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Toward an Increased Focus on Prevention

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Introduction

Over two centuries ago, Benjamin Franklin coined the famous phrase "An ounce of prevention is worth a pound of cure" (Triefeldt, 2007, p. 11). Long before the days of rigorous, longitudinal program evaluations and state-of-the-art cost-benefit analyses, these words of wisdom were spoken without the empirical support one finds today.

In modern times, an increasing amount of attention has been devoted to examining the value of prevention. The growing empirical base in the prevention science field suggests that many mental and behavioral health concerns in children and youth can be prevented (Durlak, 1997; Tolan & Dodge, 2005; Weisz, Sandler, Durlak, & Anton, 2005). Prevention and early intervention programs with children and adolescents who have not developed serious problems can be quite effective in the long term in the academic, social, and behavioral realms of development (Biglan, Mrazek, Carnine, & Flay, 2003; Fletcher, Lyon, Fuchs, & Barnes, 2007; Greenberg, Lengua, Coie, & Pinderhughes, 1999; Nation et al., 2003; Weissberg, Kumpfer, & Seligman, 2003). Additionally, empirical evidence suggests that prevention can make good financial sense: A number of studies indicate that the implementation of effective youth prevention programs can produce positive cost savings. For example, educational programs that prevent youth from dropping out of high school yield benefits to society that are two and a half times greater than their costs (Levin, Belfield, Muenning, & Rouse, 2007), and programs that effectively prevent youth substance abuse return between $3 and $102 for every dollar spent (Aos, Lieb, Mayfield, Miller, & Pennucci, 2004).

In addition to the growing empirical base demonstrating the value of prevention, the prevention science field has gained momentum with the advent of both evidence-based programs (Cooney, Huser, Small, & O'Connor, 2007) and the Response to Intervention (RtI) initiative (Kratochwill, 2007). Evidence-based programs are well-documented, theory-driven programs that have demonstrated their effectiveness through rigorous, peer-reviewed evaluations (Cooney et al., 2007). Two decades ago, the American Psychological Association could identify only 10 such programs for children and youth (Price, Cowen, Lorion, & Ramos-McKay, 1988), but today, they number in the hundreds (see Blueprints for Violence Prevention, 2008; Office of Juvenile Justice and Delinquency Prevention Model Program Guide, 2008; Substance Abuse and Mental Health Services Administration National Registry of Evidence-Based Programs and Practices, 2008). The recent growth in the number of

evidence-based programs, as well as vocal calls for their dissemination, has underscored the idea that prevention initiatives have real potential to positively impact youth.

Likewise, RtI has garnered increased support for prevention, particularly in the field of education. Within the context of serving children's academic and mental health needs, RtI adheres to a prevention science philosophy (see Brown, Chidsey, & Steege, 2005; Kratochwill, Clements, & Kalymon, 2007). RtI involves the implementation of multi-tiered services (typically spanning universal, selected, and indicated) in a school in response to a student's academic and/or behavioral problems. The multi-tiered framework is aligned with public health models that involve three levels of mental health services.

Although the RtI movement has some limitations—it has primarily been associated with special education (see National Association of State Directors of Special Education, 2005), has limited empirical support, and some professionals may question its narrow focus on the risk model of prevention—the movement has tremendous implications for wide-scale adoption of prevention models and specific prevention and early intervention practices in educational settings. The RtI movement has prompted increased interest in prevention beyond its origins in special education, and has helped many school professionals expand on the concept of prevention from a single, narrow focus or target group (e.g., school dropout, drug abuse prevention) to a multi-tiered model of prevention.

Despite raised awareness of prevention's value in educational and other applied settings, our experiences working within the education, mental health, and juvenile justice fields collectively suggest that among publicly-funded youth programming, the treatment of disorders, rather than the prevention of them, remains a greater priority. The focus on the treatment of disorders, rather than the prevention of them, leads one to ask, if research indicates that a variety of programs can not only work to prevent a range of emotional, behavioral, and physical problems in youth but also save valuable resources, why are so few monies invested in preventing negative outcomes for children and adolescents? Why do federal, state, and local government entities and some private agencies continue to provide more attention to the treatment of problems than to their prevention?

This chapter is primarily concerned with the intersection of prevention science and youth policy in the United States. Our discussion focuses on understanding how prevention scholars can better influence the course of youth policy and funding decisions. We examine reasons why policies currently being funded and implemented in the United States do not tend to incorporate the most relevant and recent research findings. In addition, we suggest reasons why the policies and funding decisions affecting our country's youth population are not more prevention-oriented. Our discussion draws on literature on the link between social science research and the policymaking process. We also comment on our own experiences that speak to the inherent difficulties in getting more public resources allocated for prevention efforts. Finally, we delineate several strategies that scholars in the prevention field can use to help bring an increased focus on prevention for our country's youth.

