

Library Watch on prevention

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A research agenda for assessing the potential contribution of genomic medicine to tobacco control.

Hall WD. *Tobacco Control* 16(1): 53-58, 2007. (79 refs.)

This paper identifies research priorities in evaluating the ways in which "genomic medicine" -- the use of genetic information to prevent and treat disease -- may reduce tobacco-related harm by: (1) assisting more smokers to quit; (2) preventing nonsmokers from beginning to smoke tobacco; and (3) reducing the harm caused by tobacco smoking. The method proposed to achieve the first aim is "pharmacogenetics", the use of genetic information to optimise the selection of smoking-cessation programmes by screening smokers for polymorphisms that predict responses to different methods of smoking cessation. This method competes with the development of more effective forms of smoking cessation that involve vaccinating smokers against the effects of nicotine and using new pharmaceuticals (such as cannabinoid antagonists and nicotine agonists). The second and third aims are more speculative. They include: screening the population for genetic susceptibility to nicotine dependence and intervening (eg, by vaccinating children and adolescents against the effects of nicotine) to prevent smoking uptake, and screening the population for genetic susceptibility to tobacco-related diseases. A framework is described for future research on these policy options. This includes: epidemiological modelling and economic evaluation to specify the conditions under which these strategies are cost-effective; and social psychological research into the effect of providing genetic information on smokers' preparedness to quit, and the general views of the public on tobacco smoking. Copyright 2007, British Medical Journal Publishing Group.

Does federal policy support the use of scientific evidence in school-based prevention programs?

Hallfors DD; Pankratz M; Hartman S. *Prevention Science* 8(1): 75-81, 2007. (28 refs.)

Since 1998, federal policy has explicitly required the use of "evidence-based" prevention programs in schools. We review how this policy has been implemented through state recipients of the Safe and

Drug Free Schools (SDFS) Program, and how other federal and private agencies have supported the policy by providing guidance about the scientific evidence for specific programs' effectiveness. We report data from a survey of SDFS state office directors, and we compare and contrast the most popular lists of effective programs. State offices supply the infrastructure for administering the SDFS Program, providing technical assistance to local school districts, monitoring the implementation of federal policy at the local level, and determining funding eligibility based on compliance. We found that states rely heavily on federal lists to determine whether school districts are meeting federal policy requirements, particularly the National Registry of Effective Programs and Practices (NREPP). Both SDFS and NREPP are changing, however, and the changes do not bode well for the transfer of prevention science to schools. Conclusions and recommendations are presented. Copyright 2007, Springer.

Promoting reduced and discontinued substance use among adolescent substance users: Effectiveness of a universal prevention program.

Kulis S; Nieri T; Yabiku S; Stromwall LK; Marsiglia FF. *Prevention Science* 8(1): 35-49, 2007. (76 refs.)

Efforts to address youth substance use have focused on prevention among non-users and treatment among severe users with less attention given to youth occupying the middle ground who have used substances but not yet progressed to serious abuse or addiction. Using a sample from 35 middle schools of 1,364 youth who reported using substances, this study examined the effectiveness of a universal youth substance use prevention program, the SAMHSA Model Program keepin' it REAL; in promoting reduced or recently discontinued alcohol, cigarette, and marijuana use. Discrete-time event history methods modeled the rates of reduced and recently discontinued use across four waves of data. Each substance (alcohol, cigarettes, and marijuana) was modeled separately. Beginning at the second wave, participants who reported use at wave 1 were considered at risk of reducing or discontinuing use. Since the data sampled students in schools, multi-level models accounted for the nesting of data at the school level. Results indicated that prevention program

participation influenced the rates of reduced and recently discontinued use only for alcohol, controlling for baseline use severity, age, grades, socioeconomic status, ethnicity and gender. Among youth who reported use of alcohol in wave 1 (N = 1,028), the rate of reducing use for program participants was 72% higher than the rate for control students. The rate of discontinuing use was 66% higher than the rate for control students. Among youth who reported use of one or more of the three substances in wave 1 (N = 1,364), the rate of discontinuing all use was 61% higher for program participants than for control students. Limitations and implications of these findings and plans for further research are discussed. Copyright 2007, Springer.

