Changing Service Systems for High-Risk Youth Using State-Level Strategies

"Current research on positive youth development and the prevention of problem behaviors in adolescents identifies connections between a range of child and adolescent behavioral disorders, a lack of individual and family assets, and deficits in neighborhood and community resources."[1,4,5]

Evelyn R. Frankford, MSW

Programs and Services Are Not Meeting the Challenge of Effective Intervention

HIGH-RISK YOUTH ARE vulnerable to multiple and intersecting problems, including emotional and behavioral disorders, substance abuse, violent and risk-taking behaviors, and poor connection to and performance in school. High-risk youth are more likely to live in vulnerable families and in communities that are inadequately supportive, contain high rates of conflict, and expose youth to high-risk activities.[1]

Despite the considerable efforts of those who serve youth through the many governmental and voluntary programs, these programs and services are not meeting the challenge of effective intervention to address and ameliorate the problems associated with high-risk youth and their broader social environments. One important reason why these programs are missing the mark is that states continue to fund categorical and fragmented programs, i.e., narrow interventions targeted on "fixing" certain problems or behaviors. State pilot projects focus on 1 or 2 narrow areas of youth problems for a time and then end up in the "pilot graveyard."[2,3]

Meeting the challenge of effective intervention requires local and regional systemic change that creates public health–oriented, comprehensive, interagency initiatives that target deficient environments and reorganize services and programs to strengthen assets among individuals, families, and communities. The state is the level from which the leadership for that change must come.

PREVENTION AND POSITIVE YOUTH DEVELOPMENT

Current research on positive youth development and the prevention of problem behaviors in adolescents identifies connections between a range of child and adolescent behavioral disorders, a lack of individual and family assets, and deficits in neighborhood and community resources.[1,4,5] This positive youth development framework addresses the historic divide between public health and prevention strategies, and the more prevalent and traditional clinical and treatment strategies. It remedies conceptual deficits that once existed around the prevention of mental disorders and the application of public health concepts to mental health.

A positive youth development framework is grounded in 2 perspectives that are the foundations for comprehensive approaches: the population-based classification system developed by the Institute of Medicine (IOM), and risk and protective factor theory.

The IOM classification covers both broad and targeted interventions, including:

- *Universal preventive interventions*: health promotion activities targeted to the general public or whole population group not identified on the basis of individual risk.
- *Selective preventive interventions:* early intervention activities targeted to individuals or a subgroup of the population whose risk of developing a disorder is significantly higher than average.
- *Indicated preventive interventions:* targeted activities for individuals in high-risk environments who are identified as having minimal but detectable symptoms foreshadowing disorder or biological markers indicating

Continued on page 596

Frankford continued from page 594

predisposition for disorder but not yet meeting diagnostic levels.[6,7]

Universal interventions target the entire population; both selective and indicated interventions are strategies for targeting individuals or groups in particularly high-risk environments for poor outcomes, based on their individual characteristics, family situation, or environmental conditions.[8]

Ideally, early intervention can be implemented throughout an individual's life.[9] Early intervention for older children involves skill building and may focus on building communications skills, problem-solving abilities, and the ability to make healthy choices and reduce unhealthy and self-destructive behaviors.[10] Early interventions can form a link between prevention and treatment, targeting young people soon after they start exhibiting problem behaviors such as drinking, smoking, or using drugs, and identifying those who need more intensive services.[8] Because school failure is often associated with behavioral disorders and substance abuse, schools are a key part of any comprehensive strategy.[11]

Risk and protective factor theory posits that the greater the number of risk factors associated with a child or adolescent, the greater the likelihood that the individual will abuse substances, develop a mental health problem, and experience other serious problems, all of which may lead to school failure. The greater the number of protective factors, such as relationships with prosocial adults and attachment to school, the less likely a negative outcome will occur.

