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Prevention of Youthful Marijuana Use

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ABSTRACT

Considerable money and effort have been expended in attempts to prevent drug use by youth, with disappointing results. Too often, prevention programs have singled out youth with simplistic messages of exaggerated risk and the same politically acceptable solution for all—abstinence. Historically, prevention efforts have been less effective by not being soundly based in science and failing also to address adult drug and alcohol use as part of the problem. The Institute of Medicine continuum of care model developed in 1994 offers a framework for a more sophisticated, three-tiered approach to prevention, defined as all services provided prior to a clinical diagnosis of a substance use disorder. By dividing prevention efforts into *universal* (delivered to broad populations without consideration of individual risk for developing substance use disorder), *selected* (targeting sub-groups of individuals identified on the basis of characteristics known to create an elevated risk for substance use disorder), and *indicated* (addressing individuals identified on the basis of manifest risk behaviors), prevention can be better tailored to meet different levels of need. Student Assistance Programs (SAPs) and community coalitions provide examples of how IOM's continuum of care model can be integrated into drug prevention programs for youth.

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Urging youth to be the leaders in pharmacological abstinence or restraint is somewhat quixotic. To date, drug education and prevention campaigns have had only marginal success in reducing marijuana use. In the context of adult legalization, it will be particularly difficult to persuade teens of their unique vulnerability (Ammerman 2011; Ammerman 2014; Silins et al. 2014). Prevention strategies have also been hobbled by (1) the Drug War's emphasis on criminal justice enforcement; (2) "scare them straight" education programs; and (3) mass media campaigns often exaggerating the risks. Medical marijuana advocates have also contributed to difficulties with misinformation that exaggerates the health benefits of marijuana while minimizing negative side-effects.

In 1994, the Institute of Medicine (IOM) developed a continuum of care model, dividing all health interventions into prevention, treatment, and maintenance phases (Mrazek et al. 1994; Institute of Medicine 2006). When applied to marijuana, prevention may be defined as all services provided prior to a clinical (DSM-V) diagnosis of a substance use disorder. Preventive interventions are further categorized as *universal*, *selected*, or *indicated* to reflect the needs of subpopulations that present different levels of risk for addiction.

IOM categories provide an alternative construct to most previous education campaigns. The IOM model permits us to think in terms of differentiated and focused interventions as well, depending on individual need and community/school context. Broad education campaigns are needed, to be sure, but it is arguably more important to develop and fund interventions that provide remediation or clinical referral for the minority of students already in trouble.

Universal prevention strategies are delivered to broad populations without consideration of individual risk for developing substance use disorder. Universal strategies are the most economical and require the lowest level of professional expertise. Examples include Nancy Reagan's "Just Say No" campaign and the DARE program. Both campaigns produced disappointing results.

As noted by Rosenbaum,

...In the effort to stop teenage experimentation, prevention messages often pretend there is no difference between use and abuse.... This hypocritical message is often dismissed by teens who see that adults routinely make distinctions between use and abuse.... Most observe their parents and other adults using alcohol [and marijuana] without abusing it.... The abstinence-

only mandate puts adults in the unenviable position of having nothing to say to young people we need most to reach (Rosenbaum 2014).

Scientifically accurate general education campaigns need to provide reality-based information that enables teenagers to make responsible decisions by:

- Providing honest science-based information;
- Encouraging moderation in youth who continue to use;
- Promoting an understanding of the legal and social consequences of drug use; and
- Prioritizing safety through personal responsibility and knowledge.

Even so, young people have a tendency to discount drug campaigns directed solely at them. Because of strong peer influences and youthful experimentation, they are likely to discount most prevention messages as propaganda. However, decades of universal anti-tobacco campaigns *have* reduced smoking rates in teens and adults as a result of public health campaigns that use a variety of age-appropriate messages targeting the population as a whole. The current paradox is that young people now consider marijuana safer than tobacco; more high school seniors smoke pot than cigarettes (Johnston et al. 2013).

