



Overview of Distracted Driving

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Motor vehicle crashes

- 1 million people have died in motor vehicle crashes in the last 25 years
- 35,000 deaths each year in the U.S.
- Leading cause of on and off-the-job unintentional deaths in the U.S.
- Leading cause of death for people 5- to 24 years old
- Cost to society = \$100 billion per year
- Society appears to have grown complacent, accepting these deaths and injuries
- Safety engineering has made significant advances

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Motor vehicle crashes

Vehicle maintenance factors

- Definite cause 10% of the time
- Probable cause 13% of the time

Environmental factors

- Definite cause 20% of the time
- Probable cause 33% of the time

Human error

- Definite cause 70% of the time
- Probable cause 93% of the time

Source: Auto Alliance

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Driving distractions

The Science of Distraction

Visual: eyes on road

Mechanical: hands on wheel


Cognitive: mind on driving

- Visual and mechanical distractions are short lived - cognitive distractions last much longer
- Much more than “eyes on the road, hands on the wheel”

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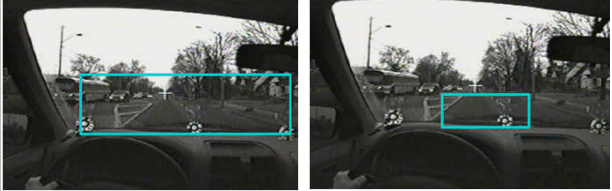
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 **Selective attention / switching**


1. No such thing as “multi-tasking” When brains are overloaded by two cognitive tasks, people switch attention (without recognizing it)
2. Make one task “primary” and the other “secondary” Cognitive attention to driving becomes secondary to a phone conversation
3. When driving is a secondary task for the brain, driving becomes impaired
Impairment takes several forms, including inattention blindness and tunnel vision

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 **“Tunnel Vision”**



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 **Crashes and cell phones**


Risk – how risky is the distraction

Reading	3.4x
Reaching for a moving object	8.8x
Turning around in a seat	8.8x
Talking on a cell phone	4x
Texting	8x

Prevalence – how often is it happening

Manipulating a wireless device	1.5%
Talking on a cell phone	9%

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 **Crashes and cell phones (2012)**

- Minimum of 281,000 crashes
 - 5% of all crashes, involve texting
- 1.2 million crashes per year
 - 21% of all crashes, involve cell phone conversations

26% of all crashes involve cell phone use

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What we know about cell phone use and driving

Role of Mobile Phones in Motor Vehicle Crashes Resulting in Hospital Attendance

Suzanne P McEvoy, Mark R Stevenson, Anne T McCart, et al - 2004

- Likelihood of crashing increases by 4x
- Risk was raised irrespective of whether or not a hands-free device was used

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Hands-free and crash risk

Hands free devices do not reduce crash risk:

- National Safety Council
 - National Transportation Safety Board
 - World Health Organization
 - Insurance Institute for Highway Safety
 - Governors Highway Safety Association
- 30+ studies reported substantial negative effects of cell phone use on driving for hands-free and handheld phones
 - Similar effects in reaction time, speed, headway and lateral lane position, for hands-free and handheld phones

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Understanding crash causation

"The real key to significantly improving safety is keeping your eyes on the road. In contrast, cognitively intense tasks can have a measurable effect in the laboratory, but the actual driving risks are much lower in comparison."

Source: Virginia Tech Transportation Institute

"Talking - be it interacting with passengers or on the cell phone - has a mixed effect on driving safety. In fact, in the case of drowsy drivers (e.g. truckers), talking on cell phones can actually reduce crashes. Evidence shows that so-called "cognitive distractions" aren't much of an issue, but physical distractions are."

Source: Ford Motor Company

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Understanding crash causation

"Using mobile phones can cause drivers to take their eyes off the road, their hands off the steering wheel, and their minds off the road and the surrounding situation. It is this type of distraction - known as cognitive distraction - which appears to have the biggest impact on driving behaviour."

**Source: World Health Organization
(with funding from NHTSA)**

"There is no conclusive evidence on whether hands-free cell phone use is less risky than hand-held use."