By reducing risk factors for poor outcomes and increasing protective factors, many prevention interventions have reduced the consequences of interconnected mental health and substance abuse disorders. For example, studies indicate that depression among adolescents can lead to substance abuse, that substance abuse rates are significantly higher in children who have conduct disorders, and that the most costly and damaging societal problems, e.g., delinquency, substance use, and adult mental disorders, have their origins in early conduct problems.[1,6,12] Connections exist also between youth violence and mental health disorders and with substance use and abuse.[13–17]

Protective factors can create conditions that shield youth from the negative consequences of exposure to risk factors associated with individual and environmental conditions. Protective factors, such as connectedness to school, close ties to a caring adult, and positive school climates, may promote positive behavior, health, well being, and personal success.[18] The field's recent emphasis on resilience is related to protective factors and stems from research on young people from troubled backgrounds who have learned to bounce back when the odds are stacked against them. Resilience refers to a "dynamic process encompassing positive adaptation within the context of significant adversity."[5] Resilience may protect or bolster people against social problems or risk factors. Resilience and positive youth development shift the focus from a deficits and risks reduction model to a competence enhancement model.[19,20]

An additional important implication of the above-mentioned research on risk and protective factors for youth is that interventions must be comprehensive and attached to the organizations and environments in which youth interact, particularly schools, families, and communities. Programs must address the range of populations and conditions, from universal population-based approaches to more targeted high-risk individuals and groups. Rather than target specific problems or conditions, however, states and other funding agencies must redeploy resources into more comprehensive public health programs that emphasize assets, resources, and positive youth development.

ELEMENTS OF NEW STRATEGIES

How are states to shift from the current funding silos to a more timely and coherent system focused on a range of population interventions, protective factors, and positive youth development? How can preventive interventions be embedded in key institutions and organizations?

A values-based conceptual framework that can be adapted to a public health approach is "systems of care," a set of principles that show how services should be delivered to children with serious emotional disturbances and their families—in other words, those for whom treatment rather than prevention is needed. Coordinated systems of care provide a range of services to effectively serve children and their families in the context of their families and communities, rather than to focus just on the singular problems they may have.[21]

The systems of care approach requires that representatives from mental health, substance abuse, child welfare, education, and other systems with which the child and family are involved work together, using comprehensive assessments to identify strength and need areas and ensuring that services are seamless, accessible, and not duplicative. Emphasis is placed on ensuring that families are involved and that everyone focuses on meeting the needs of the child and family, rather than trying to fit the child and family into categorical services. This type of comprehensive system lends itself to the inclusion of cultural needs in the assessment and planning of services.

This systems of care approach can be adapted for positive youth development and prevention strategies with adolescents. Programs that target specific problem behaviors may address related problems that are found within the scope of universal and selective interventions. Under current categorical funding streams, providers frequently choose the very same individual programs for universal and selective interventions to prevent substance abuse, mental health problems, school and community violence, and juvenile offenses. Many of these same programs are used to prevent clinical symptoms of depression, anxiety, conduct disorders, and substance abuse,[1,4,5,9,22] but they are not embedded in a comprehensive public health–oriented system, where they would have the necessary impact on youth outcomes.

Embedding a values-based systems of care model within a

public health framework would require adapting and building upon the following principles for effective prevention strategies:

- Multiyear programs are more likely to foster enduring benefits than short-term "projects."
- Preventive interventions are best directed at risk and protective factors rather than at categorical problem behavior. It is both feasible and cost-effective to target multiple negative outcomes in the context of a coordinated set of programs.
- Interventions should be aimed at multiple domains, changing institutions and environments as well as individuals.
- Prevention programs that focus independently on the adolescent are not as effective as those that simultaneously "educate" the adolescent and create positive changes in both the school and home environments.
- There is no single program component that can prevent multiple high-risk behaviors. A package of coordinated, collaborative strategies and programs is required in each community.
- Prevention programs need to be integrated with treatment systems to enhance linkages and sustainability.
- Schools, in collaboration with community providers, are potential settings for the creation of such fully integrated models.[1]

These principles and frameworks show the possibilities for how and where to develop comprehensive programs and services for children and their families that focus on their needs and strengths and on the risks and protective buffers in their environments, rather than solely on their mental health, substance abuse, or other disorders or diagnoses.

