

Screening, Brief Intervention, and Referral to Treatment (SBIRT) Improves Health

Brief interventions appear to reduce mortality and reduce the quantity and frequency of unhealthy alcohol consumption, motor vehicle crashes, hospital visits, ED visits, and arrests.

- A 48-month study of brief physician advice for problem drinkers in primary care (n=382 in control and 392 in intervention) with two physician visits and two nurse follow-up phone calls found significant reductions in alcohol use within six months, which were generally maintained over the 48-month follow-up period. For the seven-day alcohol use measure, males in the treatment group reduced their alcohol use from 21.3 drinks per week to 14.4 at six months, and women in the treatment group reduced their use from 14.8 drinks per week to 8.4 drinks per week at six months. Also, the number of "heavier drinking persons" decreased from 183 to 87 at 48 months (a 57 percent reduction in the percentage). In addition, over 85 percent of the sample reported one or more episodes of binge drinking in the past 30 days at baseline, and this reduced to 63.8% at 48 months.¹
- A 1993 article reviewed RCTs of brief referral or retention procedures (12 studies) and RCTs of brief interventions targeting drinking behavior (32 studies). Authors concluded that brief interventions are more effective than no counseling and often as effective as more extensive treatment.²

Brief interventions reduce mortality, overall alcohol consumption, and binge drinking.

- A meta-analysis of RCTs comparing brief interventions with a control group, found that the pooled relative risk (RR) of dying was 0.47 for the four studies with verified mortality rates (95 percent CI: 0.25, 0.89). The pooled RR of all 32 studies was 0.57 (95 percent CI: 0.38, 0.84). The authors concluded that although the overall death rate was low in the population of problem drinkers, brief interventions appear to reduce mortality.³
- Review of 12 RCTs concluded that heavy drinkers who received brief interventions were twice as likely to moderate their drinking 6 to 12 months after an intervention.⁴
- A review identified 22 randomized controlled trials with over 7,619 patients and found that patients receiving brief interventions drank less alcohol after follow-up at one year or longer than those in the control group, including those receiving

assessment only (mean difference: -38 grams per week, 95 percent CI: -54 to -23).⁵

- Systematic review of 12 RCTs found that 6 to 12 months after brief, multi-contact behavioral interventions, participants reduced the average number of drinks per week by 13 percent to 34 percent more than controls, and the proportion of participants drinking at moderate or safe levels was 10 percent to 19 percent greater compared with controls.⁶
- A review with 34 studies comparing brief interventions to controls in non-treatment-seeking populations found small to medium effect sizes for brief interventions.⁷
- A review examined 19 trials and performed an adjusted intention-to-treat analysis, which showed a mean pooled difference of -38 g of ethanol (approximately four drinks) per week (95% percent CI; -51 to -24 g/wk) in favor of the brief alcohol intervention group.⁸
- A study in academic medical center-affiliated primary care sites (N=530 high-risk drinkers) found that alcohol consumption was significantly less at six-month follow-up. The intervention group had 5.8 drinks less per week in comparison to the control group, which had 3.4 drinks less per week (P = 0.001).⁹
- In 1995, a review of interventions provided by physicians to problem drinkers found that the interventions reduced weekly alcohol consumptions by five to seven drinks more than the control groups.¹⁰
- An RCT in 17 community-based primary care practices enrolled 382 problem drinkers in the control group and 392 in the intervention group (10- to 15-minute counseling visits by physicians). The mean number of drinks in past seven days decreased from 19.1 at baseline to 11.5 at 12 months for the experimental group versus 18.9 at baseline to 15.5 at 12 months for controls (t=4.33; P<.001). Also, at 12 months, the mean number of binge drinking episodes during the past 30 days decreased from 5.7 at baseline to 3.1 for the experimental group versus 5.3 at baseline to 4.2 for controls (t=2.81; P<.001). The RCT also showed that the percentage drinking excessively in the past seven days decreased from 47.5 percent at baseline to 17.8 percent at 12 months for the experimental group versus 48.1 percent at baseline to 32.5 percent at 12 months for controls (t=4.53; P<.001).¹¹

Paraprofessional-based SBIRT reduces alcohol and illicit drug use and improves health and quality of life.

- A study of the federally funded SBIRT programs analyzed data from 459,599 patients screened. The results showed that the self-reported patient status at six months had decreased by 38.6% (p<0.001) for heavy alcohol use and 67.7% (p<0.001) for illicit drug use. The study also found that rates of self-reported general health (p<0.001), mental health (p<0.001), employment (p<0.001), housing status (p<0.001), and criminality (p<0.001) improved significantly. Most services were provided by non-credentialed individuals, such as uncertified "health educators."¹²

Brief Interventions reduce the risk of alcohol-exposed pregnancies.

