

Reducing Alcohol-impaired Driving: School-based programs

Summary Evidence Table

| Author, Year (follow-up period) Design (suitability) Quality of execution Evaluation setting | Intervention Comparison | Length of intervention Grade(s) Interaction level Sample size (N) | Outcomes & Results | Estimated effect sizes (confidence interval) |
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| Instructional Programs Conducted in the Classroom | | | | |
| D'Amico, 2002 (2–6 months) Randomized (greatest) Fair Evaluation setting not specified | Intervention #1: Risk Skills Training Program (RSTP): Taught risk-reduction skills and encouraged commitment to change behavior. Subjects were presented with and discussed feedback regarding their behavior, the perceived behavior of peers, and actual peer norms Intervention #2: Abbreviated Drug Abuse Resistance Education (DARE-A) Program: Single 50-minute informational presentation regarding drug abuse and the law Comparison: Pre- and post-testing; and with untreated control group | 50 minutes Grades 10–12 Interactive N = 75 (RSTP) 50 minutes Grades 10–12 Not interactive N = 75 (DARE) N = 150 Control | On a Likert scale assessing DD or RDD: <ul style="list-style-type: none"> ▪ RSTP group mean decreased from 1.25 to 0.52 at 2-month follow-up and 0.95 at 6-month follow-up ▪ DARE-A group mean decreased from 0.75 to 0.72 at 2-month follow-up and 0.67 at 6-month follow-up ▪ Control group mean decreased from 1.58 to 1.34 at 2-month follow-up and 1.32 at 6-month follow-up RSTP group also reported decreased risky drinking (e.g., playing drinking games) at both post-tests ($p < .05$) | Self-reported DD or RDD: RSTP: 2 mo: $-.12$ SD ($-.51, .27$) 6 mo: $-.01$ SD ($-.40, .38$) DARE: 2 mo: $.05$ SD ($-.34, .45$) 6 mo $.04$ SD ($-.35, .44$) |
| Shope et al., 2001; Shope et al., 1996 (2 months – 7 years) Group randomized trial (greatest) Fair Southeastern Michigan: 254 classes | Intervention: Alcohol Misuse Prevention Study: Focused on information, inoculation against peer pressure, and building of refusal skills (through role-playing). Program administered by trained teachers on the project staff to ensure fidelity Comparison: Pre- and post-testing; and untreated control group | 5 sessions, 45 minutes Grade 10 Interactive N = 1041 | Relative risk (RR) for crashes (at-fault, single-vehicle, or alcohol-involved) was .93 in the first year following intervention and approximately 1.00 over the subsequent 6 years RR for serious motor vehicle offenses was .80 (95% CI: .63, 1.01) in the first year following intervention and ranged from 0.92 to 1.14 over the subsequent 6 years At 2-year follow-up, on a Likert scale assessing DD increased from .09 to .60 in the intervention group, and from .10 to .69 in the control group ($p = .12$) | Crashes: 1 yr: $.93$ RR ($.74, 1.16$) Self-reported DD: 2 mo: $.08$ SD ($-.09, .25$) 24 mo: $-.10$ SD ($-.27, .07$) |

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| Wilkins, 2000 (1 month) Before-and-after; no comparison (least) Fair Florida | Intervention: (SAFE) Program: Presented by EMS personnel to highlight the dangers posed by AID and failure to wear seatbelts; lecture, supplemented with graphic photos of crash victims and demonstration of the experience of a crash victim receiving emergency trauma care using student volunteer Comparison: Pretest data only | 1 session, 1 hour High school Interactive N = 60 | Self-reported RDD on Likert scale decreased from 3.45 (.62) at pretest to 3.83 (.42) at post-test ($p < .01$) At post-test, 81% of students reported "Never" riding with a drinking driver versus 50% at pretest At post-test, 87% of students reported "Always" wearing seatbelts in the front seat versus 53% at pretest | Self-reported RDD: 1 mo: $-.72$ SD ($-1.06, -.38$) |
| Harre, 1998 (4 months) Before-and-after with concurrent comparison (greatest) Fair Auckland, NZ: 6 high schools | Intervention: Based on Bandura's Social Learning Theory and concept of self-efficacy; taught knowledge, attitudes, and judgments related to safe driving using a "reasoned-argument" approach that minimized fear appeals; focus was on building self-efficacy with interactive sessions and role playing Comparison: Pretest data; and students at untreated comparison high schools | 10 sessions, 1 hour each Grade 12 Interactive N = 322 | On a Likert scale assessing DD: <ul style="list-style-type: none"> ▪ Mean scores for males increased from 1.30 to 1.31 in the intervention group, and decreased from 1.14 to 1.13 in the comparison group ▪ Mean scores for females increased from 1.22 to 1.23 in the intervention group, and from 1.00 to 1.08 in the comparison group On a Likert scale assessing RDD (with unequal time periods at pre- and post-test): <ul style="list-style-type: none"> ▪ Mean scores for males decreased from 2.55 to 1.49 in the intervention group, and from 2.46 to 1.57 in the comparison group ▪ Mean scores for females decreased from 2.68 to 1.71 in the intervention group, and increased from 2.62 to 1.74 in the comparison group No significant program effects were found for knowledge, attitudes, or behavior | Self-reported DD: Males: $.04$ SD ($-.62, .69$) Females: $-.17$ SD ($-.83, .48$) Self-reported RDD: Males: $-.18$ SD ($-.62, .26$) Females: $-.10$ SD ($-.54, .34$) |