The Relationship Between Research and Youth Policy

Prevention research and policymaking have experienced a troubled relationship in the United States. While researchers' interests in prevention science and program evaluation derive from an expectation that this work can influence the development, adoption, and amendment of policy and programming in accordance with "what works" (Weiss, 1999), the field has instead witnessed a sizeable disconnect between what researchers might expect to be done with empirical knowledge and what is actually done. Prevention researchers, joining many others in the

social sciences, have long lamented the lack of applied use of their findings (e.g., Chelimsky, 1987; Small, 2005; Weiss, 1999).

For several inter-related reasons, a very tenuous link exists between the findings of empirical research, such as the type undertaken by prevention scientists, program evaluators, and economists, and decisions regarding which youth policies and initiatives should or should not be developed, adopted, implemented, or funded. One key factor responsible for this disconnect is that in the realm of policymaking, research is only one factor that decision-makers may draw on when debating and ultimately deciding upon courses of action.

Policymakers have several priorities beyond simply adopting the recommendations put forth by researchers or otherwise taking into account a body of knowledge, such as that generated by the prevention science field in the past couple of decades. Other factors, including alternative sources of information, can influence the decision-making process, and empirical research must contend with these. First and foremost, policymakers' political ideologies influence their decisions. Ideologies are especially relevant when considering the actions of elected and appointed officials, who usually hold their positions as a direct result of their values and beliefs and the means by which they demonstrate them (Weiss, 1999). The ways in which policymakers interpret research findings, and the odds that they will consider these findings relevant, exist as a function of their political ideologies and belief systems. Because prevention researchers may also view research findings with an eye toward policy implications, such interpretations and their related recommendations may not coincide with those of any one policymaker.

Similarly, elected and appointed policymakers have responsibilities to their constituents and the individuals for whom they work (Lavis et al., 2003; Weiss, 1989). Elected officials tend to focus on making decisions that are favored by the voting public and ultimately will get them re-elected. As such, research findings may not be as influential as anecdotal evidence offered by a constituent (Zervigon-Hakes, 1995). Research with lawmakers indicates that constituents are powerful sources of information, carrying more influence than other potential sources, such as lobbyists and non-partisan, university-based educational seminars (Bogenschneider, Olson, Linney, & Mills, 2000). With an eye toward the next election, policymakers tend to favor actions that they believe will avoid controversy, generate favorable media coverage, and reap noticeable benefits within the next several years (Zervigon-Hakes, 1995). To this end, policymakers may make a policy or funding decision simply to demonstrate that they support a particular position (e.g., "tough on crime") regardless of whether research has suggested that the strategy being funded and implemented is more effective than others for producing positive impacts.

Other factors determining the course of policy include the policymakers' past experiences; real or imagined expertise in certain areas; and communication networks of issue advocates, lobbyists, interest groups, and research organizations (Chelimsky, 1987; Sorian & Baugh, 2002). Such networks are often well-established for experienced policymakers (Weiss, 1989). Although policymakers deem issue advocates and lobbyists to be questionable sources of unbiased information, they may seek their responses to research findings and proposed legislation in order to better understand all sides of an argument.

Finally, tradition, or what is usually done, often plays a role in the formation of policies. Past policies shape and constrain future policies (Lavis et al., 2003). Very often new policies cannot and do not form on a blank slate; rather, changes must be made while cognizant of the structures, processes, and pathways that are currently in place (Weiss, 1999).

In the youth prevention field, some of the same factors that help to provide ongoing support to well-established youth programs, such as public perceptions of the program and

policymakers' and funders' preferences, can also make it more difficult to move programs in more innovative directions or eliminate them entirely in favor of more effective programs. As one example, consider the history of the Drug Abuse Resistance Education (DARE) program, one of the most frequently implemented school-based substance use prevention programs in the United States. Several years after empirical evidence strongly suggested the DARE program to be ineffective (Ennett, Tobler, Ringwalt, & Flewelling, 1994), the rate of program implementation in this country remained exceptionally high. In 2002, Hallfors and Godette estimated that 80% of school districts were implementing DARE in some form. As this specific case of disconnect between research evidence and prevention practice continues to incite debate (Des Jarlais et al., 2006; Weiss, Murphy-Graham, & Birkeland, 2005), some policymakers have suggested that DARE should be implemented as part of a larger, more comprehensive effort to prevent youth substance use, rather than as a single program (Birkeland, Murphy-Graham, & Weiss, 2005). In this way, decision-makers intent on maintaining the status quo can continue supporting the DARE program while recognizing that it alone cannot substantially impact youth substance use.

