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Selling Prevention: Using a Business Framework to Analyze the State of Prevention and Overcome Obstacles to Expanding Substance Abuse Prevention

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Abstract

Substance abuse prevention programs can be a tough sell to schools, but by employing common business frameworks, the field can more easily understand the state of the field and identify possible methods of expanding school-based substance abuse prevention. An analysis of the state of the substance abuse prevention field finds that the field often fails to consider the consumer when making strategic business decisions. Consumer-driven approaches such as the development and adoption of a standardized measure for effectiveness of in-school substance abuse prevention programs may expand the use and impact of substance abuse prevention. The field should extensively examine the current state of substance abuse prevention, through business tools such as the SWOT and Five C's Analysis, before ultimately developing a strategy. The prevention field can learn from business practices.

Keywords: business framework, substance abuse prevention, in-school substance abuse prevention, NREPP, standardized measure

Selling Prevention: Using a Business Framework to Overcome Obstacles in Expanding Substance Abuse Prevention

Substance abuse in America seems to be on an unmanageable trend. Today, more than ten percent of Americans fit the criteria for substance use disorder (Sussman, Lisha, Griffiths, 2011) – meaning substance use disorders are more prevalent than cancer -- and only a small percentage of people with substance use disorders receive adequate treatment (SAMHSA, 2012). The economics of substance abuse boil down to a hefty price tag for virtually every American business and taxpayer. The National Institute of Health estimates that the total costs of substance abuse tops $500 billion annually in health care, criminal justice, and lost productivity costs (NIH, 2008). Costs associated with other, less measurable social harms (i.e. irresponsible parenting, co-occurring risky behaviors, impaired drivers) only add to that total. Worse still, rates of substance use and overdose have increased dramatically over the past ten years. A nationwide opioid epidemic (Laxmaiah & Helm, 2012), with rates of heroin and prescription drug abuse skyrocketing, has captured popular media attention. If Americans do not make major policy changes, the costs associated with substance abuse will only increase and create more of a burden on Americans.

There is an intermittently suggested approach that appears to be the most powerful cost-effective solution for substance abuse related harms: prevention. Research by Substance Abuse and Mental Health Services Administration (SAMHSA) has shown that every dollar spent on substance abuse prevention can save up to $34 of future costs (Miller & Hendrie, 2009). A solution 34 times more powerful than treatment as usual? That sounds

like the kind of response we need to curb the effects of the opioid epidemic. But as soon as prevention is proposed as a solution, it is discredited as impractical. Prevention is inherently proactive, and we live in a reactive world.

I argue that we are writing off prevention too hastily. It is true that prevention is a tough sell but so too have been vaccines, colonoscopies, and condoms. If we apply a commonsense business framework to substance abuse prevention, we may see unprecedented success in selling prevention.

The State of Prevention

Before businesses create a strategy to improve, they often study the state of the field extensively and even perform diagnostic marketing research to get a sense for the climate surrounding their products. Unfortunately, the decentralized world of prevention rarely devotes time to examine substance abuse prevention programs on a whole. This section will review the current state of prevention using business frameworks including a SWOT analysis (figure A) and a Five C's analysis (figure B).

It seems natural for schools to host substance abuse prevention programs. Schools have a captive audience of young people and already provide education concerning other problem behaviors such as risky sex. Not surprisingly, in-school programs have dominated the field for several decades. The decentralized nature of school policy in America has led to a fairly decentralized administration of substance abuse programs. Prevention programs are often selected by individual school districts, individual schools,

or, in some cases, individual classroom teachers. Schools are given the responsibility of implementing substance abuse prevention, and there is no designated, centralized agency that guides substance abuse prevention program implementation.

Resource-poor schools often do not implement prevention programming due to perceived costs, which limits prevention implementation in particularly needy areas. Wealthier schools that have the resources to purchase prevention programs often implement ineffective substance abuse prevention programs. The Substance Abuse and Mental Health Services Administration (SAMHSA) is a federal agency that seeks to help schools by identifying effective programs with the publication of its National Registry of Evidence Based Programs and Practices (NREPP; SAMHSA 2007). NREPP is a listing of programs designated as "evidence-based," which means that some amount of published research supports the efficacy of the programs included in the list. NREPP is important because many federal and state funders require that substance abuse programs be evidence-based, a term which typically means inclusion in NREPP.