VENUES FOR SERVICE DELIVERY

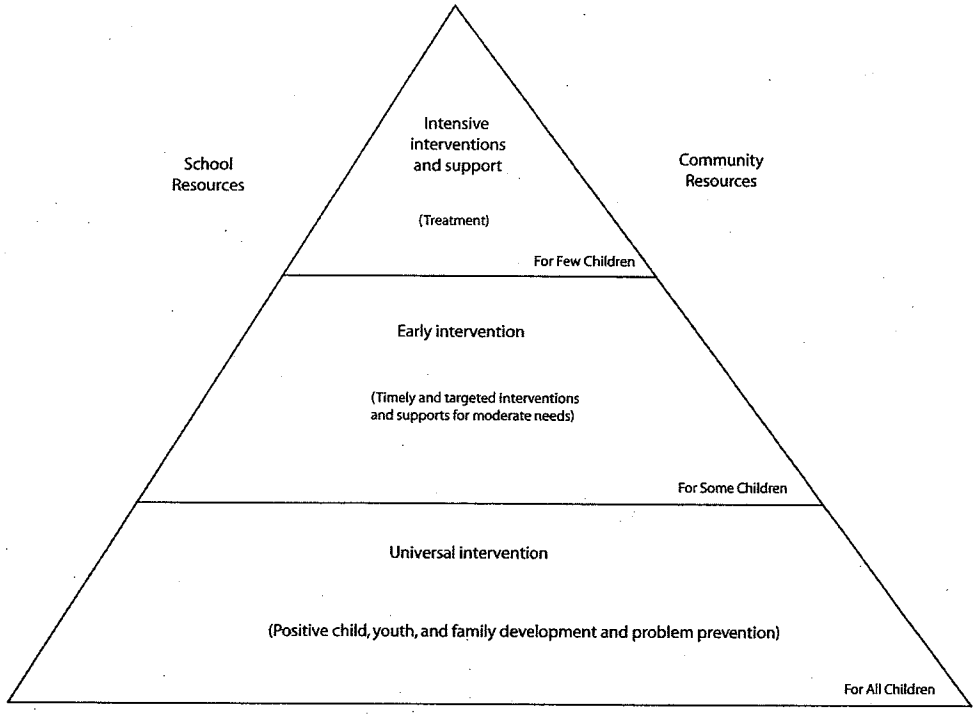
Building up the Prevention Focus in Schools

Schools are strategically placed to implement comprehensive prevention interventions for children. School personnel see the full continuum of young people's mental health needs, from emotional and behavioral disorders to serious emotional disturbance. A major set of protective factors for high-risk youth has to do with school, including development of the child's cognitive skills, interactions with peers and adults with prosocial values, and connectedness to school.[18]

More than three fourths of children who receive any mental health services are seen in the education system; for many, this is the sole source of care.[23] Most schools have some programs, however scattered and insufficient, to address mental health and psychosocial concerns, e.g., school adjustment and attendance problems, dropping out, physical and sexual abuse, substance abuse, relationship difficulties, emotional upset, delinquency, and violence. Many of these programs are considered preventive in nature.[24]

The longer adolescents stay in school and the more successful they are in school, the more likely it is that they will not be involved in substance abuse and will not experience mental health problems. The less successful that students are in school, the more at risk they are for conduct disorders, substance abuse, and engagement in risky behaviors with regard to their health.[11] Adolescents with mental health problems and disorders and those who abuse substances are at risk for not staying in school and for having problems in school, which impairs their life outcomes.

Figure 1 is a diagram based on the the IOM population-based classification system of universal, selective, and indicated preventive interventions widely used by many school-based comprehensive initiatives that represents the opportunity for collaboration between schools and community agencies around a shared public health approach. One effort to apply the IOM framework as well as the research on risk and protective factors has been Safe Schools/ Healthy Students, an interagency school-based initiative sponsored by the federal Substance Abuse and Mental Health



Note. Both school and community resources function as equals and are reorganized into the 3-tiered public framework.

FIGURE 1—Comprehensive 3-level framework for school and community resources.