The discrepancy between the value of prevention indicated by research and the current focus of youth policy in the United States also stems from factors inherent to prevention research and the environment in which most prevention scientists operate. Researchers usually have several priorities, some of which may be more important than influencing policy decisions. For instance, university tenure practices often do not recognize and reward efforts to inform policymakers, so academic researchers usually receive very little benefit from communicating with a policy audience (Bogenschneider et al., 2000; Small, 2005). Instead, university-based researchers receive tenure and advance in their field when they publish in scholarly journals and obtain grant funding for more research. Researchers may perceive that effectively working with and for the benefit of policymakers is a good use of their time only if influencing policy is a primary goal of their organization. When organizations are mainly focused on other objectives, such communication and any influence it has on policy would be viewed as more accidental than deliberate (Lavis et al., 2003).

Perhaps because researchers do not often intentionally interact with policymakers, most are not cognizant of the best ways to communicate information to this audience. Observers of the relationship between social science research and policymaking note the inherent differences between these groups in terms of their communication styles (e.g., Bazelon, 1982; Caplan, 1979; Small, 2005). While policymakers prefer information to be conveyed as precisely, simply, and quickly as possible, researchers are accustomed to writing in a detailed and highly technical jargon that is not easily understood by non-researchers. Furthermore, researchers are trained to qualify each of their statements and focus on the complexity of issues and what information is still needed; however, such complexities do not translate well to non-researchers (Roos & Shapiro, 1999), and policymakers are more interested in discussing what is known, rather than unknown. The preferred modes of communication also tend to differ between these two groups. An "oral tradition" persists among congressmen, legislators, and other policymakers accustomed to relying on the spoken, rather than the written, word (Weiss, 1989, p. 414). In contrast, researchers tend to follow the "written tradition" that communicates findings primarily to other researchers. As noted by Zervigon-Hakes (1995, p. 180), "few researchers write for the newspapers or the television broadcasts that are the daily media diet of policymakers." In sum, research evidence does not often reach policymakers, and when it does it is written in a language meant for other researchers and not easily understood by a policy audience (Small, 2005).

Additional Impediments to Prevention

In addition to these more general barriers hindering social science's ability to inform policy, other impediments more specifically related to the concept of prevention also exist. Most glaring is the disparity between the time schedules on which policymakers and prevention scientists operate. Policymakers' needs for information are often immediate (Chelimsky, 1987). Because they are regularly inundated with information, the timeliness of the message is a key determinant of what actually gets read and discussed (Sorian & Baugh, 2002). However, in the prevention science field, researchers must undertake longitudinal and other time-intensive studies to better understand the effects of a program or policy. Prevention, by its very nature, does not show its effects immediately. Effective prevention programs targeting children and youth may not show their largest impacts for years, and possibly even decades. As one example, consider the longitudinal findings of the Abecedarian Project that assessed the impacts of high-quality educational daycare on participants until they were 21 years of age (Campbell, Ramey, Pungello, Sparling, & Miller-Johnson, 2002). Data indicated that the intervention youth, compared to the control group youth, had consistently higher cognitive test scores and academic achievement over the course of the study. However, some of the most compelling results were those evidenced years later when the youth made their transition to adulthood. For example, the treatment youth were twice as likely as the control group youth to be enrolled in school at age 21 (42% and 20%, respectively).

Contrast this scenario first with the needs of policymakers, who must receive information on the potential benefits of prevention initiatives in a very timely manner if that information is ever going to be used. Prevention researchers simply do not have enough time to evaluate the effects of various programs and policies when called upon for this information; instead, prevention scholars can only use information already at their disposal that may or may not adequately speak to expected outcomes for youth or cost-to-benefit ratios.

In addition, consider the effect that the prospect of re-election has on the decisions made by elected officials. Because most politicians must keep an eye focused on the next election, it can lead to a shortsightedness that emphasizes the here and now of policy decisions over potential long-term consequences. Policymakers may be wary of investing public resources in prevention efforts when the benefits of those efforts will not be demonstrated until after the next election or even later, after the policymaker is out of office.

Another barrier faced by the prevention field is that decreasing federal, state, and local budgets effectively work against the funding, adoption, and implementation of prevention initiatives and favor "deeper end" services and programs. Our personal experiences working with decision-makers at all levels point to the perception that prevention is a lower priority—merely "value added"—while interventions for youth's current problems are of greater necessity and priority. Quite understandably, there is more of urgency when it comes to treating current social, emotional, and behavioral disorders in children and adolescents. In contrast to the noticeable benefits that may be gained when youth are currently experiencing substance addictions, mental illness, or severe learning disabilities, the benefits of prevention occur in the distant future for some unidentified, abstract individuals who are not yet affected. In the research and policy arenas, these abstract people of the future do not demand programming and policy responses the same way that youth in the here and now do. Although preventing problematic outcomes in children and adolescents may save money for society in the long run, our experiences suggest that in times of decreasing budgets, prevention initiatives are much less likely to receive funding due to a lesser sense of urgency.

