

## What Works and Doesn't Work for Preventing Distracted Driving?\*

SUPPORT USE	CAUTION	AVOID	DISCRETION
<p style="text-align: center;"><b>Good Quality Study</b> AND <b>Positive Impact on Prevention</b></p> <hr/> <p>There is strong evidence based on research and evaluation that these strategies have been shown to reduce texting while driving.</p> <ul style="list-style-type: none"> <li>• Steering Teens Safe<sup>1,2</sup></li> <li>• Front Windshield Sticker Reminder<sup>3</sup></li> </ul>	<p style="text-align: center;"><b>Quality of Study has Limitations</b> AND <b>Impact on Prevention Inconclusive</b></p> <hr/> <p>These strategies need additional research and evaluation.</p> <ul style="list-style-type: none"> <li>• Center line rumble strips<sup>4</sup></li> <li>• Road shoulder rumble strips<sup>5</sup></li> <li>• Cell phone bans<sup>5</sup></li> </ul>	<p style="text-align: center;"><b>Low Quality Study</b> AND <b>Negative Impact on Prevention</b></p> <hr/> <p>The study design is poor. These strategies need additional research and evaluation.</p> <ul style="list-style-type: none"> <li>• No studies were identified</li> </ul>	<p style="text-align: center;"><b>Very Low Quality Study or No Evaluation</b> AND <b>Unknown Impact on Prevention</b></p> <hr/> <p>The study design is very poor and need well-designed evaluation or no evaluation was conducted.</p> <ul style="list-style-type: none"> <li>• High-visibility enforcement of cell phone laws with public awareness campaign<sup>8,9</sup></li> <li>• State all-driver distracted driving laws and high school students' texting while driving behavior<sup>10</sup></li> <li>• Distracted driving law enforcement<sup>11</sup></li> <li>• Center line rumble strips<sup>12</sup></li> <li>• Computer-delivered driver safety behavior screening and intervention program initiated during an emergency department visit<sup>13</sup></li> <li>• High School/Hospital Educational Program<sup>14</sup></li> <li>• Public Service Announcements<sup>15</sup></li> <li>• Reviews from Expert Panels<sup>16</sup></li> <li>• Systems Approach to the Management of Distracted Driving<sup>17</sup></li> </ul>
<p style="text-align: center;"><b>Good Quality Study</b> AND <b>Negative Impact on Prevention</b></p> <hr/> <p>High quality study methods with negative results</p> <ul style="list-style-type: none"> <li>• Exposure to trauma room with motivational counseling/intervention<sup>7</sup></li> </ul>	<p style="text-align: center;"><b>Moderate Quality Study</b> AND <b>Limited Negative Impact on Prevention</b></p> <hr/> <p>Moderate quality study methods with limited negative results</p> <ul style="list-style-type: none"> <li>• No studies were identified</li> </ul>	<p style="text-align: center;"><b>Low Quality Study</b> AND <b>Poor Negative Impact on Prevention</b></p> <hr/> <p>Low quality study methods – poor negative results</p> <ul style="list-style-type: none"> <li>• No studies were identified</li> </ul>	<p style="text-align: center;"><b>Quality Study or No Evaluation</b> AND <b>Unknown Impact on Prevention</b></p> <hr/> <p>The study was designed as a quality study; however the evidence is inconclusive or no evaluation was conducted.</p> <ul style="list-style-type: none"> <li>• Laws prohibiting all cell phone use<sup>18</sup></li> <li>• Cell Phone Filter/Blocker<sup>19,20</sup></li> </ul>

***No published studies were identified that had evaluated the following activities:***

- 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

\*Prepared by the Injury Prevention Committee of the Texas Governor's EMS & Trauma Advisory Council, 2017. Committee members conducted an extensive literature review among peer-reviewed journals, as well as government and injury prevention websites. The Nursing Levels of Evidence from "Evidence-based practice in nursing & healthcare: a guide to best practice" by Bernadette M. Melnyk and Ellen Fineout-Overholt. 2005, were used to determine criteria for evidence-based strategies/interventions. It was determined that strategies/interventions in Levels I-II showed strong evidence based on research and evaluation. If evaluation of strategies/interventions in those levels were effective in reducing distracted driving, they were placed in the High or Green category. If an article was in Levels III-V, the strategies/interventions were placed in the Moderate or Yellow category. If the evaluation of strategies/interventions in Levels I-IV showed the strategy/intervention was ineffective or harmful, it was placed in the Low or Red category. Studies/interventions in Levels V-VII and activities described on websites that: 1) had not been published in a peer-reviewed journal or 2) did not provide evaluation results, were placed in the Very Low or Gray category.