Services Administration (SAMHSA) and the Departments of Education and Justice. Grants are awarded to local education agencies to stimulate school-based comprehensive approaches to violence prevention and healthy child development in collaboration with community-based mental health and local law enforcement partners. However, because these grants focus on local agencies only, sustainability, which is likely to require changes in state funding, statutes, and regulations, has been a serious challenge.

Nine Safe Schools/Healthy Students grantees were paired with SAMHSA grantees for treatment-oriented systems of care (the top of the triangle in Figure 1) in the same municipalities. Their patterns of collaboration and comprehensiveness were assessed through a series of telephone interviews. The results indicated that although both initiatives had goals of creating systemic change to build comprehensive infrastructure, with regard to reducing risk and building protective factors, most of the initiatives tended to operate separately.[25] However, 2 pairs of grantees were able to align the 2 grants so they created a path to a comprehensive infrastructure. A reported advantage gained from such infrastructure building was that, by intervening at earlier points all along the continuum, the numbers of children who needed the most intensive level of intervention decreased and staff could direct scarce resources to children who most needed them. At least 1 of these pairs of grantees received technical support from the state to move in this direction, which suggests that appropriate state-level involvement and leadership may support local, sustained, comprehensive, public health–oriented, school-based infrastructure for children and youth services, with less demand for the costliest level of service.

Incorporating Prevention Interventions in Primary Health Settings

About half of the care for common mental disorders is now delivered in general medical settings. Primary care providers prescribe the majority of psychotropic drugs for both children and adults. Primary care is the other major setting, after schools, for the potential identification and treatment of mental disorders in children. For this reason, both the Surgeon General's Report and the President's New Freedom Commission on Mental Health recommended improvement of the delivery of mental health and substance abuse prevention services through primary health care.[26,27]

Because of access to care for children and adolescents, school-based health centers provide an opportunity to apply research on mental health promotion and early intervention for substance abuse and mental disorders between schools and primary health care. Studies of school-based health-center service utilization repeatedly identify mental health counseling as the leading reason for visits by students. School-based health centers report that mental health is a component in more than 50% of cases that present for physical health, and almost 70% of school-based health centers are currently staffed to provide mental health services.[28] Nevertheless, because of financial constraints, most school-based health centers and other school health providers offer largely clinical treatment rather than a public health, comprehensive approach.

MOVING STATES BEYOND CATEGORICAL FUNDING

For many high-risk children and adolescents, a window of opportunity may exist for preventive interventions to alter life trajectories in positive ways. However, there is no simple way to do this without more active state leadership that promotes positive youth development. State leadership will be required to replace fragmented and inadequate programs and services with a public health–oriented, comprehensive, noncategorical system.

Unfortunately, such a shift to noncategorical funding may require scarce additional state, local, and federal funds. The fact that states continue to provide fee-for-service funding that requires clients to be individually identified hampers expansion of preventive and early interventions in school-based settings. For the most part, states continue to devote health funds to clinical services and mental health funds to treatment and care. Most states still use mental health funds disproportionately to pay for inpatient and residential programs rather than for community treatment and support services to prevent further disability or relapse. Some state mental health statutes explicitly direct funding to treatment services for children and adolescents with serious emotional disturbances, which excludes prevention entirely.

Also, promising school-based interagency initiatives such as Safe Schools/Healthy Students have largely not been coordinated with key state agencies or have not sought to change regulations that would ensure long-term funding. The result is that these kinds of initiatives remain disparate, marginal local pilots that end up in the "pilot graveyard" rather than serving as foundations for a full public health approach.

With the availability of an ever-expanding research base on comprehensive prevention and positive youth development, state policymakers and funding agencies are remiss if they do not take action to spend scarce resources to achieve better youth outcomes by:

- Reforming state interagency infrastructure
- Reviewing and modifying state regulations against a common template of comprehensive health, mental health, substance abuse, and child welfare services delivered through the schools and the primary health care system
- Providing guidance to local education authorities on the integration of school-based support programs with those of health and human services agencies through a common framework of social, emotional, and learning supports improving outcomes for high-risk and troubled youth
- Directing state mental health, public health, education, and child welfare authorities to apply federal funds (e.g., Block Grant funds) toward development of nonclinical funding streams
- Increase appropriations to remedy the cuts endured by school and community-based services
- Examining ways to restructure Medicaid away from fee-for-service
- Promoting interdisciplinary knowledge development