The current trend toward defederalization, moving monies and decision-making powers from federal to state to local jurisdictions (Sorian & Baugh, 2002), also works against the funding and implementation of prevention initiatives. While decisions to fund prevention efforts are more often made locally and programs may be funded by a single entity, the benefits are accrued by the larger society, not by the local government or community organization that made the initial financial investment. For example, school-based programs focused on preventing teen pregnancies, substance abuse, and delinquency may be adopted and funded by local school systems, but the public benefits of such programs are borne by a much broader audience in the long term; among others, the juvenile and criminal justice systems, businesses and employers, and state and federal systems (through increased tax revenue) may all benefit. Furthermore, in an age of geographic mobility, locally-funded prevention efforts tend to benefit not only the immediate community and its residents, but the rest of the country and beyond. Thus, policymakers at all levels may grapple with the question of why they should invest valuable resources in prevention initiatives when the benefits, at least to some extent, will be realized elsewhere.

A final category of barriers to the greater adoption of prevention as a strategy for promoting youth well-being applies to both prevention research and practice. First, although social and behavioral scientists have been interested in prevention for years, the field continues to experience a dearth of information on the longitudinal outcomes and cost-benefit ratios of youth-focused prevention programs. With the advent of evidence-based programs, the field is in a unique position to capitalize on the influence that cost-benefit analysis can have on policy and funding decisions. Unfortunately, cost-benefit research has not yet progressed to the same extent as rigorous impact evaluation, leaving policymakers to question whether an "effective" program is "cost-effective" and therefore worthy of limited funding resources.

Moreover, although there has been significant growth in the number of evidence-based and promising prevention programs in recent years, youth programming currently funded and implemented in the United States still tends toward well-meaning, but often ineffective, interventions (Greenberg et al., 2003; Satcher, 2001). Many locally developed youth programs lack both evidence to suggest their effectiveness and the funding necessary for program improvement and impact evaluation activities. Fortunately, this situation is changing to some extent as a result of increased knowledge of "what works" in youth prevention programming (Small, Reynolds, O'Connor, & Cooney, 2005), the growing availability of evidence-based programs, and state-level adoption of comprehensive youth development models (e.g., social-emotional learning in schools; see Greenberg et al., 2003). However, because no two schools, families, or communities are "built" alike and the prevention programming developed in one setting may not translate well to others, prevention advocates are sometimes left in the awkward position of seeking resources for youth initiatives with questionable impact and cost savings.

Strategies for Bringing a Preventative Focus to Youth Policy

If prevention scholars want to have a greater impact on youth policy, they will need to become more sophisticated and strategic in conducting relevant empirical research and communicating this knowledge in the youth policy arena. Researchers may believe that their typical role—that is, testing theories, measuring phenomena, and communicating results to other researchers—is sufficient for contributing to the betterment of society. However, if decision-makers are unaware of how prevention works and its potential for substantial impacts on children and adolescents, their communities, and society, can the role currently played by many researchers really have much significance? If youth-oriented policies at local, state and

Table 23.1　Strategies for Bringing a Preventative Focus to Youth Policy

1	Recognize and exploit the conditions under which prevention research can inform policy.
2	Communicate with multiple audiences, and tailor the message to each.
3	Involve policymakers and their staff in the prevention research process.
4	Build and maintain credibility.
5	Reward prevention researchers for disseminating evidence to non-research audiences.
6	Educate future prevention researchers about policymaking and related topics.
7	Start small.

national levels are to become more prevention-focused, prevention scholars will need to make a more concerted effort to further research in the field and reach policymakers not only in the manner in which they are most comfortable but also at the time that empirical contributions are needed. Simply publishing research, evaluation, and cost-benefit findings in scholarly scientific journals and waiting for policy to follow suit is not and has never been an effective method for improving youth policy.

Both the literature and our experiences working with policymakers suggest several key strategies for shifting the current focus on treating youth problems to one on preventing them (see Table 23.1). These strategies have not been empirically tested in the manner of evidence-based practices and programs. Rather, they are primarily based on the experience of scholars who have spent many years working in the policy arena and astutely observing the ways in which researchers in the social sciences can influence the policy process. Although some have made calls to more formally evaluate the effectiveness of various strategies (e.g., Lavis et al., 2003), the field has not yet reached, and perhaps never will reach, such a point. Given the lack of more rigorous evidence, these recommendations draw on the best available knowledge and may help prevention science researchers bring an increased focus on current science and prevention to the youth policy arena.