In addition to federal agencies, states play a role in the implementation of substance abuse prevention programs in school and otherwise. Many states have some type of mandate that requires prevention programming in schools. Unfortunately, these mandates are often unenforced and either unfunded or underfunded. Many states have some limited level of funding dedicated to prevention programming. Pennsylvania, for instance, provides some prevention funding through county-based Single County Authorities

(SCAs). SCAs are required to use prevention programs included in Pennsylvania's list of evidence-based and state-approved programs, which on the whole is similar to NREPP.

A summary of substance use prevention in the United States is incomplete without mention of the Drug Abuse Resistance Education (D.A.R.E.) program, the most prevalent in-school substance abuse prevention program in America. D.A.R.E. was founded in 1983 by Daryl Gates, retired chief of the Los Angeles Police Department, and quickly became synonymous with substance abuse prevention across the country (D.A.R.E. America, 2015). In fact, D.A.R.E. is now implemented in 75% of American school districts, affecting 26 million young people each year. D.A.R.E. earned its prominence through highly powerful, emotional marketing. From its inception to the early 2000's, however, D.A.R.E. lacked a sound evidence basis. Several studies found that D.A.R.E. was ineffective or even counterproductive (e.g. Clayton, Cattarello, & Johnstone, 1996; Ennet, Tobler, Ringwalt, & Flewelling, 1994). Beginning in the early 2000's, D.A.R.E. sought to make its program evidence based. First, D.A.R.E. attempted to develop its own program, *Take Charge of Your Life*, through a grant from the Robert Wood Johnson Foundation (Sloboda et al., 2009). This program failed efficacy trials and was eventually scrapped. In 2009, D.A.R.E. adopted an existing evidence-based program called *Keepin' it REAL* (Hecht, Colby, & Miller-Day, 2010). Today, D.A.R.E. implements versions of the *Keepin' it REAL* curriculum to millions of American students.

The Major Problems

Several well-known problems exist in substance abuse prevention, and this section will review some of the most glaring.

Perhaps the most difficult to overcome issue in prevention is a remnant from the old D.A.R.E. program: a poor reputation. Research refuting D.A.R.E. through the late 1980's and 1990's made the educated public skeptical of prevention programs in general. As a colleague in the social sciences asked me when I told him about my research on the efficacy of prevention programs, "Isn't D.A.R.E. the epitome of failed social interventions? Does prevention even work?" It is important to note that this negative perception persists despite the existence of numerous alternative prevention programs that have an evidence basis and D.A.R.E.'s 2009 adoption of an evidence-based program. In business, perception is reality, and the perception of prevention is still poor based upon research performed on an ineffective version of D.A.R.E. more than 20 years ago.

The second most important problem in prevention is consumer confusion. As a list of evidence-based programs, NREPP is a standard of efficacy for substance abuse prevention programs, but NREPP is inadequate because its standard of evidence is questionable. For example, one NREPP "evidence-based" program, *Drugs: True Stories*, is supported by just one summary in a non-refereed journal (e.g. "Division on Addictions," 2007). Varied reporting systems used in research make it difficult to discern differences in efficacy of programs. For example, *Keepin' it REAL* (Hecht, Graham, & Elek, 2006) measures norms and recent substance abuse up to 14 months after the

intervention. *Botvin's Life Skills* (Botvin, Baker, Dusenbury, Botvin, & Diaz, 1995), on the other hand, measures lifetime substance abuse up to six years after the intervention. To a consumer, comparing prevention programs is akin to comparing apples to oranges.

