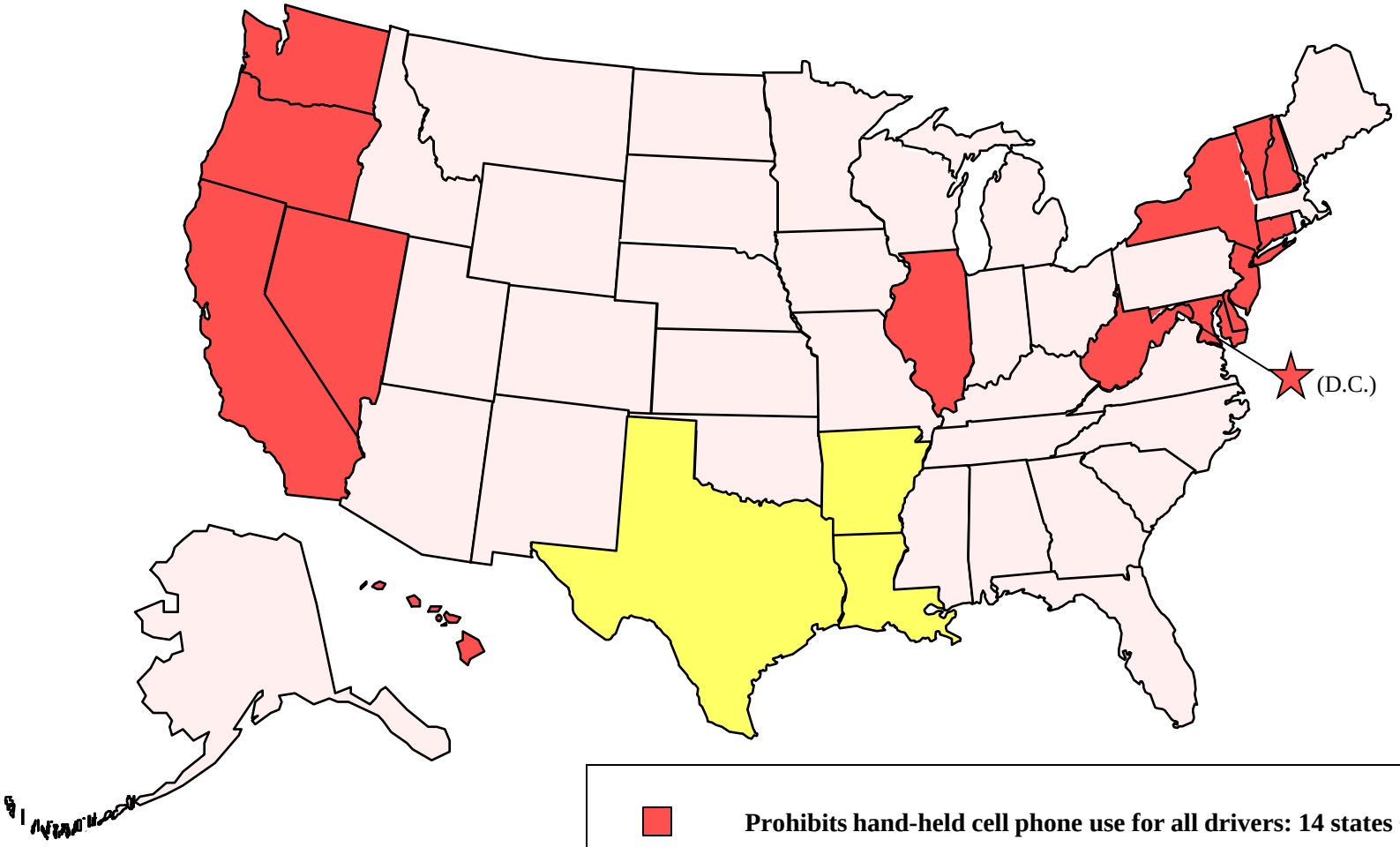
Prohibits teen driver text messaging only: 1 states

Prohibits text messaging for all drivers (teens included): 9 states (+ handheld ban for all drivers New York and Nevada)

No law prohibiting teen driver cell phone use : 2 states

AAA Public Affairs

Handheld Cell Phone Bans



Prohibits hand-held cell phone use for all drivers: 14 states + D.C.

Prohibits hand-held cell phone use for all drivers in school and/or work zones only: 3 states

No law prohibiting hand-held cell phone use for all drivers: 33 states

AAA Public Affairs

Public opinion on distracted driving laws

State Law	Public Support
Texting ban for all drivers	87.7%
Handheld cell phone ban for all drivers	70.3%
Complete cell phone ban for all drivers	42.4%

2015 Traffic Safety Culture Index, AAA Foundation
www.aaafoundation.org/2015-traffic-safety-culture-index-0

Ban all cell phone use?

- Enforcement?
- Public acceptance?
- Industry/commercial acceptance?

Other distracted driving laws

- ‘Comprehensive distracted driving laws’
- Reckless/negligent driving laws
- School and work zone bans
- Telematics/infotainment restrictions

Key Areas to Explore in Texas

- Adopt a texting while driving ban for all drivers
- Federal FAST Act distracted driving incentive grants
- Improve distracted driving data collection
- Evaluate your educational programs if possible – help everyone zero in on what works and why