Examining & Implementing Effective Evidence-Based Strategies to Reduce Distracted Driving

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More than 9 people are killed every day in crashes that involve a distracted driver.

https://www.cdc.gov/motorvehiclesafety/distracted_driving/index.html
A growing issue

• In 2015, 3,477 people were killed in motor vehicle crashes involving distracted drivers
• During daylight hours, approximately 660,000 drivers are using cell phones while driving
• Cell phone use continues to be higher among females than male drivers
• Cell phone use continues to be highest among 16 – to 24 – year old drivers
In Texas

• Governor’s EMS and Trauma Advisory Council (GETAC)
  • Injury Prevention Committee
    • 13 member committee
      • Austin (3)
      • Lake Jackson
      • Dallas (3)
      • Ft Worth
      • El Paso
      • Houston
      • San Antonio (2)
      • Van Horn
The Question

What are the evidence-based strategies or countermeasures that reduce distracted driving among persons 16+ years of age?

Sources:
Pub Med
Embase
Cinahl
Centers for Disease Control and Prevention
National Highway Traffic Safety Administration
National Safety Council
Federal Highways Administration
World Health Organization
Governors Highway Safety Association
Texas Department of Transportation
Distracted Driving.gov
Safe Kids Worldwide
American College of Emergency Physicians
Insurance companies

Key search words used:
evaluation of distracted driving prevention; OR
evaluation of distracted driving prevention interventions; OR
evaluation of distracted driving countermeasures; OR
evaluation of technology to prevent distracted driving; OR
evaluation of state laws/policies to prevent distracted driving; OR
mindfulness and driving; OR
inattention and driving

The years searched for all questions were 1999-2016.
The language searched was English.
Follow-up Evaluation of Performance: A Guide to Best Practice

Evaluation levels of evidence

Level I: Evidence from a systematic review of all relevant randomized controlled trials (RCT's), or evidence-based clinical practice guidelines based on systematic reviews of RCT's

Level II: Evidence obtained from at least one well-designed Randomized Controlled Trial (RCT)

Level III: Evidence obtained from well-designed controlled trials without randomization, quasi-experimental

Level IV: Evidence from well-designed case-control and cohort studies

Level V: Evidence from systematic reviews of descriptive and qualitative studies

Level VI: Evidence from a single descriptive or qualitative study

Level VII: Evidence from the opinion of authorities and/or reports of expert committees
## Grading the Findings

<table>
<thead>
<tr>
<th>Grade</th>
<th>Nursing Level</th>
<th>Document Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>I-II (+) Positive Impact</td>
<td>Green</td>
</tr>
<tr>
<td>Moderate</td>
<td>III-V (Inconclusive Evidence)</td>
<td>Yellow</td>
</tr>
<tr>
<td>Low</td>
<td>I-IV (-) Negative Impact</td>
<td>Red</td>
</tr>
<tr>
<td>Very Low</td>
<td>VI-VII or No evaluation</td>
<td>Gray</td>
</tr>
</tbody>
</table>
## Categorizing the Findings

<table>
<thead>
<tr>
<th>SUPPORT USE</th>
<th>CAUTION</th>
<th>AVOID</th>
<th>DISCRETION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good Quality Study AND Positive Impact on Prevention</td>
<td>Quality of Study has Limitations AND Impact on Prevention Inconclusive</td>
<td>Low Quality Study AND Negative Impact on Prevention</td>
<td>Very Low Quality Study or No Evaluation AND Unknown Impact on Prevention</td>
</tr>
</tbody>
</table>

<table>
<thead>
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<th>DISCRETION</th>
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<tbody>
<tr>
<td>Good Quality Study AND Negative Impact on Prevention</td>
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<td>Quality Study or No Evaluation AND Unknown Impact on Prevention</td>
</tr>
</tbody>
</table>
20 Articles (describe 16 interventions)

- 3 Effective
- 3 Inconclusive
- 1 ineffective & harmful
- 13 lacked evaluation
The Findings **GREEN**

- Steering teens safe: a randomized trial of a parent-based intervention to improve safe teen driving
- Implementation Evaluation of "Steering Teens Safe": Engaging Parents to Deliver a New Parent-Based Teen Driving Intervention to Their Teens
- Front Windshield Sticker Reminder
The Findings **YELLOW**

- Center line rumble strips
- Road shoulder rumble strips
- Cell phone bans
The Findings RED

• Motivational counseling/intervention with exposure to trauma room
The Findings GREY

- Laws prohibiting all cell phone use
- High-visibility enforcement of cell phone laws with public awareness campaign
- High-visibility enforcement of cell phone laws with public awareness campaign
- State all-driver distracted driving laws and high school students' texting while driving behavior
- Distracted driving law enforcement
- Center line rumble strips
- Computer-delivered driver safety behavior screening and intervention program initiated during an emergency department visit
- High School/Hospital Educational Program
- Public Service Announcements
- Cell Phone Filter/Blocker
- Systems Approach to the Management of Distracted Driving
- Reviews from Expert Panels
No studies were found for the following

• Pledges not to text while driving
• Information on distracted driving as a required component of driver education
• Communication and informational campaigns about the dangers of texting while driving
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