Analysis of the *Keepin' it REAL* (KiR) intervention further demonstrates the confusion connected with identifying an effective program. The KiR middle school intervention was originally tested in three different versions: KiR white/black, KiR Hispanic, and KiR multicultural. Only KiR Hispanic and KiR multicultural showed any significant results; the black/white version was ineffective (Hecht, Graham, & Elek, 2006). Years later, KiR developed two elementary school adaptations, KiR-Acculturation Enhanced (KiR-AE) and KiR-Plus. When tested, both of these versions were found to be ineffective or even counterproductive (Hecht et al., 2008). When D.A.R.E. adopted KiR in 2009 (Hecht, Colby, & Miller-Day, 2010), the KiR developers created a new version, KiR D.A.R.E. (and eventually KiR D.A.R.E. Elementary), which combined elements of the KiR middle school interventions and the original D.A.R.E. program. KiR D.A.R.E. and KiR D.A.R.E. Elementary have not been tested in randomized trial. The research indicates that some versions of KiR work (e.g. Hispanic/Latino, multicultural), others do not (e.g. Black/White, KiR-AE, KiR-Plus), and some are unstudied (e.g. KiR D.A.R.E. and KiR D.A.R.E. Elementary). However, using NREPP, all versions of KiR are classified as though they are the same intervention and are, therefore, all considered evidence-based. Is KiR D.A.R.E. or KiR D.A.R.E. elementary truly evidence based? While they may show promise, those particular versions have never been specifically tested.

It is important to note that consumer confusion does not only lead to suboptimal choices of programs. Schools or districts that are perplexed by the prevention field may simply choose not to implement prevention altogether.

A third problem in the implementation of substance abuse prevention is the distribution channels. The primary channel for substance abuse prevention is through schools. Unfortunately, many schools or school districts lack an in-house substance abuse prevention specialist. While prevention experts may see substance abuse prevention programs as crucially important, for the field's customers of schools and school boards, it is often seen as a low motivation purchase. The price tag is generally modest (compared with other school expenses), but confusion in the marketplace makes market research costly. Low motivation purchases are driven primarily by heuristic, mental shortcuts that help people to make a decision. An example of a heuristic is the availability heuristic, where people make a decision based on the first option to come to mind. Heuristics are surprisingly powerful even in organizational decisions. A school board, for example, may choose a prevention program because of name brand recognition or NREPP status – both of which are not necessarily good indicators of quality – rather than the quality of the program and its suitability to the student population. While one school board acting on heuristic may seem inconsequential, thousands of school boards across the country acting on heuristic may be detrimental to research-driven prevention approaches.

Finally, the quality of prevention research is questionable. This challenge may be the most difficult to address. Substance abuse programs are almost always tested by their

developers, who have a bias to prove that their program works. A program like *Keepin' it REAL* is classified as evidence-based solely because of studies performed by KiR's developers (e.g. Hecht, Graham, & Elek, 2006; Hecht et al., 2003; Kulis et al., 2005; Kulis et al., 2007).

Businesses seeking to expand often use several key tools to help them better understand the state of their industry. I encourage the prevention field to utilize tools, such as SWOT Analysis and the Five C's, to improve its reach. A SWOT analysis (see Figure A) measures a firm's Strengths, Weaknesses, Opportunities, and Threats (e.g. Pickton & Wright, 1998). Strengths and Weaknesses refer to internal conditions, whereas Opportunities and Threats refer to external conditions. Performing a SWOT Analysis can help a corporation understand how it measures up against its competitors. Competition is rarely considered in substance abuse prevention, but the reality is that substance abuse prevention programs are competing for both time and resources against all sorts of other social interventions and academic curricula in schools. Using a SWOT analysis could help the field better understand its barriers to succeeding in these types of competitions. The Five C's, (Consumer, Competitors, Collaborators, Company, and Context; see Figure B) provide a framework for understanding the state of a company within its given field. The Five C's are particularly important for substance abuse prevention because it forces the user to consider all relevant factors that frame the substance abuse prevention field. An analysis without the Five C's may ignore an important barrier. For example, substance abuse prevention policy makers often fail to understand their customers. Customers are rarely students receiving the substance abuse prevention intervention;

instead they are the school board, principal, or teacher who decides whether the program will be implemented at all. Additionally, it is conceivable that different types of consumers exist; what if school boards have different concerns from teachers? Tools such as the SWOT analysis and the Five C's can help prevention policy makers to better understand what is standing in the way of successful implementation of evidence-based prevention programs.