Applying computer technology to substance abuse prevention science: Results of a preliminary examination.

Marsch LA; Bickel WK; Badger GJ. *Journal of Child and Adolescent Substance Abuse* 16(2): 69-94, 2006. (40 refs.)

This manuscript reports on the development and evaluation of a computer-based substance abuse prevention program for middle school-aged adolescents, called HeadOn: Substance Abuse Prevention for Grades 6-8 (TM). This self-guided program was designed to deliver effective drug abuse prevention science to youth via computer-based educational technologies that effectively promote learning of key skills and information. Results of a controlled, school-based evaluation demonstrated that the HeadOn substance abuse prevention program promoted significantly higher levels of accuracy in objective knowledge about drug abuse prevention relative to the demonstrably effective Life Skills Training Program. Participants in the HeadOn and Life Skills groups also generally achieved comparable, positive outcomes after completing their substance abuse prevention intervention in actual self-reported rates of substance use, intentions to use substances, attitudes toward substances, beliefs about prevalence of substance use among both their peers and adults, and likelihood of refusing a drug offer. The HeadOn program may be of substantial benefit in providing drug abuse prevention to middle school-aged youth in a manner that ensures the fidelity of the intervention. It may also provide comprehensive substance abuse prevention science that is more cost-effective than the labor-intensive prevention interventions that have been demonstrated to be efficacious, and thereby expand the reach of effective drug abuse prevention science. Copyright 2006, Haworth Press.

Does a minimum-age law for purchasing tobacco make any difference? Swedish experiences over eight years.

Sundh M; Hagquist C. *European Journal of Public Health* 17(2): 171-177, 2007. (18 refs.)

Background: The purpose was to study possible changes in adolescents' opportunities for purchasing tobacco during the period 1996-2005. The study also investigated regional differences in adolescents' opportunities for purchasing tobacco, and elucidated the efforts by the authorities to affect the compliance with the minimum-age law of 18. Methods: In 1996, 1999, 2002, and 2005, 3150 test purchases of tobacco were conducted in controlled forms by 48 adolescents in three regions of Sweden. In addition, in 2005, 28 structured telephone interviews were conducted with key people in tobacco prevention work. Results: In 1996, 84% of all test purchases in shops with a voluntary age-limit ended with the test purchasers succeeding in purchasing tobacco. This may be compared with 48% in 2005, 8 years after the age-limit law was introduced. The result of the test purchases and of the interviews showed differences between the three regions in compliance and in activities connected with the minimum-age tobacco law. Conclusions: The study shows that the minimum-age law for the purchase of tobacco has had an effect on adolescents' opportunities for purchasing tobacco and that compliance has improved since its introduction in 1997. The result also indicates avenues for further improving compliance with the age-limit law. Copyright 2007, Oxford University Press.

Do alcohol restrictions reduce suicide mortality?

Varnik, A.; Kolves, K.; Vali, M.; Tooding, LM; Wasserman, D. *Addiction* 102(2): 251-256, 2007. (28 refs.)

Aim: Blood alcohol concentration (BAC) at the time of suicide was examined in relation to the marked falls in suicide rates and per capita alcohol consumption in Estonia during the major Soviet anti-alcohol campaign from June 1985. Design and participants In all, 5054 suicide cases (76% males, 24% females) were examined with respect to the official autopsy reports of the Estonian Bureau of Forensic Medicine (autopsy rates: 95%, of males, 88% of females) before (1981-84), during (1986-88) and after (1989-92) the campaign. Cases were divided by gender and BAC level (0.5-1.49, 1.5-2.49 and > 2.5 parts per thousand). Findings During the campaign, annual per capita alcohol consumption in Estonia fell from 10.9 to 6.61. Alcohol in blood was found in 47.9% before, 35.1% during and 40.90% after the campaign. During the intervention, BAC-positive, i.e. alcohol-positive,

suicides decreased by 39.2% for males and 41.4%, for females, with the largest fall occurring at the BAC 2.5 parts per thousand + level for both sexes. Changes in BAC-negative suicides were modest. When the campaign ended suicide rates started to rise. Conclusions: Investigation on an individual level showed that alcohol consumption was a common precursor to suicide and that rigorous alcohol restrictions were accompanied particularly by a decrease in BAC-positive suicide mortality among both sexes. However, the 'natural experiment' does not, in terms of study design, demonstrate convincingly that the fall in the suicide rate was due specifically to the decrease in alcohol use as such. Copyright 2007, Society for the Study of Addiction to Alcohol and Other Drugs.