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| Sheehan, 1996; Sheehan 1990 (3 months to 3 yrs) Group-randomized trial (greatest) Fair Queensland, Australia: 41 high schools | Intervention: Plan a Safe Strategy (PASS): Program was based on "theory of planned behavior" aimed at modifying students' beliefs, attitudes, and perceived social norms about drinking and driving; also sought to increase self-efficacy through role-playing Comparison: Pretest data; and students at untreated control high schools | 12 lessons Grade 10 Interactive N (final) = 1774 | At 3-year follow-up, percent of students reporting DD: <ul style="list-style-type: none"> ▪ Increased from 3.1% to 7.4% in the intervention group ▪ Increased from 4.7% to 8.8% in the control group At 3-year follow-up, percent reporting RDD: <ul style="list-style-type: none"> ▪ Decreased from 47.7% to 21.3% in intervention group ▪ Decreased from 46.3% to 26.8% in control group | Self-reported DD: 36 mo: .01 SD (-.12, .14) Self-reported RDD: 3 mo: -.12 SD (-.33, .09) 36 mo: -.15 SD (-.28, -.02) |
| Klepp et al., 1995 (4 years) Time series with concurrent comparison (greatest) Fair Moorhead, MN & Fargo, ND | Intervention: (Shifting Gears): A school- based education component addressed smoking, alcohol, marijuana use, and drinking-and-driving. Program was incorporated into the Minnesota Heart Health Program (a multifaceted community-based program to change eating habits, smoking, and activity levels) during the 1985-86 school year. Program was based on social learning theory, incorporating role-playing of refusal skills, social norming, media awareness, and increasing knowledge of alternative behaviors Comparison: Pretest data; and students in control community (Sioux Falls, South Dakota) | 6 sessions Grade 9 Interactive N = 2376 (at 9th grade evaluation) | Percent intervention vs control students reporting driving after 2 drinks (DD): <ul style="list-style-type: none"> ▪ in 1st year post-test: 9th grade (13% vs 21%, p = .01) ▪ at 12 mo. post-test: 10th grade (21% vs 28%, p = .27) ▪ at 24 mo. post-test: 11th grade (31% vs 33%, p = .63) ▪ at 36 mo. post-test: 12th grade (36% vs 32%, p = .66) Similar patterns observed for alcohol use variables High and likely selective attrition for the 12th grade sample in the comparison community | Self-reported DD (2+ drinks) Yr 1: -.22 SD (-.38, -.06) Yr 2: -.17 SD (-.53, .19) Yr 3: -.05 SD (-.28, .18) Yr 4: .09 SD (-.40, .59) |

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| Singh, 1993 (4 months) Nonrandomized trial (greatest) Fair England: 8 schools | Intervention (One for the Road): A series of four films that covered different aspects of the impaired driving problem (in as value-free of a manner as possible) were provided; teachers were encouraged to follow each film with discussions, and use role-playing or dramatic presentations if possible. Teaching guides were provided Comparison: Pretest data; and students in unmatched control schools | >4 hours (requested) High school Encouraged interaction N = 664 | Intent to drink and drive or ride with a drinking driver was assessed using 18 hypothetical scenarios. Scores for intervention group improved from 71 at pretest to 79 at post-test; those for the control group changed from 71 to 72. No variability indices or inferential statistics were provided Knowledge gains for the intervention group were reportedly maintained at 4-month follow-up | N/A |
| Newman et al, 1992 (1 year) Group-randomized trial (greatest) Fair Nebraska (urban): 9 schools | Intervention: (Resisting Pressures to Drink and Drive): Integrating videotaped examples of refusal skills with role-playing and small-group discussion; presented by social studies teachers (English teachers in replication study); teachers trained in 6-hour, one-day session Comparison: Pretest data; and classes in control schools; control group received traditional alcohol education program | 8–10 lessons Grade 9 Interactive N = 87 classes | Self reported number of RDD occasions in last 30 days increased from 1.01 to 1.48 in the intervention group, and from 1.01 to 1.98 in the comparison group ($p < .05$). Similar results were reported for replication using English teachers the following year | Self-reported RDD: 1–2 mo: $-.12$ SD ($-.73, .48$) 12 mo: $-.61$ SD ($-1.21, .01$) |