Figure A: Sample SWOT Analysis

<table>
<tr><td colspan="2">Internally-Focused</td></tr>
<tr><td>Strengths
Cost effective approach to substance abuse
Diverse set of effective programs that work on diverse audiences
Dedicated researchers at institutes and universities across the country</td><td>Weaknesses
Overall poor perception of effectiveness
Consumer confusion fueled by differences in measures
Poor quality of research (in that most programs are only evaluated by the developers)</td></tr>
<tr><td>Opportunities
Room for increased government role
Good implementation channels through schools
NREPP guides national standard of efficacy</td><td>Threats
The schools and students that need prevention most are often the most resistant
Tends to be a low-motivation decision
Opioid epidemic and increase in substance use</td></tr>
<tr><td colspan="2">Externally-Focused</td></tr>
</table>

Figure B: Sample Five C's Analysis

Five C's Analysis	
Consumer	• Common wisdom suggests that schools and school districts are the main consumer • Unclear which indicators matter to consumers • Unclear whether there are different segments in the market (i.e. differences between urban and suburban consumers)
Competitors	• Competitors for prevention are other in-school non-academic programs, e.g. an in-school art program • Other programs may have a better perception
Collaborators	• Federal collaborators: Department of Education, Substance Abuse Mental Health Administration • State collaborators: drug and alcohol agencies, state education agencies • Local collaborators: school districts, schools, teachers • Others: researchers, policy makers, and legislators
Company	• Prevention is not a company, but it may be valuable to identify the major players in prevention (i.e. primary providers)
Context	• Opioid epidemic has brought substance abuse into the limelight • Substance abuse still faces a poor reputation from the old D.A.R.E. program

Potential Solutions

In-school prevention programs should be considered a business product that has turned off customers due to their poor perception and high levels of consumer confusion. By failing in these two dimensions, prevention programs fail to capture their full market potential. The field can implement strategies to ameliorate these two fundamental problems and increase market demand.

In business, solutions are not only evaluated based upon their potential for success but also for their feasibility. A perfect strategy that is unlikely to be implemented or well received is not a good strategy for the field.

The most obvious solution to solving many major problems in prevention is to make the field easier to navigate. Just a few years ago, health insurance systems across the United States were complicated and convoluted. Some plans had higher co-pays, while others had high deductibles. Some covered certain areas better than others. Understanding health care was too complicated for commercial consumers, let alone private consumers. The result was that many consumers purchased suboptimal health care packages. The 2010 Affordable Care Act created HealthCare.gov, which at least partially clarified the system. The website provides easy-to-understand comparisons of health care plans and standardized some features (i.e. coverage of pre-existing conditions). While there is still debate concerning the long-term success of the ACA and HealthCare.gov, it seems clear that the program improved overall consumer perceptions related to comparing health care plans.

Substance abuse prevention could benefit from learning the story of HealthCare.gov. Currently, substance abuse prevention research is so scattered that it is difficult to discern differences in efficacy between programs. Programs that show positive short-term results may not have had long-term efficacy trials and the rigor of research varies from study to study. In essence, the data on prevention programs is messy and comparison is difficult or impossible.

To ameliorate several problems in the prevention field, I recommend the adoption of a standardized measure for in-school substance abuse prevention programs. A standardized

measure would have several benefits. Chief among them would be an improvement in the quality of research performed on substance abuse programs. As it stands, prevention programs are subject to reporter bias, where researchers may selectively publish certain findings on a particular program. This effect is magnified by the bias associated with having a program's developer evaluate its effectiveness. A standardized measure would at least force the researcher to publish all relevant data on the intervention. If a biased researcher discovers that the prevention program under scrutiny will have positive short-term effectiveness but no long-term effect, a standardized measure would require the reporter to publish both findings instead of simply ignoring the long-term effects.

A standardized measure would lend itself to a "Consumer Reports" type of comparison for substance abuse prevention programs. A major source of confusion in the substance abuse prevention field is differences in measures. It is virtually impossible to directly compare two different interventions as the two interventions undoubtedly use different indicators for success. A standardized measure would facilitate direct comparison between programs.

Standardized measures and a report system may also help the field overcome its perception of inefficacy. Prevention programs have come under attack for being ineffective because of confusing and often self-serving reporting practices. If two programs cannot be compared, who is to say that *any* are effective? A "Consumer Reports" type model, facilitated by a standardized measure of in-school prevention programs, would help consumers see clearly the efficacy of programs.