Recognize and Exploit the Conditions Under Which Prevention Research Can Inform Policy

Instead of having a direct or instrumental influence on the results of a particular policy debate, some prevention scholars believe that more often scientific findings influence the world view of policymakers over time and affect policy in small increments (Lavis et al., 2003; Weiss, 1989, 1999). Thus, those working to apply their research findings within the policy arena should not expect a radical paradigm shift to occur at any one time point. Rather, research findings can gradually infiltrate the political arena such that a concept—such as the value of prevention— becomes integral to the common mode of thinking. Prevention scholars can contribute to this "enlightenment," the gradual filtering of new information, ideas, and perspectives into decision-making arenas (Weiss 1989, 1999). In this way, concepts and ideas, not the empirical data themselves, yield the most influence. Weiss (1999), for example, reports that evaluations can tell "stories" and communicate generalizations that can sway policymakers in small but meaningful ways.

Researchers occasionally have the opportunity to influence policy decisions more directly, but for them to do so, the timing must be right. According to Chelimsky (1987), sometimes it is less essential to have the strongest study than it is to have an adequate study that delivers results when decision-makers need them. As such, researchers may do well to stay abreast of legislative and election calendars (Zervigon-Hakes, 1995) and attune themselves to the opportunities that "policy windows" offer (Bogenschneider et al., 2000). Policy windows open when

problems, policies, and politics converge: when a problem is recognized, when adequate policy solutions are available, and when the political climate is ripe for a shift in strategy. Policy windows may be opened by a shift in public opinion, a change in administration, or a major disaster or media event. In the United States, troubling events or trends that garner prolonged media attention, such as the school shootings that occurred in the late 1990s (Satcher, 2001), can lead policymakers in school districts, communities, and state capitols to adopt and fund initiatives that may help prevent such occurrences in the future. Similarly, Weiss (1989) reports that research findings can have an effect on policy when there is a general perception among policymakers that something needs to be done but everyone is very unclear about exactly what path to take.

Research on policymakers suggests that when they need information quickly, they turn to people "who either know the answer or know where to find it" (Sorian & Baugh, 2002, p. 269). They are likely to seek out expertise from credible and knowledgeable sources, such as staff members and trusted professionals at state agencies and local, grassroots organizations (Jackson-Elmoore, 2005). When they contact researchers, policymakers and their staff appear most likely to seek out direct but informal exchanges of information (Hy, Venhaus, & Sims, 1995). Less often, they search for a hard copy of a research brief, request a formal committee presentation, or browse the internet for more information (Hy et al., 1995; Jackson-Elmoore, 2005). Given this reality, prevention scholars need to be proactive and versatile in the ways they reach policymakers. They can exploit such opportunities to influence policy by letting policymakers know ahead of time their particular areas of expertise. When called upon, prevention researchers can serve a valuable role by delivering timely, concise, and matter-of-fact information. Zervigon-Hakes (1995) recommends a two-pronged approach; first, network with policymakers and program administrators and their staffers so they will remember you as an expert in the field, and second, always be prepared to summarize information quickly.

Communicate with Multiple Audiences, and Tailor the Message to Each

Prevention researchers should consider presenting work to various audiences both within and outside academic circles; only through such widespread dissemination efforts will a focus on prevention become a larger part of a national vision. This strategy is especially important when considering that policymakers who influence the lives of youth fill many different roles. In addition to decision-makers existing at all levels of government, the private and non-profit sectors are also influential in determining which programs are developed, funded, and implemented. Thus, if prevention scholars are ever to bring a stronger preventative focus to youth policy and funding decisions, they need to communicate to a myriad of audiences instead of focusing efforts on only one or two legislative bodies or administrative agencies. Because these audiences are likely to vary in their professional and educational backgrounds, their priorities, and their preferred methods of communication, messages need to be tailored to be maximally effective. One general message for everyone is not likely to be sufficient.

The decision-maker's ability to understand the information is key to it ever being used (Chelimsky, 1987). Policymakers very often will not utilize information that is too long, detailed, technical or theoretical in its presentation, leading many scholars to recommend that researchers banish research and evaluation jargon when talking to policymakers and other professionals unfamiliar with the terminology (Sorian & Baugh, 2002). It is recommended that researchers present information to decision-makers beginning at the most basic level possible (Normandin & Bogenschneider, 2006), perhaps by using bullet points, short sentences,

stories, and visual illustrations that require little to no explanation (Bogenschneider et al., 2000).