Source: Governors Highway Safety Association (GHSA)

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Understanding crash causation

Experimental and laboratory studies

- Simulators
- Test tracks

Epidemiology studies

- Examines statistical correlations

Naturalistic studies

- Observations
- Cameras and monitoring equipment in cars

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Understanding crash causation

Naturalistic studies

Attributes

- Natural driving environment

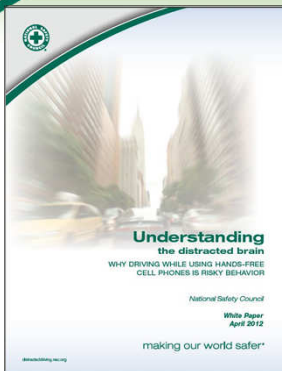
Limitations

- Not representative - limited study size
- Are they really natural?
- The problem with surrogate crashes
- Key data (near crashes) are not collected
- Can't measure cognitive distraction - no audio or cell records

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Free download at:
thebrain.nsc.org

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Misperceptions

If talking on a cell phone is so dangerous, and cell phone use has exploded in the last 10 years, why haven't we seen a spike in crashes and fatalities?

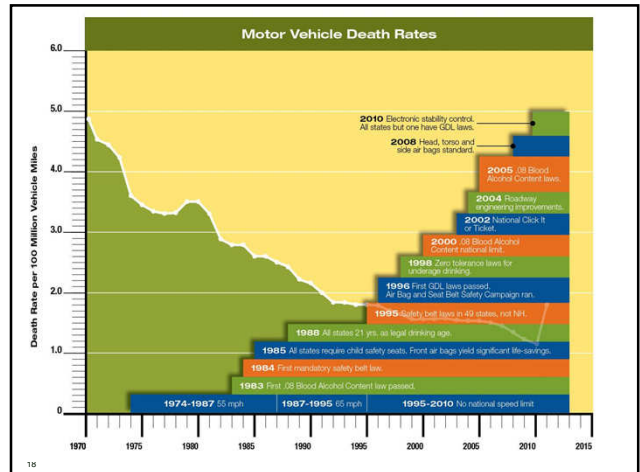
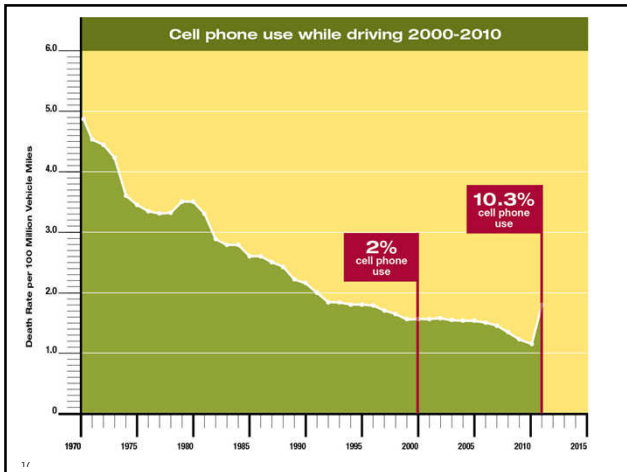
Crashes have actually decreased 9% since 2000 and fatalities have also trended downward.

How can this be?

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Misperceptions

What about CB radios? Navigation? Books on tape?

- Simplex communication occurs in one direction only
- Shorter duration and less complex
- Never input navigation while the vehicle is moving
- Voice directions may be less distracting than reading a map and street signs
- Not a two way, duplexed conversation. Easier to disengage.

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Misperceptions

It's no more dangerous than talking to a passenger

- A passenger in a vehicle is aware of the driving situation and can even serve as an additional look-out
- The phone carries a certain obligation of immediacy

There isn't enough evidence to prove that using a cell phone while driving causes crashes

- Difficult to collect crash data
- Much evidence, few statistics
- An absence of statistics does not prove or even indicate the absence of a problem

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Putting it all together

Motor vehicle crashes are the leading cause of death for a large percentage of our population

- Human error causes the vast majority of crashes
- Cell phone drivers four times more likely to be involved in a personal injury crash
- Reaction times slower than .08 BAC
- Hands-free as dangerous as handheld
- Inattention blindness
- 37% reduction in spatial processing in the part of the brain used for the task of driving
- Cell phone use involved in 26% of all crashes

Voluntary compliance is difficult

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Under-Reporting of Fatal Crashes Involving Cell Phones