Selected prevention strategies target sub-groups of individuals identified on the basis of characteristics known to create an elevated risk for a DSM-V substance use disorder. For example, students just entering high school, school dropouts, and students with a positive family history of addiction constitute groups with increased and specific risks. Prevention interventions can be focused to address the specific risk factors shared by members of such subgroups.

Indicated prevention addresses individuals identified on the basis of manifest risk behaviors. Examples include students who use drugs on campus or who are known to have begun binge drinking. Indicated individuals tend to emerge from selected populations, often through the use of screening tools, arrests, and school or family reports. The juvenile justice system can also make court diversion referrals to community- or school-based programs. Indicated prevention strategies include motivational interviewing, evaluation of barriers to learning, family contacts, assessment of learning skills, and individual and group counseling to mitigate behaviors that put students at risk of developing a diagnosis of addiction requiring referral to professional treatment.

Many intervention models have demonstrated changes in adolescent behaviors. For example, Hawkins and Catalano's *Communities That Care* (CTC) model is organized outside of the school system. Such a community-based design,

...mobilizes community stakeholders to collaborate on the development and implementation of a science-based community prevention system. The CTC system is expected to produce community-wide changes in prevention system functioning, including increased adoption of a science-based approach to prevention and increased use of tested, effective preventive interventions that address risk and protective factors prioritized by the community (Hawkins, Catalano, and Miller 1992).

Student Assistance Programs (SAPs) are school-oriented but widely diverse in design. Generally speaking, SAPs provide confidential three-tiered interventions for students in a manner analogous to Employee Assistance Programs (EAPs). SAPs coordinate school-based services for students to identify issues that prevent students from learning and being successful. They provide a range of preventive services, including education, early identification, intervention, referral, and support groups for students and families to promote school retention and "readiness to learn."

Each prevention model has its advantages. *Communities That Care* promotes development of community coalitions that could guide their local schools in developing SAPs as well as promoting dissuasion activities for youth after high school graduation (or dropout) and before age 21. A community-based approach would do well to study the design and impact of the Portuguese Dissuasion Commission model (Greenwald 2009; Hughes and Stevens 2010; Domoslawski 2011; Hughes and Stevens 2012).

The Institute of Medicine's prevention model points toward a three-tiered school-based approach, recognizing at the same time that such an approach does not handle school dropouts or graduates after age 18. SAPs can provide a range of preventive interventions (from education to remediation and counseling) designed to more precisely meet the level of identified risk. A great benefit of SAPs is that there are many such programs already operating in the U.S. The core foci of SAPs are school retention and improved learning performance. Essential components of such designs include:

- (1) School district-level organization;
- (2) Drug education and prevention services;
- (3) Focused educator trainings;
- (4) Cognitive learning assessments;
- (5) Clinical screenings;

- (6) Confidentiality and privacy;
- (7) Confidential toxicology testing;
- (8) No zero-tolerance suspension/expulsion policies;
- (9) Criminal justice diversion;
- (10) Relapse is not a treatment failure;
- (11) Outcomes evaluations.

“School Climate” is a relatively new organizing concept for understanding the components of successful schools, and there is a great deal of data available on “school climate” in California schools. A positive school climate has been associated with higher academic achievement and healthy behavioral outcomes for students (Voight, Austin, and Hanson 2013).

Between 2003 and 2011, California districts that received funding through the Safe and Drug-Free Schools and Communities Act, Title IV, Part A of the No Child Left Behind Act of 2001 or the state Tobacco Use Prevention Education program were required to administer the *California Healthy Kids Survey* (CHKS), which is largely focused on measuring school climate. Approximately two thirds of all public middle and high schools in the state administered the CHKS. These data are used to create a global school climate score for each school in which the CHKS was administered, as well as subscale scores that measure specific dimensions of school climate (Voight, Austin, and Hanson 2013).

Although there are no data on combining the two approaches—promoting healthier schools through SAPs and healthier communities through CTC-like coalitions—there are theoretical and common sense reasons to suppose that the two models of prevention could work together.

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