- Providing technical assistance and professional development about overarching risk and protective factors in children's lives and about prevention interventions across categorical programs
- Supporting advocacy by community, health, and school coalitions to develop a comprehensive vision of preventive, early intervention, and intensive interventions

Our youth deserve comprehensive public health–oriented services that cover the spectrum of interventions and populations. Although many of our youth are marginalized and live in marginalized communities, programs and services that strengthen their chances in life need not be marginalized. ■

About the Author

Evelyn R. Frankford is with the Executive Office of Health and Human Services–Schools Initiative with the Commonwealth of Massachusetts, Boston.

Requests for reprints may be sent to Director, EOHHS–Schools Initiative, c/o Department of Social Services, 24 Farnsworth St, Boston, MA 02210 (e-mail: efrankford@verizon.net).

This article was accepted July 1, 2006.

Note. *The conclusions and recommendations are the author's and do not necessarily represent the views of the Substance Abuse and Mental Health Services Administration, Education Development Center, or agencies of the Commonwealth of Massachusetts.*

doi:10.2105/AJPH.2006.096347

Acknowledgments

E.R. Frankford organized and wrote this article, building on and substantially revising an extensive original research review prepared by Beth Caldwell for the Substance Abuse and Mental Health Services Administration's Northeast Center for the Application of Prevention Technologies at Education Development Center, Newton, Mass. Ms. Frankford added information obtained through her work on the Substance Abuse and Mental Health Services Administration's National Center for Mental Health Promotion and Youth Violence Prevention.

References

1. Greenberg MT, Domitrovich C, Bumbarger B. *Preventing Mental Disorders in School-Age Children: A Review of the Effectiveness of Prevention Programs.* Rockville, Md: Center for Mental Health Services; 1999.

2. Frankford ER. Realizing a vision for children, families, and neighborhoods: the importance of communications and civic engagement strategies. Presented at: 1997 Child Welfare League of America Mid-Atlantic Conference; June 16, 1997; Baltimore, Md.

3. Goodman RM, Steckler AB. The life and death of a health promotion program: an institutionalization case study. *Int Q Community Health Educ.* 1987– 1988;8:5–21.

4. *Report to Congress on the Prevention and Treatment of Co-occurring Substance Abuse Disorders and Mental Health Disorders.* Rockville Md: US Dept of Health and Human Services, Substance Abuse and Mental Health Services Administration; 2002.

5. Davis NJ. The promotion of mental health and the prevention of mental and behavioral disorders: surely the time is right. *Int J Emerg Ment Health.* 2002;4:3–29.

6. Mathews-Younes A, Davis NJ, Ritchie G. *The Promotion of Mental Health and Prevention of Mental Health and Behavioral Disorders* [working paper]. Rockville, Md: Substance Abuse and Mental Health Services Administration; 2002.

7. Mzarek PJ, Haggerty RJ, eds. *Reducing Risks for Mental Disorders: Frontiers for Preventive Intervention Research.* Washington, DC: Institute of Medicine, National Academy Press; 1994.

8. Education Development Center. *Early Intervention: A Strategy for Prevention Practitioners.* Newton, Mass: Center for Substance Abuse Prevention, Northeast Center for the Application of Prevention Technologies; 2002.

9. Olds D, Robinson J, Song N, Little C, Hill P. *Reducing Risks for Mental Disorders During the First Five Years of Life: A Review of Prevention Interventions.* Rockville, Md: Center for Mental Health Services; 1999.

10. Olds DL, Eckenrode J, Henderson CR Jr, et al. Long-term effects of home visitation on maternal life course and child abuse and neglect. Fifteen-year follow up of a randomized trial. *JAMA.* 1997;278:637–643.

11. Dryfoos JG. *Adolescents at Risk: Prevalence and Prevention.* New York, NY: Oxford University Press; 1990.

12. Federation of Families for Children's Mental Health and Keys for Networking Inc. *Blamed and Ashamed: The Treatment Experience of Youth With Co-occurring Substance Abuse and Mental Health Disorders and Their Families.* Alexandria, Va: Federation of Families for Children's Mental Health; 2000.