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Challenges

- Not fully investigated if
 - It's not a violation in jurisdiction
 - More serious violation is identified
- Factor not listed on crash report
- Cell use discovered much later
- Drivers don't admit cell phone use
- Drivers seriously injured or deceased
- Difficult to obtain cell phone records
- Moment of crash not always known

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Crashes Included

- Evidence indicated a driver was using a cell phone:
 - Driver admitted
 - Caller reported use
 - Passenger reported use
 - Police find unfinished message in phone at scene
 - Investigation results in police publicly identifying cell phone as crash factor
 - Coroner or other authoritative report
 - Civil or criminal court documents/testimony
 - Wireless records

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Limitations

- Convenience sample of identified crashes
 - Not random
 - Media may play up some stories
 - Bias toward Internet presence
 - Cannot capture crashes no one knows about
- Sample not representative of all crashes involving cell phones
- Findings apply only to our sample
 - Don't generalize to all crashes

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Findings

- In 2011, only 52 percent of the fatal crashes reviewed were coded in FARS as involving a cell phone.
- Cell phone use isn't always being recorded on police crash reports – leads to under-reporting in state & national numbers
- When cell phone factors are missing from the data, most often it was not recorded in crash reports
- Wide state by state variations

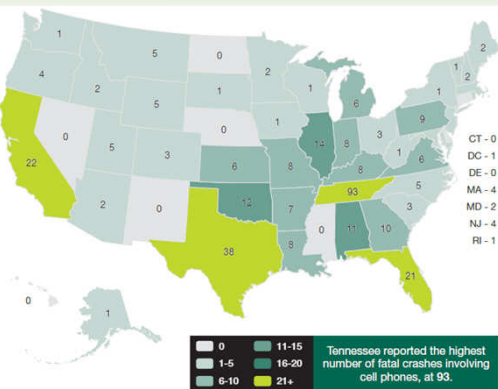
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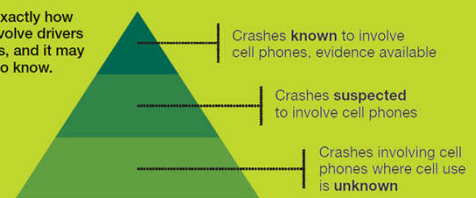


Fatal Cell Phone Crashes by State, 2011



The Number of Cell Phone Crashes: A Hypothetical

We don't know exactly how many crashes involve drivers using cell phones, and it may not be possible to know.

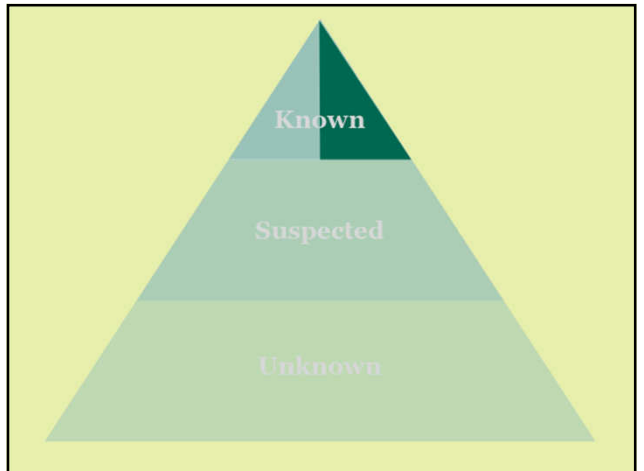


Even if 100% of known crashes were captured, data would still be greatly under-reported.

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Recommendations

- Distracted driving and cell phone crash data should always be described as under-reported by an unknown amount.
- When making policy decisions, policymakers should assume that cell phone involvement in crashes is substantially greater than crash statistics show.
- Determine if an under-reporting correction is possible for cell phone use, similar to the imputed data on BAC.

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Putting it all together

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Voluntary compliance is difficult

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For Immediate Release
Jan. 12, 2009

Contact: Meredith Morris
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Editors' note: scientific references are available from NSC media relations, 630/775-2307 or media@nsc.org.

National Safety Council Calls for Nationwide Ban on Cell Phone Use While Driving
Bold Plan Goals to Involve Law Makers, Businesses and Public

Itasca, Ill. — The National Safety Council today is calling on motorists to stop using cell phones and messaging devices while driving, and is urging businesses to enact policies prohibiting it and governors and legislators in all 50 states and the District of Columbia to pass laws banning the behavior.