## References

1. Peek-Asa C, Cavanaugh JE, Yang J, Chande V, Young T, Ramirez M. Steering teens safe: a randomized trial of a parent-based intervention to improve safe teen driving. *BMC Public Health* 2014;14:777. DOI: 10.1186/1471-2458-14-777. Published: 31 July 2014
2. Ramirez, Marizen; Yang, Jingzhen; Young, Tracy; Roth, Lisa; Garinger, Anne; Snetselaar, Linda; Peek-Asa, Corinne. Implementation Evaluation of "Steering Teens Safe": Engaging Parents to Deliver a New Parent-Based Teen Driving Intervention to Their Teens. *Health Education & Behavior*, v40 n4 p426-434 Aug 2013.
3. Rohl A, Eriksson S, Metcalf D. Evaluating the Effectiveness of a Front Windshield Sticker Reminder in Reducing Texting while Driving in Young Adults. *Cureus*. 2016 Jul; 8(7): e691. Published online 2016 Jul 14. doi: 10.7759/cureus.691
4. Sayed, T., P. deLeur, J. Pump. "Impact of Rumble Strips on Collision Reduction on BC Highways: A Comprehensive Before and After Safety Study." TRB 89th Annual Meeting Compendium of Papers CD-ROM. Washington, D.C. 2010.
5. Griffith M. Safety evaluation of rolled-in continuous shoulder rumble strips installed on freeways. *Transportation Research Record*. 1999;1665: 28-34
6. Lim, S. & Chi, J. Cellphone bans and fatal motor vehicle crash rates in the United States *J Public Health Pol* (2013) 34: 197. doi:10.1057/jphp.2013.3
7. Nirenberg T1, Baird J, Longabaugh R, Mello MJ. Motivational counseling reduces future police charges in court referred youth *Accid Anal Prev*. 2013 Apr;53:89-99. doi: 10.1016/j.aap.2013.01.006. Epub 2013 Jan 16.
8. Chaundhary NK, Connolly J, Tison J, Solomon M, & Elliott K. (2015, January) Evaluation of the NHTSA distracted driving high-visibility enforcement demonstration projects in California and Delaware. (Report No. DOT HS812108). Washington, DC. National Highway Traffic Safety Administration.
9. Cosgrove L, Chaundhary N, Reagon I. "Four High-Visibility Enforcement Demonstration Waves in Connecticut and New York Reduce Hand-Held Phone Use," NHTSA 2011
10. Qiao N, Bell TM. State all-driver distracted driving laws and high school students' texting while driving behavior. *Traffic Injury Prevention*. Volume 17, 2016; Issue 1. Published online: 04 June 2015.
11. Cosgrove, L., Chaundhary, N., & Roberts, S. (2010). High Visibility Enforcement Demonstration Programs in Connecticut and New York Reduce Hand-Held Phone Use. DOT HS 811 376. Washington, DC: National Highway Traffic Safety Administration.
12. Persaud, B.N., Retting, R.A., & Lyon, C.A. (2004). Crash reduction following installation of centerline rumble strips on rural two-lane roads. *Accident analysis & Prevention* 36(6), 1073
13. Murphy M, Smith L, Palma A, Lounsbury D, Bijur P, Chambers P, Gallagher E.J. Feasibility of a computer-delivered driver safety behavior screening and intervention program initiated during an emergency department visit. *Traffic Inj Prev*. 2013;14(1):39-45. doi: 10.1080/15389588.2012.690545.
14. Unni P, Morrow SE, Shultz BL, Tian TT. A pilot hospital-school educational program to address teen motor vehicle safety. *J Trauma Acute Care Surg*. 2013 Oct;75(4 Suppl 3):S285-9. doi: 10.1097/TA.0b013e31828f9aa4.
15. Steadman M1, Chao MS, Strong JT, Maxwell M, West JH. C U L8ter: YouTube distracted driving PSAs use of behavior change theory. *Am J Health Behav*. 2014 Jan;38(1):3-12. doi: 10.5993/AJHB.38.1.1.
16. Sherin KM, Lowe AL, Harvey BJ, Leiva DF, Malik A, Matthews S, Suh R; Preventing texting while driving: a statement of the American College of Preventive Medicine. *Am J Prev Med*. 2014 Nov;47(5):681-8. doi: 10.1016/j.amepre.2014.07.004. Epub 2014 Sep 10.
17. Young KL, Salmon PM. Sharing the responsibility for driver distraction across road transport systems: A systems approach to the management of distracted driving. *Accident Analysis & Prevention*; Volume 74, January 2015, Pages 350–359.
18. Rudisill TM, Zhu M. The association between states texting regulations and the prevalence of texting while driving among U.S. high school students *Ann Epidem* 2015; 25(12) 888-93
19. Funkhouser, D., & Sayer, J. R. (2013, December). Cell phone filter/blocker technology field test. (Report No. DOT HS 811 863). Washington, DC: National Highway Traffic Safety Administration.
20. Creaser JI, Edwards CJ, Morris NL, Donath M. Are cellular phone blocking applications effective for novice teen drivers? *J Safety Res*. 2015 Sept;54:75-8. Doi: 10.1016/j.jsr.2015.06.014. Epub 2015 July 29.