13. National Center for Injury Prevention and Control, Substance Abuse and Mental Health Services Administration, National Institute of Mental Health. *Youth Violence: A Report of the Surgeon General.* Rockville, Md: US Dept of Health and Human Services; 2001.

14. Elliott DS, Huizinga D, Menard S. *Multiple Problem Youth: Delinquency, Substance Use and Mental Health Problems.* New York, NY: Springer-Verlag; 1989.

15. Huizinga D, Jakob-Chen C. Contemporaneous co-occurrence of serious and violent juvenile offending and other problem behaviors. In: Loeber R, Farington DP, eds. *Serious and Violent Juvenile Offenders: Risk Factors and Successful Interventions.* Thousand Oaks, Calif: Sage Publications; 1998:47–67.

16. Elliott DS. Health-enhancing and health-compromising lifestyles. In: Millstein SG, Peterson AC, Nightingale EO, eds. *Promoting the Health of Adolescents: New Directions for the Twenty-First Century.* New York, NY: Oxford University Press; 1993:119–145.

17. Reiss AJ Jr, Roth JA. *Understanding and Preventing Violence.* Washington, DC: National Academy Press; 1993.

18. Blum RW. A case for school connectedness. *Educ Leadership.* 2005;62: 16–20.

19. Catalano RF, Berglund ML, Ryan JAM, Lonczak HS, Hawkins JD. Positive youth development in the United States: research findings on evaluations of positive youth development programs. *Prev Treatment.* 2002;5.

20. Bumbarger B, Greenberg MT. Commentary on "Positive youth development in the United States: research findings on evaluations of positive youth development programs": next steps in advancing research on positive youth development. *Prev Treatment.* 2002;5.

21. Stroul B, Friedman R. *Children's Mental Health: Creating Systems of Care in a Changing Society.* Baltimore, Md: Brookes Publishing Co; 1986.

22. Curie CG, Brounstein PJ, Davis NJ. Resilience-building prevention programs that work: a federal perspective. In: Class-Ehlers C, Weist M, eds. *Community Planning to Foster Resilience in Children.* New York, NY: Kluwer Academic/ Plenum Publishers; 2004.

23. *About Mental Health in Schools.* Los Angeles, Calif: Center for Mental Health in Schools at the University of California, Los Angeles; 2002.

24. Osher D, Dwyer K, Jackson S. *Safe, Supportive and Successful Schools; Step by Step.* Longmont, Colo: Sopris West Educational Services; 2004.

25. Frankford ER, Kitson J, Osher D. Patterns of collaboration: applying the systems of care framework to advance comprehensive prevention and resilience: implications from an environmental scan of SAMHSA-funded initiatives. *Proceedings 18th Annual Research Conference, Florida Mental Health Institute,* March 8, 2005. In: Newman C, ed. *A System of Care for Children's Mental Health: Expanding the Research Base.* Tampa, Fla: The Research and Training Center for Children's Mental Health; 2006.

26. Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institute of Mental Health. *Mental Health: A Report of the Surgeon General, Chapter 3: Children and Mental Health.* Rockville, Md: US Dept of Health and Human Services; 1999.

27. President's New Freedom Commission on Mental Health. *Achieving the Promise: Transforming Mental Health Care in America. Final Report.* Rockville, Md: US Dept of Health and Human Services; 2003. DHHS publication SMA-03-3832.

28. Schlitt J, Santelli J, Juszczak L, et al. *Creating Access to Care for Children and Youth: School-Based Health Center Census 1998–1999.* Washington, DC: National Assembly on School-Based Health Care; 2000.

Gorman continued from page 595

This has important implications for the development of preventive interventions. Specifically, if there are distinct subtypes within the broad category of adolescent problem behaviors with distinct developmental paths, one would expect generic interventions such as those delivered through school-based curricula to work with some individuals but not others and with some problem behaviors but not others. Indeed, one might expect some interventions to have a detrimental effect with some subgroups of individuals, as indeed seems to be the case with high-risk youth in poorly structured group settings.[7,8]

"The difficulty with using scattered positive effects from a wide range of prevention program evaluations to support a general theory of positive youth development is that it gives the appearance that these interventions have a potentially broad reach."