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NTSB Recommends:


- (1) Ban the nonemergency use of portable electronic devices (other than those designed to support the driving task) for all drivers;
- (2) Use the National Highway Traffic Safety Administration model of high visibility enforcement to support these bans; and
- (3) Implement targeted communication campaigns to inform motorists of the new law and enforcement, and to warn them of the dangers associated with the nonemergency use of portable electronic devices while driving.

December 13, 2011

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Companies with policies

- Exxon/Mobil
- DuPont
- Halliburton
- Shell
- Chevron
- BP
- Enbridge
- AstraZeneca
- Spectra Energy
- CA Office of Traffic Safety
- Abbott
- EnCana
- Cargill
- CSX Intermodal
- Schneider National
- Sysco Corporation
- Time Warner Cable
- Potash
- Owens Corning
- NTSB

Just a sample - no national database of companies with policies

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Employer liability

\$21.6 million: A stay-at-home dad received the award for the violent wreck that killed his wife, after a jury found a driver negligent for either talking on her cell phone or some other distraction.

\$21 million: A soft drink beverage salesperson driving a passenger vehicle was using a hands-free headset, in compliance with a handheld ban, when she struck another vehicle and injured the driver. A jury awarded \$21 million in damages to the injured driver.

\$20.9 million: Dykes Industries of Little Rock, Ark., lost a personal injury suit in which its employee was using a cell phone when the crash occurred.

\$18 million: Holmes Transport, of Muscle Shoals, Ala., was ordered to pay the damages by a U.S. District Judge to Mark Tiburzi who was left unable to walk or talk after a crash caused by one of their drivers distracted by a cell phone.

\$5.2 million: International Paper employee Vanessa McGrogan was using her company-supplied cell phone when she rear-ended a vehicle driven by Debra Ford.

\$2.5 million: State of Hawaii agreed to pay as its share of liability in a crash involving a state employee who was talking on her cell phone when she hit a tourist.

\$1.5 million: City of Palo Alto has agreed to pay the victim of a 2006 vehicle crash involving a city worker who was using his cell phone while driving.

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Why Such Big Awards?

- Public now well aware of the risks
- Juries come from the public
- Juries expect employers to be aware of risks
- Employer failure to prevent dangerous behavior = negligent and willful ... beyond ignorant



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Public support

Quinnipiac University

- 2424 US Voters
- November 2010, +/- .02
- **By a 63% – 34% margin, American voters support a federal ban on cell phone use while driving, even while using a "hands-free" device**

Nationwide Insurance "On Your Side Survey"

- 1008 US drivers
- August 2009, +/- .03
- **80% support ban on texting or emailing**
- **57% support a ban on all cell phone use while driving**

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Public support

According to the National Highway Traffic Safety Administration (NHTSA), current scientific research indicates that using a wireless phone while driving degrades a driver's performance, whether with a hands-free or hand-held wireless phone. NHTSA advises that the safest course of action is to refrain from using a wireless phone while driving.

Consider turning your phone off and allowing calls to go to voicemail while driving—for your safety and that of those around you.

-Verizon website
(May 2013)

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CEO Selling Proposition

1. Employee cell phone use while driving is a significant and growing safety threat to our employees and the driving public.
2. It has also become a significant financial risk and liability.
3. If a total ban policy is properly implemented and supported, there will not be a negative effect on productivity, customer service or employee morale.

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Karen Sprattler

MAP21, NHTSA enforcement blitz, state legislation, state programs, etc.).

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Takeaways

- We need full attention for the task of driving - cognitive distraction is real - Multitasking is a myth
- Hands-free is not risk free
- Risk exposure is what makes cell phone use the biggest threat
- A total ban on employee cell phone use while driving is "best safety practice" and your company's best defense against liability exposure.

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Takeaways

- We need full attention for the task of driving - cognitive distraction is real - Multitasking is a myth
- Hands-free is not risk free
- Risk exposure is what makes cell phone use the biggest threat

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What you can do

- Personal example – stop using cell phone when driving (change no answer greeting)
- Don't talk with people who call you while they are driving
- Educate employees, drivers, parents, friends and family
- Implement cell phone driving bans
- Support legislation and enforcement
- Hold offenders accountable

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