It is also recommended that communication be as brief and to-the-point as possible. According to Chelimsky (1987), researchers tend to communicate each and every research finding in the same tone, leaving it to the receiver of the information to pick out the most essential details. However, "telling all is tantamount to telling nothing" when communicating with a policymaking audience (Chelimsky, 1987, p. 212). Because presentations are likely to be better received by policymakers when they are succinct, researchers may need to prioritize findings, presenting only the most important points that pass the "so what" test (Normandin & Bogenschneider, 2006).

Scholars who regularly work with policymakers also recommend presenting the conclusions of the work first, rather than presenting details of the research and building up to the conclusions (Bogenschneider et al., 2000). In other words, researchers should take a strategy that first relays "What we found" and only secondly, "How we got there." Others suggest relaying "actionable messages" that focus on solutions, rather than the problems themselves (Lavis et al., 2003). Additionally, although prevention research tends to be large-scale and quantitative, researchers can effectively use anecdotes or stories to illustrate broader findings (Chelimsky, 1987). Such anecdotal evidence "put[s] a face on research findings" for policymakers, who are attuned to the messages that such stories communicate (Zervigon-Hakes, 1995, p. 189).

One key task that researchers can fulfill for policymakers is providing a framework for understanding prevention and related concepts. Policymakers need to know not just that prevention initiatives can work, but how, why, and in what context they work. Theories of youth development and related phenomena can help researchers clearly articulate and explain these concepts. As one example, representing the life course development of youth antisocial behaviors with the "vile weed" illustration (Patterson, Reid, & Dishion, 1992) can make the known precursors to these behaviors much more salient for policymakers. In this illustration, the "weed" has its roots in the child's temperament, parental substance abuse and antisocial behaviors, and stressors, grows in the context of poor parental monitoring and discipline, and develops into associations with deviant peers, youth substance abuse, and delinquency. Bogenschneider and her colleagues (2000) report that one state legislator, after learning this analogy, used it to explain to other lawmakers the value of intervening early with troubled families.

Another key task for researchers interested in informing policy is to integrate research evidence from a body of literature and generate thoughtful but general knowledge about the subject (Chelimsky, 1987). Such systematic reviews on one particular topic are invaluable for developing policies that are well-grounded in years of prevention research. Because individual researchers are unlikely to generate such a body of knowledge on their own, this strategy for informing policy speaks to the importance of continuing to publish literature reviews and meta-analyses in academic journals in addition to effectively communicating these aggregated findings to policymakers.

An important element of effectively communicating with others is framing ideas and concepts so that people take an interest in them (Gilliam & Bales, 2001). Researchers would do well to assess decision-makers' goals and to frame prevention whenever possible within this light. For example, scholars making the case for investing in youth development and prevention initiatives might frame the issue differently for fiscally conservative state legislators than for local business executives. While the former group may be persuaded by an argument appealing to potential cost savings, the latter may see the value in helping to cultivate a well-prepared workforce.

The cost savings that prevention can provide is one definite selling point for decision-makers. Weiss (1999) reports that a primary reason policymakers take note of program evaluation findings is the cost and benefit data that are sometimes included. Because so many decisions in the modern policy arena are justified by cost estimates, such as what benefits will be gained or lost by giving up one programming focus for another (Weiss, 1999), we believe this information needs to be gathered and disseminated more deliberately. While a major argument for the importance of prevention rests on the presumed ratio of benefits to costs, in reality, the prevention field currently does not possess a substantial cache of overwhelming evidence. Thus, where cost-benefit findings indicate the positive value of effective youth-focused prevention programs, scholars need to communicate them more often and more broadly. (Aos and his colleagues (2004) provide an excellent resource of cost-benefit estimates for youth programs.) Where cost-benefit information does not exist, the field would do well to investigate it whenever possible. Considering the power that such information could yield for youth policymaking, estimating the cost-effectiveness of prevention initiatives needs to become more standard in a field currently exploding with rigorous longitudinal program evaluations.

Beyond directly communicating with policymakers, the literature on the transference of research to the policy arena suggests that targeting constituents should be part of a comprehensive strategy. Policymakers, especially elected officials, will focus on youth prevention if constituents demand it. Elected officials are unlikely to support preventative measures, even when such proposed measures are supported by scientific evidence, if constituents do not see them as a good use of public resources (Bogenschneider et al., 2000).

One of the best ways to way to reach constituents is through the media (Roos & Shapiro, 1999; Zervigon-Hakes, 1995). If constituents are informed of an issue by the media and they take interest in it, policymakers will be forced to respond (Roos & Shapiro, 1999; Weiss, 1999). Thus, the media can have a substantial influence on policymakers, both directly and indirectly, through communication with the public. Prevention scholars might consider taking a more active role in engaging the media to educate the general public and policymakers on the value of youth prevention and what programs and practices have empirical support for their effectiveness.