A less practical but more powerful solution would be legislative or regulatory changes. A major problem in the substance abuse prevention field is delivery channels. Despite the importance of these programs to a student's future, the consumers with the best potential to benefit from our product – schools and school districts – treat substance abuse prevention as a low-motivation decision. There are several ways to make these consumers care more about the product and switch the decision from low-motivation to high-motivation.

For-profit firms commonly use advertising to make a low-motivation purchasing decision into a high-motivation purchasing decision. Advertising can convince consumers that a specific consumption decision is important and deserves a high level of motivation (laundry detergent, for example). Prevention could publicize the scope of the addiction problem and advertise the effectiveness of evidence-based and well-suited prevention programs to increase levels of consumption motivation.

The substance use prevention field has another tool to increase consumer motivation: regulatory or legislative changes. Currently, purchasing decisions for substance abuse prevention programs are commonly made by non-experts. Non-experts tend to make low-motivation, uninformed decisions. If, through regulatory or legislative changes, prevention programs were decided by an expert in substance abuse prevention (either someone at the school or at a government agency), then the decision would become higher motivation and better informed.

The third and least feasible option would simply be to fund and enforce a mandate to implement effective in-school prevention programs. If schools were forced and funded to implement independently clinically-proven K-12 substance abuse prevention programs, resource-poor schools would be more likely to implement programs. Further, funding from a federal agency would likely increase oversight to ensure that only effective programs are implemented.

A useful framework for examining potential solutions to the problems listed in this section is called the Marketing Mix or the 4 P's (see Figure C). This analysis includes consideration of price, product, promotion, and place. Such an analysis is important because it considers the four main determinants for consumer decision making and forces the decision-maker to consider how a strategic change will ultimately impact the consumer's decision-making experience. Each consumer-based strategic decision will ultimately impact the 4 P's.

Figure C: Sample Marketing Mix Analysis

Marketing Mix Analysis	
Price	• Some resource poor schools see the price as prohibitive. This can be solved by emphasizing future savings. • Prevention providers may also consider cost reduction strategies to reign in prices
Product	• Variety of products available to meet diverse needs • Universal, selective, and indicated programs to meet specific needs
Promotion	• Clarify promotion through standardized measure and consumer report • Need for increased awareness about efficacy of prevention programs • Advertising to shift attribute importance in line with public health priorities
Place	• Perhaps it would be easier to market programs through funders rather than schools

Areas for Future Research

There is a lot of work left for researchers in the field of substance abuse prevention. I recommend two phases of research.

Phase I: Field Analysis

A successful business must invest some money into market and industry research in order to maintain market share. Unfortunately, the available research on the substance abuse prevention field is lacking.

Channels

There has been no recent research on the channels for substance abuse prevention. While it is largely assumed that decisions for school-based programs are made at the school or district level, little peer-reviewed research is available to support this. There is no

research to indicate who the decision makers are within schools. The decision maker could be principals, guidance counselors, or individual teachers. These channels may differ between market segments (e.g. urban schools versus suburban schools). Perhaps urban school districts will tend to implement prevention on a school-by-school basis, while suburban schools will implement programs on a district-by-district basis. We simply do not have enough information to tell.

Consumer Demands

Social scientists often focus too stringently on results and not stringently enough on meeting consumer needs. It will not matter if a program has the best long-term results if school decision makers only care about short-term results. Fortunately, business and marketing have developed tools to help us discern what matters to consumers. I recommend using a conjoint study (Green & Srinivasan, 1978) to analyze what consumers care about and do not care about. A conjoint study (see Figure D) is a type of systematic survey, which helps to discern which attributes of a product are most important. Screen size, weight, camera quality, and service may be important attributes for a cell phone, but a conjoint study may show that the camera is most important and the weight is less important. By including evidence from a conjoint study while formulating a standardized measure for in-school prevention programs, it will ensure that a prevention consumer's guide adequately informs consumers.