Exploring the relationship between genetic and environmental influences on initiation and progression of substance use.

Fowler T; Lifford K; Shelton K; Rice F; Thapar A; Neale MC et al. *Addiction* 102(3): 413-422, 2007. (43 refs.)

Aims: To examine the genetic and environmental contributions to the initiation of use and progression to more serious use of alcohol, cigarettes and marijuana during adolescence, and to examine the relationship between initiation and progression of substance use. Design: The study used a twin-based design and a new theoretical model, the causal-common-contingent (CCC) model. This allows modelling of the relationship between initiation of use and progression to heavier use as a two-stage model and the examination of genetic and environmental influences on both stages, while taking into account their relationship. Participants: The participants consisted of 1214 twin pairs (69% response rate) aged 11-19 years sampled from the UK population-based Cardiff Study of AllWales and North-west of England Twins (CaStANET). Measurements: Data on adolescent initiation and progression to more serious use of alcohol, cigarettes and marijuana were obtained using self-report questionnaires. Findings: Initiation of alcohol and progression to heavier alcohol use had separate but related underlying aetiologies. For cigarette and marijuana use the relation between initiation and progression to heavier use was stronger, suggesting greater overlap in aetiologies. For all three substances, environmental influences that make twins more similar (common environment) tended to be greater for initiation, while genetic influences were stronger for heavier use. Conclusions These findings have implications for policy decisions aimed at an adolescent and early adult age group. Specifically, these findings suggest that it may be more efficacious

to focus alcohol interventions on risk factors for the development of heavier use rather than initiation of use. In contrast, interventions aimed at reducing the initiation of cigarettes and marijuana use may be more appropriate. Copyright 2007, Society for the Study of Addiction to Alcohol and Other Drugs.

Acceptability and impact of a partial smoking ban in a psychiatric hospital.

Etter M; Etter JF. *Preventive Medicine* 44(1): 64-69, 2007. (34 refs.)

Objective. The acceptability and impact of partial smoking bans in psychiatric hospitals are not well documented. We assessed the impact of a partial smoking ban in a psychiatric hospital in Switzerland. Methods. Before the intervention, smoking was not allowed in bedrooms and dining rooms, but this ban was not enforced. The intervention consisted of banning smoking everywhere, except in dedicated smoking rooms. Patients and staff were surveyed before (October 2003, 49 patients and 57 staff) and 2 months after the smoking ban (April 2004, 54 patients and 54 staff). Analyses included both patients and staff. Results. Compared with baseline, after the intervention twice as many non-smokers reported that they were "never" exposed to environmental tobacco smoke (ETS) in bedrooms (before = 25.0%, after = 54.5%, $p = 0.046$), dining rooms (35.5 vs. 65.5%, $p = 0.037$), corridors (10.4 vs. 30.9%, $p = 0.001$) and meeting rooms (36.8 vs. 75.0%, $p = 0.012$). The smoking ban was loosely enforced; although the ban reduced ETS, substantial exposure to ETS remained after it was introduced. Most participants (87%) rejected the idea of a total smoking ban. Conclusion. The partial smoking ban was well accepted and was associated with less exposure to ETS. However, even a partial ban proved difficult to enforce in this hospital. Copyright 2007, Academic Press.

Hearing consumer voices: Planning HIV/sexually transmitted infection prevention in alcohol detoxification.

Brems C; Dewane S. *Journal of the Association of Nurses in AIDS Care* 18(1): 12-24, 2007. (42 refs.)