The Teen Assessment Project (Small, 1996) offers one example of how the media can serve as an important vehicle for raising awareness and educating policymakers and the public. This university-based research project utilized a community survey process to identify and address issues and concerns among local adolescents. A central activity of the project was to share the survey's findings with policymakers and the public through local press releases, newsletters, press conferences and community forums. This process helped to increase the community's awareness of issues facing local youth which in turn motivated community leaders and policymakers to take action to address them.

Involve Policymakers and Their Staff in the Research Process

Interactions between researchers and policymakers appear to be important for accounting for why some research is used while other research is not (Lavis et al., 2003). When possible, it is recommended that policymakers and their staff are involved in the evaluation research process at key time points, such as when articulating the research questions and when reviewing the results (Zervigon-Hakes, 1995). Researchers can use these interactions to discover what policymakers' assumptions are, the questions they have, the kinds of data that would be most convincing, and how they plan to use the results of the study (Chelimsky, 1987; Roos & Shapiro, 1999). Such interactions not only attune researchers to the policymaking process,

they also educate policymakers about what good prevention research requires, essentially producing paradigm shifts on both sides (Lavis et al., 2003).

Prevention researchers can begin the process of influencing youth policy by testing the assumptions of policies directly (Chelimsky, 1987). Prevention scholars can also make research endeavors more policy-friendly by not only searching for practical ways to prevent common problems in childhood and adolescence, but also focusing on issues that are of critical importance to decision-makers. Zervigon-Hakes (1995) recommends that program evaluations ask practical questions—What services are needed? How much will those services cost? Who is most likely to benefit? As such, program evaluation questions are not created at the sole discretion of the researcher; instead, the evaluator helps to bring the best possible information to light on a wide variety of policy and practice questions (Chelimsky, 1987).

Build and Maintain Credibility

Scholars studying the link between research and policymaking report that researchers need to broker knowledge, not just advocate for certain policy recommendations, to be maximally effective (e.g., Chelimsky, 1987; Normandin & Bogenschneider, 2006). The source of information is very likely taken into consideration by policymakers, who trust some individuals and organizations more than others. Policymakers are well-tuned to pick up on biases in the way research is presented; they work under the assumptions that everyone, including those in the research community, has an agenda, and the "truth" cannot be learned solely from one source (Bazelon, 1982). Moreover, according to Chelimsky (1987), reputations for partisanship persist and are not forgotten. Thus, the burden falls on the prevention researcher to conduct and present his or her work with as little bias as possible.

A large part of remaining credible is recognizing and acknowledging that information deficits exist, particularly in the social sciences (Bazelon, 1982; Chelimsky, 1987; Lavis et al., 2003). It is recommended that researchers become comfortable saying that good evidence is not available when in fact it is not, and actively push back against decision-makers who want them to make declarations beyond their expertise (Bazelon, 1982). It is also important to acknowledge that some bodies of research will not generate a take-home message because there is no apparent or credible conclusion.

Falsely judging that something works is detrimental to the whole of social science (McCartney & Rosenthal, 2000). Bazelon (1982) eloquently warns researchers against promising too much; when prevention efforts fail to deliver, researchers have an even lower likelihood of influencing future policy decisions. Particularly in evaluation research, it is essential to remember that what works under ideal conditions may not work or may be less effective when transferred to the "real world," where other factors influence the outcomes of prevention efforts. Program impact evaluations are frequently conducted under ideal conditions with well-trained, supervised staff and ample, consistent funding. In contrast, the effectiveness of a program is measured under "everyday" conditions which are potentially less favorable. As such, the effectiveness of a program often does not reach its demonstrated efficacy, and we should expect the latter impact when the program is implemented in a non-experimental setting (Evidence-Based Intervention Work Group, 2005; Small, 2005).

Additionally, it is recommended that researchers acknowledge distinctions between the evidence provided by different types of research. Some research methods are generally considered better than others, and each method has its limitations, so it is important to

communicate how much confidence one has in a study's findings (Normandin & Bogenschneider, 2006). For example, meta-analyses are generally preferred to jointly considering the results of only two or three studies, and research with samples representative of the population is often perceived as more desirable than those conducted with more limited samples. Prevention researchers should also have a working knowledge of effect size estimates and the difference between practical and statistical significance (McCartney & Rosenthal, 2000).

To build and maintain credibility with a policymaking audience, researchers need to distinguish between new, emerging information that has yet to be replicated and information drawn from a litany of well-respected studies. When presenting the results of only one study, researchers should be clear that individual studies can have conclusions much different from those emanating from a larger body of research. Additionally, in line with the evidence-based practice movement, it is becoming increasingly important for researchers to convey accurate information not only when a particular program is found to be ineffective, but also when a program demonstrates iatrogenic effects (Lilienfield, Lynn, & Lohr, 2003; Norcross, Koocher, & Garofalo, 2006).