Figure D: Sample Conjoint Study

SAMPLE Conjoint Study Screen		
	Option A	**Option B**
Price	$20/student	$24/student
Short-term effectiveness	8 percent reduction in alcohol use	10 percent reduction in alcohol use
Long-term effectiveness	No long term effectiveness	2 percent reduction in alcohol use
Norms	20% increase in perception of harm	No increase in perception of harm
Ease of implementation	8/10	2/10
Choose "Option A" or "Option B"		

Summary: in a conjoint study, market researchers ask research subjects to make a series of choices between hypothetical products. The researchers use the results of these decisions to discern which attributes are most important to the consumer.

Funding Streams

In business, people follow the money. Surprisingly, there have been few studies mapping out the funding streams behind prevention programs. Funders can yield significant control over the types of prevention programs implemented, i.e. when states require that funded programs be evidence-based. Perhaps it will be easier to market changes to funders rather than to consumers.

Phase II: Possible Solutions

Once the field has been more thoroughly and systematically studied, researchers and policy makers can begin steps to improve their business strategy.

As previously stated, I recommend the next step for the field would be the development and widespread adoption of a standardized measure of efficacy for in-school substance

abuse prevention programs. Such a measure should be informed by science *and* business. A standardized measure will be all but pointless if it ignores the demands of the consumer.

Therefore, I recommend a study to garner information about scientific and consumer indicators of quality for in-school prevention programs. A group of informed scientists can contribute which measures are most important from a public health standpoint. As consumers, school administrators and decision makers can contribute which indicators they find most important. A combination of focus groups, semi-structured interviews, and conjoint studies could illuminate the indictors to be included in a standardized measure. This measure would lend itself to the creation of a Consumer's Guide for substance abuse prevention programs, complete with measures important to both schools and public health officials.

The proposed creation of a Consumer's Guide raises the concern that public health priorities may be misaligned with consumer demand. Businesses have dealt with this problem for years. Say, for example, that a particular television company has good screen size, bad screen resolution, and high price. If consumers care about the "wrong" attributes, i.e. they care more about screen resolution and price than screen size, then the television company may lose market share. The company can shift attribute importance through effective advertising. By advertising the importance of screen size, the company may win back market share without necessarily adjusting screen resolution and price. Similarly, prevention policy makers and researchers can use advertising and other

marketing practices to emphasize the importance of measures important to public health. If scientists find that long-term lifetime use indicators are more important than short-term recent-use indicators, the field could use advertising to change attribute importance of these two indicators.

A regulatory solution would be increasing the rigor of NREPP. NREPP has earned a reputation in the field for identifying effective programs, even though it is clear that NREPP's has a low standard of evidence. Increasing the rigor of NREPP would help schools understand which programs are truly evidence based, even without making substance abuse prevention a high-motivation decision. A potential standard of evidence may be that a program must have favorable results on two, independently run randomized trials of a certain size. Experts on evidence are best suited to identify a specific standard of evidence for NREPP.

Conclusion

Frameworks such as the SWOT analysis, Five C's analysis, and conjoint studies have fueled business growth across sectors for several years. Substance abuse prevention often ignores these business decisions in deference to a focus on research and program efficacy. However, the best businesses realize they need more than a superior product to succeed; they need to dedicate time, energy, and resources to designing a marketing and business strategy that consumers will be receptive to. The idea of customer-centricity in substance abuse prevention is not new (Backer, 2000). However, utilizing business frameworks may improve the field's ability and willingness to develop its business

strategy. While such a business strategy has not been previously studied in the substance abuse prevention literature, other projects for social good have successfully employed business methods to more widely disseminate programs. The US Department of Agriculture spends an equal amount on research as it does on designing consumer-friendly dissemination methods (Rogers, 1995), and has consequently been extremely successful in disseminating educational messages.

Substance abuse prevention should behave more like a business. A strategy to expand the impact of substance abuse prevention must utilize the business frameworks and tools that help for-profit firms succeed and gain market share. Analyzing substance abuse through a business framework will help researchers and policy makers craft a strategy that will engage more students with more effective programs and utilize prevention, the most powerful tool in substance abuse.

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Conflict of Interest Statement:

I declare that I have no proprietary, financial, professional or other personal interest of any nature or kind in any product, service and/or company that could be construed as influencing the position presented in, or the review of, the manuscript entitled, "Selling Prevention: Using a Business Framework to Overcome Obstacles in Expanding Substance Abuse Prevention."

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