The literature has provided ample evidence that individuals abusing or dependent upon alcohol are at high risk for contracting HIV and other sexually transmitted infections (STIs). Despite the documented need of this vulnerable group for targeted HIV/STI prevention efforts, no prior research has explored the efficacy and feasibility of HIV/STI prevention for individuals in alcohol detoxification. The current study sought the voices of consumers of such services to get their guidance about successful and necessary features

of HIV/STI prevention programs targeted to their needs. Two focus groups conducted yielded exceptionally helpful information. Consumers clearly want to be educated about HIV/STI, seeing this as crucial to their physical well-being and safety. They voiced preferences for nonjudgmental counselors who meet with them on an individual basis in contexts that protect consumer privacy. A clear set of guidelines emerged for an intervention structure that, if carefully honored, has strong likelihood of success in protecting individuals in alcohol detoxification from HIV/STI. Copyright 2007, Elsevier Science.

Lung cancer screening as a teachable moment for smoking cessation.

Taylor KL; Cox LS; Zincke N; Mehta L; McGuire C; Gelmann E. *Lung Cancer* 56(1): 125-134, 2007. (34 refs.)

Background: Lung cancer screening may serve as a 'teachable moment' for smoking cessation, a brief period in which motivation to stop smoking is enhanced. Within the context of two NCI-funded randomized lung screening trials, we conducted an ancillary study to explore the impact of screening on smoking cessation and readiness to stop smoking. Methods: We accrued a sample of current and former smokers participating at the Georgetown University site of the Lung Screening Study (LSS; N = 144) and of the National Lung Screening Trial (NLST; N = 169). In each sample, we assessed reasons for trial participation, interest in smoking cessation interventions, motivations for stopping smoking, and the impact of undergoing screening on tobacco use and readiness to stop smoking. Telephone interviews were conducted prior to screening, and 1-month following receipt of the screening result. The samples were analyzed separately due to differences in age and level of nicotine dependence. Results: The majority of the findings were consistent across the two samples. Frequently endorsed reasons for trial participation among both current and former smokers included psychological reasons (e.g., wanting peace of mind about lung cancer) and altruism (e.g., wanting to make a contribution to science). Nicotine replacement therapy and free counseling were the cessation methods that were of most interest, and fear of lung health problems was the most frequently endorsed motivation for quitting smoking. Regarding readiness to stop smoking, approximately 20% were ready to stop in the next 30 days, 45% were ready to stop in the next 6 months, while 35% were not thinking of stopping. At the follow-up, 7% of current smokers at

baseline reported abstinence, and 4% of former smokers at baseline reported having relapsed. The findings differed across the two samples when considering the readiness to quit outcome. At the 1-month follow-up of the NLST sample, participants became more ready to stop smoking ($p < .05$). Screening result did not moderate this finding. In the LSS sample, among younger participants (≤ 64), an abnormal screening result was significantly associated with becoming more ready to stop smoking, whereas a normal result was associated with becoming less ready to stop smoking ($p = .02$). Conclusions: The current findings demonstrated the feasibility of enrolling lung screening participants into a smoking-related research study, as well as the high level of interest in stopping smoking and in smoking cessation interventions. These data indicate that lung cancer screening may serve as a teachable moment for smoking cessation. Copyright 2007, Elsevier Science.

Parenting programmes for preventing tobacco, alcohol or drugs misuse in children under 18: A systematic review.

Petrie J; Bunn F; Byrne G. *Health Education Research* 22(2): 177-191, 2007. (37 refs.)

We conducted a systematic review of controlled studies of parenting programmes to prevent tobacco, alcohol or drug abuse in children < 18 . We searched Cochrane Central Register of Controlled Trials, specialized Register of Cochrane Drugs and Alcohol Group, Pub Medicine, psych INFO, CINALH and SIGLE. Two reviewers independently screened studies, extracted data and assessed study quality. Data were collected on actual or intended use of tobacco, alcohol or drugs by child, and associated risk or antecedent behaviours. Due to heterogeneity we did not pool studies in a meta-analysis and instead present a narrative summary of the findings. Twenty studies met our inclusion criteria. Statistically significant self-reported reductions of alcohol use were found in six of 14 studies, of drugs in five of nine studies and tobacco in nine out of 13 studies. Three interventions reported increases of tobacco, drug and alcohol use. Parenting programmes can be effective in reducing or preventing substance use. The most effective seem to be those sharing an emphasis on active parental involvement and on developing skills in social competence, self-regulation and parenting.. Copyright 2007, Oxford University