Dennis M. Gorman, PhD

A Broad Analysis of Youth Development Provides Only a Starting Point

ALTHOUGH FRANKFORD HAS identified important problems in prevention and positive youth development, there are at least 2 concerns about the type of positive youth development framework proposed. First, a broad analysis of youth development provides only a starting point for understanding the etiology and course of adolescent problem behaviors and the development of effective interventions. Second, a focus on positive youth development may not provide the basis for a truly public health approach because it may be tied to strategies that "fix" or "inoculate" individuals through participation in inter- and intrapersonal prevention programs, rather than promote strategies to strengthen the broader social environment.

The positive youth development model proposed by Frankford is grounded in 2 sets of ideas that have influenced much of the contemporary research and practice in health education, namely risk and protective factor theory and the tripartite classification of intervention programs (i.e., universal, selective, and indicated). As Frankford notes, the basic premise of risk and protective factor theory is that the greater the number of risk factors experienced by a young person, the greater the probability that he or she will experience 1 or more of an array of behavioral, emotional, and mental health problems such as drug use, violence, and school failure. It is further argued that this risk can be off-set or mitigated by the presence of protective factors such as attachment to prosocial others and personal competency.

At a very general level, the basic premise of the youth development model is almost certainly true—the backgrounds of children and adolescents who develop behavioral, emotional, and mental health problems are probably more similar to one another than they are to those who reach adulthood unscathed. They are also individuals with more negative experiences that threaten social and emotional competence, self-efficacy, and other personal traits. Thus, from one perspective, child and adolescent problem behaviors can be considered the result of some broad common developmental pathway.

However, when one focuses attention on the experiences that place youth at risk, the picture becomes more complex. For example, research suggests that adolescent problem behaviors cluster into more than a single factor, that the associations between problems and behaviors are unstable over time, and that the predictors of problem behaviors differ according to sociodemographic characteristics, such as gender, and from one point in time to another.[1–3] Indeed, even if one focuses on a single health or behavioral problem (e.g., substance use and abuse or delinquency), the evidence shows that there are different risk factors associated with different types of the problem.[4–6] Such research suggests the existence of a number of at-risk subtypes within any one of the adolescent health and behavioral problems of concern to public health, based on factors such as etiology, duration, and co-occurrence with other types of problems.

Continued on page 599

Beyond the issue of adolescent subgroups is the idea that there exists a number of empirically supported positive youth development programs grounded in risk and protective factor models. This big picture of effectiveness is presented in the recent review of positive youth development programs by Catalano et al.[9] cited by Frankford. This work describes 15 broad objectives considered relevant to the issue of positive youth development, such as promoting bonding and social competence and fostering self-efficacy and resilience. It then goes on to identify programs that target 1 or more of these objectives and purport to have had a positive effect in the form of reduction or prevention of some type of problem behavior. For example, evaluations of Catalano and colleagues' Seattle Social Development Project revealed some positive outcomes (e.g., increased attachment to school) attributed to the objectives of positive youth development (e.g., bonding). These limited positive outcomes are used to affirm the benefits of a positive youth development approach.

The difficulty with using scattered positive effects from a wide range of prevention program evaluations to support a general theory of positive youth development is that it gives the appearance that these interventions have a potentially broad reach. However, when one focuses on the specific evidence presented in the evaluations of these programs one finds that they often do not show effects on the behaviors that they were designed to influence. This weakens the argument for some generalized effect of these programs upon a successful transition to adulthood.[10–12] Although the use of isolated statistically significant results to designate programs as "best practice" in relation to a specific outcome (e.g., drug use) is in itself a problem,[11] it is even more questionable to use such evidence to argue that they provide some form of generalized developmental panacea.