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| Peer Organization Programs | | | | |
| <p>Leaf et al., 1995 (retrospective) Post-only with concurrent comparison (least) Fair Ohio & Wisconsin: 4 schools</p> | <p>Intervention: Students Against Drunk Driving (SADD): Schools with highly active and exemplary SADD chapters were identified. The SADD programs in these schools involved a variety of activities including assembly presentations, a standard 15-session curriculum, demonstrations, and various instructional and extra-curricular activities Comparison: Post hoc comparison with matched schools with no SADD program</p> | <p>Ongoing, multiyear High school Interactive N = 17,187</p> | <p>Self-reported DD, RDD, moving violations, alcohol-related violations, total crashes, and alcohol-related crashes. Results reported included the following (intervention versus comparison):</p> <p>DD: 24.5% vs 27.1% (p > .05)</p> <p>RDD: 35.1% vs. 35.5% (p > .05)</p> <p>moving violations: 11.8% vs 16.8% (p < .05)</p> <p>total crashes: 14.4% vs 18.4% (p > .05)</p> <p>alcohol-related crashes: 1.1% vs 1.2% (p > .05)</p> | <p>Self Reported: DD: -2.06 SD RDD: -.01 SD Crashes: -.11 SD Alcohol-related crashes: -.01 SD</p> |
| <p>Klitzner et al., 1994 (2 years) Time series with concurrent comparison (greatest) Fair CA (urban) & NM (rural)</p> | <p>Intervention: SADD programs: Implemented in 2 schools; primary elements included: 1) a Kick-Off Assembly, at which the Contract for Life was distributed (but not strongly promoted); and 2) establishment of a SADD student chapter. In NM, SADD chapter was inactive during the second year Comparison: Pre- and post-testing with control schools where SADD programs were not to be implemented (but where SADD and other programs were implemented in some cases)</p> | <p>Ongoing, multiyear High school Interactive N = 4 schools</p> | <p>Surveys indicated a decrease in DWI-related curricular activity following implementation of SADD chapters Analyses revealed a greater willingness to address DD/RDD among SADD students at the first post-test but not at the second post-test; no overall differences between groups with regard to normative perceptions regarding DD/RDD; no initial difference between groups with regard to discussions of DD/RDD at home but control discussed more at home over time; and no significant difference between groups with regard to self-reported DD/RDD</p> | <p>No effect sizes estimated</p> |

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| Social Norming Programs | | | | |
| Foss et al., 2001 (2 years) Before-and-after with no comparison group (least) Fair UNC - Chapel Hill | Intervention: ("2 out of 3" program): A campuswide public awareness program to provide objective information regarding student use of alcohol. The phrase "whether it's Thursday, Friday or Saturday night, 2 out of 3 UNC students return home with a .00 BAC" provided the primary message. It was conveyed via student awareness sessions, poster incentive campaign, sticker incentive campaign, news conference, newspaper ads, etc. Comparison: Pre- and postintervention responses to nighttime surveys including breath alcohol measurement | Year-long campaign University campus (freshman emphasis) Not interactive N = 1786 surveyed (pre) N = 2451 surveyed (post) | Percentage of drivers (observed or self-reported) with positive BACs decreased from 13% to 9.7%. Percentage of drivers (observed or self-reported) with BACs greater than 0.08% decreased from 2.6% to 1.3%. Percent of respondents with positive BACs decreased from 23.7% to 21.5%. | DD: .00 BAC: -.10 SD (p = .18) .08 BAC: -.09 SD (p = .21) |
| Cimini et al., 2002 (6 weeks) Group randomized trial (greatest) Fair University of Albany | Intervention: Background was a campuswide public awareness program which was developed and implemented to provide objective information regarding student use of alcohol. The phrase "74% of University of Albany students drink once a week or less" provided the primary message. Key intervention was a one hour peer theater session, using trained peer "actors" and involving the audience in discussions regarding topical scenarios that were acted out Comparison: Pre and post-testing with control group of students exposed to a one hour lecture on alcohol and its effects | Media campaign ongoing/peer theater 1 session University campus (freshman emphasis) Interactive N = 8 groups of 20 students each | Relative to controls, intervention group reported: <ul style="list-style-type: none"> ▪ Significant decrease in DD (F = 9.47 p <.01) ▪ Significant increase in designated driver use (F = 9.47 p <.01) High-risk drinkers exposed to the intervention reported a 9% decrease in frequency of alcohol consumption, relative to a 9% increase among controls. | N/A |

BAC blood alcohol content; CA California; DARE Drug Abuse Resistance Education; DD drinking-and-driving; DWI driving while intoxicated; MN Minnesota; mo month(s); N sample size; ND North Dakota; NM New Mexico; NZ New Zealand; PASS Plan a Safe Strategy; RDD riding with a drinking driver; RR relative risk; Risk Skills Training Program (RSTP); SADD Students Against Drunk Driving; SAFE Stay Alive from Education; SD standard deviation; UNC University of North Carolina; vs versus