- 830 women at risk for an alcohol-exposed pregnancy (AEP) were randomized to receive information plus a brief motivational intervention (n=416) or to receive information only (n=414). At 3, 6, and 9 months, the ORs of being at reduced risk for AEP were 2.31, 2.15, and 2.11 for the intervention group, respectively. Between-groups differences at 3, 6, and 9 months were 18.0 percent, 17.0 percent, and 14.8 percent, respectively.¹³

Young adults benefit from brief interventions through less overall alcohol consumption, binge drinking, ED visits, motor vehicle crashes, and arrests.

- Data from a subsample of 226 young adults (18 to 30 years old) in an RCT in primary care offices of 64 physicians found that there were significant reductions in the following measures: number of young adults drinking more than three drinks per day, average seven-day alcohol use, number of persons drinking six or more drinks per occasion, number of binge drinking episodes in the previous 30 days ($P < .01$ to $P < .001$). There were also significant differences ($P < .05$) in emergency department visits (103 vs. 177), motor vehicle crashes (9 vs. 20), total motor vehicle events (114 vs. 149), and arrests for controlled substance or liquor violation (0 vs. 8).¹⁴

Both licensed practitioners and mid-level nurses can effectively practice brief interventions.

- A quasi-experimental study at 15 clinic sites in five MCOs (n=1329) compared three cohorts: brief interventions by a licensed practitioner, brief interventions by a nurse, and usual care. The decline was significantly greater in the two interventions than in the control group at three months. The study also found that the average incremental costs of brief interventions for at-risk drinkers were \$4.16 per patient using licensed practitioners and \$2.82 using mid-level specialists.¹⁵

Motivational interviewing is more effective than other treatments.

- A meta-analysis of motivational interviewing trials that compared no treatment to motivational interviewing for excessive drinking found an aggregate effect size of 0.60 (95 percent C.I. 0.36, 0.83) when the follow-up was three months or less. When brief motivational interviewing was compared to another treatment, the aggregate effect size was 0.43 (95 percent C.I. 0.17, 0.70).¹⁶

SBIRT reduces illicit drug use

- A randomized controlled trial of 1175 enrollees in urban teaching hospital outpatient clinics showed that the intervention group with a single brief intervention was more likely to be abstinent for cocaine use (22.3 percent vs. 16.9 percent), heroin use (40.2 percent vs. 30.6 percent), and both drugs (17.4 percent vs. 12.8 percent). The adjusted ORs were 1.51 to 1.57. Cocaine levels in hair were reduced by 29 percent for the intervention group and only 4 percent for the control group. Reductions in opiate levels were similar (29 percent versus 25 percent).¹⁷

- A trial of 33 self-defined problem cannabis users received a brief one-to-one brief intervention. At one and three months, most of the 33 participants reported a marked reduction in the frequency and/or quantity of cannabis used.¹⁸
- A study of the federally funded SBIRT programs analyzed data from 459,599 patients screened. The results showed that the self-reported patient status at six months had decreased by 38.6 percent ($p < 0.001$) for heavy alcohol use and 67.7 percent ($p < 0.001$) for illicit drug use.¹⁹
- A meta-analysis of articles, studying Motivational Interviewing in clinical settings, found that Motivational Interviewing is significantly (10 percent – 20 percent) more effective than no treatment and generally equal to other viable treatments for a wide variety of problems ranging from substance use (alcohol, marijuana, tobacco, and other drugs) to reducing risky behaviors and increasing client engagement in treatment.²⁰
- A study with 291 adult marijuana users seeking treatment compared a brief 2-session motivational interviewing (MI) session to a 14-session cognitive behavioral therapy (CBT) treatment and to a four-month delayed treatment control (DTC) condition. Results indicated that that marijuana use, dependence symptoms, and negative consequences were reduced significantly in relation to pretreatment levels at 1-, 4-, 7-, 13-, and 16-month follow-ups. There were no significant differences between the CBT and MI outcomes at any follow-up.²¹

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³ Cuijpers. The effects on mortality of brief interventions for problem drinking: a meta-analysis. *Addiction*. 2004;99:839-45.

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⁵ Kaner EF, Dickinson HO, Beyer FR, Campbell F, Schlesinger C, Heather N, Saunders JB, Burnand B, Pienaar ED. Effectiveness of brief alcohol interventions in primary care populations. *Cochrane Database of Systematic Reviews*. 2007;2, Art. No.: CD004148. DOI: 10.1002/14651858.CD004148.pub3.

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⁸ Bertholet N, Daeppen JB, Wietlisbach V, Fleming M, Burnand B. Reduction of Alcohol Consumption by Brief Alcohol Intervention in Primary Care. *Archives of Internal Medicine*. 2005;165:986-995.

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