Finally, although Frankford notes the importance of changing the broader social environment, the model she presents is grounded in the delivery of services and intervention programs through schools and primary health care settings. The major reviews of positive youth development interventions cited[9,13] also focused on inter- and intrapersonal intervention programs typically delivered in schools. Thus, there is little focus at the population level, and one might question the extent to which positive youth development models provide a basis for a genuine public health approach. Indeed, with a focus on individual-level risk and protective factors and interpersonal interventions, it is not clear how this model moves beyond much previous public health practice that has ultimately yielded disappointing results.[14] As a recent description of the tobacco industry's promotion of a well-known school-based positive youth development program illustrates, such a focus may actually draw attention and resources away from environmental and community-based strategies.[15] ■

About the Author

Dennis M. Gorman is with the Department of Epidemiology & Biostatistics, School of Rural Public Health, Texas A&M Health Science Center, College Station.

Requests for reprints should be sent to Dennis M. Gorman, PhD, Department of Epidemiology & Biostatistics, School of Rural Public Health, Texas A&M Health Science Center, TAMU 1266, College Station, TX 77843-1266 (e-mail: gorman@srph.tamhsc.edu).

This article was accepted October 11, 2006.

doi:10.2105/AJPH.2006.097261

References

1. Brack CJ, Brack G, Orr DP. Dimensions underlying problem behaviors, emotions, and related psychological factors in early and middle adolescents. *J Early Adolescence.* 1994;14:345–370.

2. White HR, Labouvie EW. Generality versus specificity of problem behavior: psychological and functional differences. *J Drug Issues.* 1994;24:55–74.

3. Basen-Engquist K, Edmundson EW, Parcel GS. Structure of health risk behavior among high school students. *J Consult Clin Psychol.* 1996;64:764–775.

4. Zucker RA. Pathways to alcohol problems and alcoholism: a developmental account of the evidence for multiple alcoholisms and for contextual contributions to risk. In: Zucker RA, Boyd G, Howard J, eds. *The Development of Alcohol Problems: Exploring the Biopsychosocial Matrix of Risk.* Washington, DC: US Government Printing Office; 1994:255–289. NIAA research monograph 26.

5. Kandel DB, Chen K. Types of marijuana users by longitudinal course. *J Stud Alcohol.* 2000;61:367–378.

6. Moffitt TE, Caspi A. Childhood predictors differentiate life-course persistent and adolescence-limited antisocial pathways among males and females. *Dev Psychopathol.* 2001;13:355–375.

7. Dishion TJ, McCord J, Poulin F. When interventions harm. Peer groups and problem behavior. *Am Psychol.* 1999;54:755–764.

8. Dodge KA, Dishion TJ, Lansford JE. Deviant peer influences in intervention and public policy for youth. *Soc Policy Rep.* 2006;20. Available at: http://www.srcd.org/documents/publications/SPR/spr20-1.pdf. Accessed September 1, 2006.

9. Catalano RF, Berglund ML, Ryan JAM, Lonczak HS, Hawkins JD. Positive youth development in the United States: research findings on evaluations of positive youth development programs. *Ann Am Acad Polit Soc Sci.* 2004;591:98–124.

10. Gorman DM. Defining and operationalizing "research-based" prevention: a critique (with case studies) of the US Department of Education's Safe, Disciplined and Drug-Free Schools Exemplary Programs. *Eval Program Plann.* 2002;25:295–302.

11. Gorman DM. Drug and violence prevention: rediscovering the critical rational dimension of evaluation research. *J Exper Criminol.* 2005;1:39–62.

12. Gandi AG, Murphy-Graham E, Petrosino A, Chrismer SS, Weiss CH. The devil is in the details: examining the evidence for "proven" school-based drug abuse prevention program. *Eval Rev.* 2007;31:43–74.

13. Greenberg MT, Domitrovich C, Bumbarger B. *Preventing Mental Disorders in School-Age Children: A Review of the Effectiveness of Prevention Programs.* Rockville, Md: Center for Mental Health Services; 1999.

14. McKinlay JB, Marceau LD. A tale of 3 tails [editorial]. *Am J Public Health.* 1999;89:295–298.

15. Mandel LL, Bialous SA, Glantz SA. Avoiding "truth": tobacco industry promotion of life skills training. *J Adolesc Health.* 2006;39:868–879.