In instances where we know prevention works, researchers are encouraged to highlight the field's knowledge on the subject. Of course, in many cases we are unsure of the value of preventative initiatives for youth. Here, more research is needed, and prevention scholars may find themselves in the position to say as much. If policymakers understand that prevention can work and provide cost-savings, it logically follows that investments need to be made in prevention research to assess exactly which programs or types of program should be funded and how and with whom they should be implemented.

There exists an ongoing debate in the social sciences about whether researchers should outline policy recommendations emanating from a study or collection of studies. When Sorian and Baugh (2002) surveyed state legislators, they found that the majority (89%) stated they do want to know what the researcher recommends or perceives as implications of the research. When identifying policy options, researchers can be more effective when they provide a balanced perspective of the consequences of each option (Normandin & Bogenschneider, 2006), a process sometimes termed *policy alternative education*. As one example, when states are deciding which, if any, policies to adopt regarding the type of sex education taught in public schools, a prevention researcher might lay out three options—such as comprehensive education, abstinence-only education, and condom use instruction—and show what the evidence suggests would be the outcomes of each. In this manner, recognizing that additional factors beyond empirical evidence will influence policymakers' decision, the researcher can forgo advocating for any one policy option and maintain credibility.

Some scholars have suggested convening an interdisciplinary group to discuss research findings and their implications before forming policy recommendations, especially for controversial topics (Chelimsky, 1987; Zervigon-Hakes, 1995). When originating with a group rather than one or two people, the recommendations may be less likely to be biased by a particular mode of thinking. If convening a panel of scholars is not possible, a related option is to have others in the field review the recommendations. Such activities will allow researchers and the organizations for which they work to remain credible and effectively inform youth policymaking, no matter which political party or prevailing viewpoint is currently the most powerful (Bogenschneider et al., 2000). A number of well-respected institutions that employ prevention researchers, such as RAND Corporation and Child Trends, have maintained influence in the policy arena through these means.

Reward Researchers for Disseminating Evidence to Non-Research Audiences

Building credibility and effectively transferring knowledge to others outside of academia and the prevention research community can be time- and labor-intensive. While researchers have become increasingly specialized in their fields of study, policy-oriented research, and the thoughtful dissemination and application of results, necessitates integration and synthesis (Bogenscheider et al., 2000). The ability to speak to and work with a range of audiences is a unique skill that prevention researchers do not typically learn during their graduate training. Such skills need to be developed and cultivated; as such, prevention researchers need to be rewarded for undertaking policy-friendly work if a real shift toward prevention is ever to occur in the youth policy arena.

Educate Future Prevention Researchers About Policymaking and Related Topics

Given the influence prevention researchers can have on youth policymaking in the United States, universities have a responsibility to adequately prepare students for this task. Graduate training in prevention science might include courses on performing program evaluations, policy simulations, and cost-benefit analyses; working with policymakers; understanding the policymaking process; investigating policy questions; and applying empirical findings to areas of policy interest. Several universities have already established prevention science curriculums that highlight the importance of connecting this work to policy. For example, at the University of Wisconsin—Madison, graduate students enrolled in prevention science courses gain real-world experience by holding "practice" briefings with local legislators and press conferences with members of the local media.

Start Small

Working in the policy arena can be intimidating, even for the most knowledgeable professionals in the prevention field. We suggest that prevention researchers "start small," by working with individuals and groups already familiar and accessible. Today, most youth policies are debated, crafted, and implemented at the local level through school boards, local commissions, county boards, community-based organizations and other agencies that might readily welcome outside assistance. Researchers may find these collaborative experiences to be particularly educational and empowering. Prevention researchers who help local decisions-makers with even the smallest of projects might use these opportunities as a springboard, addressing larger and more powerful audiences when the circumstances are right. Prevention researchers influential in the youth policy arena have taken this route; as one example, in Wisconsin, university-based prevention researchers leading the Responsive Education for All Children (REACh) initiative started their work with seven schools before expanding it into a statewide prevention initiative.

Conclusion

For a multitude of reasons, prevention has not been a primary focus of youth policy and funding decisions in the United States. While several of these barriers echo those found in the social sciences more generally, others must be recognized and addressed more deliberately in the prevention field.

Literature on the utilization of social science research by policymakers not only speaks to the existing barriers, but also suggests strategies for countering them. As prevention

researchers become more sophisticated in their work with policymaking audiences, it is our hope that the prevention field will not only generate new information about effectively facilitating these relationships, policy-relevant research, and the knowledge transfer process, but also increase its impact on the programs, institutions, and policies that enhance youth development and well-being.

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