Mental, emotional, and behavioral (MEB) disorders affect large numbers of young people. Almost one in five of them has one or more MEB disorders at any given time. Many disorders have life-long effects that include high psychosocial costs for young people, interfering with their ability to accomplish developmental tasks, such as establishing healthy interpersonal relationships, succeeding in school, and making their way in the workforce.

**EXTENSIVE COSTS**

The annual cost of treatment, lost productivity, and crime alone for MEB disorders in young people is estimated to be $247 billion. Additional costs—both tangible and intangible—are incurred by family members, the community, and multiple service sectors.

**Treatment:** The direct costs of treating MEB disorders in young people are high. As calculated in 1998, the estimated annual national cost of mental health treatment for those under 18 was $11.7 billion. Adjusted to 2007 dollars, that amounts to $14.8 billion dollars in direct treatment costs.

**Costs to family members:** The suffering of young people with MEB disorders affects those around them as well. Coping with the issues surrounding these disorders can disrupt the lives of family members, often increasing stress and diminishing productivity.

**Decreased quality of life and increased morbidity:** According to the most recent (1996) estimates by age group in the United States, mental disorders and substance abuse accounted for 30% of disability adjusted life years (DALYs) lost by people under 25—the highest burden of any disease category for this broad age range. Mental disorders and substance abuse accounted for 18% of DALYs...
lost for ages 5 to 14 and 48% of DALYs lost for ages 15 to 24.

**Costs to other service sectors:** Services in mental health care settings represent only a modest fraction of the total costs related to children with MEB disorders. Costs are borne by other service systems that support young people and their families, including the education, child welfare, primary medical care, and juvenile justice systems. According to one estimate, more than a quarter of total service costs for children with MEB disorders are incurred in the school and juvenile justice systems.

Youth involvement with the juvenile justice system also creates law enforcement and court expenses, as well as costs related to detention, placement, and incarceration, as well as other forms of publicly provided treatment. Costs associated with all juvenile arrests in 2004 were estimated at $14.4 billion, and costs of medical care treatment through public programs and property damages to victims of juvenile violence were estimated at $95 million. Although not all crimes are committed by young people with MEB disorders, the potential contribution of these disorders to the occurrence of such crimes is enormous.

**Long-term costs:** MEB disorders threaten young people’s future. They interfere with their ability to invest in their own human capital via education when their poor mental health affects participation and performance in school. And these disorders often extend into adulthood. Half of all adults with MEB disorders had the first onset of their disorder before age 14. As adults, they are more likely to experience employment difficulties, alcoholism, drug abuse, depression, and thoughts of suicide. Adults with mental illness are less likely to be employed, and those who are employed work fewer hours and receive lower wages.

**Benefits and Costs of Prevention**

The good news is that a range of policies and practices have proven to be effective at reducing and preventing MEB disorders. Making use of some of the effective evidence-based interventions already at hand could potentially save billions of dollars by addressing behavioral problems before they reach the threshold for a diagnosis and require expensive treatment.

**Proven approaches:** The NRC-IOM study reviewed the research on the prevention of mental disorders and substance abuse among young people and recommended multiple strategies for enhancing their psychological and emotional well-being. Research including meta-analyses and numerous randomized trials demonstrates the value of:

- **Strengthening families** by targeting such problems as substance use or aggressive behavior, teaching effective parenting skills, improving communication, and helping families deal with disruptions (such as divorce) or adversities (such as parental mental illness or poverty).
• **Strengthening individuals** by building resilience and skills and improving cognitive processes and behaviors.

• **Preventing specific disorders**, such as anxiety or depression, by screening individuals at risk and offering cognitive training or other preventive interventions.

• **Promoting mental health in schools** by offering support to children encountering serious stresses; modifying the school environment to promote prosocial behavior; developing students’ skills at decision making, self-awareness, and conducting relationships; and targeting violence, aggressive behavior, and substance use.

• **Promoting mental health through health care and community programs** by promoting and supporting prosocial behavior, teaching coping skills, and targeting modifiable lifestyle factors that can affect behavior and emotional health, such as sleep, diet, activity and physical fitness, sunshine and light, and television viewing.

**Costs:** There are no current estimates of overall national spending on preventive services. The most recent estimate concluded that in 1995, federal agencies, state Medicaid, and employee assistance/wellness programs contributed $4.3 billion toward the prevention of mental illness. This would translate to $5.9 billion in 2007 dollars.

**Benefit-cost ratio:** Research on the benefit-cost ratio (the value of the benefits attributed to the program in relation to the costs of the program) of prevention of MEB disorders in young people has been limited. There is some evidence that the benefits of some specific interventions significantly outweigh the costs. The most heavily researched preventive programs are early childhood interventions for children from birth to age 5. For example, nurse home visitation programs produced benefits that greatly outweighed the cost per child, resulting in reduced child abuse, improved achievement test scores, and decreased likelihood of arrest later in life.

Many comprehensive interventions for school-age children and adolescents also appear to be cost-effective in a range of service systems, including education, child welfare, primary health care, and juvenile justice. Youth development programs that focus on improving parent-child relationships and reducing problem behaviors, such as substance use and violence, have been shown to have benefit-cost ratios ranging from 3:1 to 28:1.

**POLICY IMPLICATIONS**

Additional evidence of the economic benefits of these preventive interventions is critical to help national, state, and local leaders decide about the efficient distribution of limited resources. Economic analyses of prevention should become a routine part of research protocols. To this end, leaders, funders, and researchers should collaborate to develop outcome measures and guidelines for economic analyses of prevention and mental health promotion activities, incorporate guidelines and measures related to economic analyses into program announcements, and include analysis of costs and cost-effectiveness of interventions to prevent MEB disorders in young people in evaluations of effectiveness studies whenever possible.

It is important to note, however, that the significant societal benefits of preventing MEB disorders among young people may warrant intervention when an effective approach is available, even if the cost-effectiveness of such interventions is not yet ready. Producing more widespread cost-effectiveness analyses may take years, placing many young people at unnecessary risk.
COMMITTEE ON PREVENTION OF MENTAL DISORDERS AND SUBSTANCE ABUSE AMONG CHILDREN, YOUTH AND YOUNG ADULTS: RESEARCH ADVANCES AND PROMISING INTERVENTIONS

Kenneth E. Warner (Chair), School of Public Health, University of Michigan
Thomas Boat (Vice Chair), Cincinnati Children’s Hospital Medical Center
William R. Beardslee, Department of Psychiatry, Children’s Hospital Boston
Carl C. Bell, University of Illinois at Chicago, Community Mental Health Council
Anthony Biglan, Center on Early Adolescence, Oregon Research Institute
C. Hendricks Brown, College of Public Health, University of South Florida
E. Jane Costello, Department of Psychiatry and Behavioral Sciences, Duke University Medical Center
Teresa D. Lafromboise, School of Education, Stanford University
Ricardo F. Munoz, Department of Psychiatry, University of California, San Francisco
Peter J. Pecora, Casey Family Programs and School of Social Work, University of Washington
Bradley S. Peterson, Pediatric Neuropsychiatry, Columbia University
Linda A. Randolph, Developing Families Center, Washington, DC
Irwin Sandler, Prevention Research Center, Arizona State University

FOR MORE INFORMATION ...

Copies of the report, Preventing Mental, Emotional, and Behavioral Disorders Among Young People: Progress and Possibilities, are available for sale from the National Academies Press at (888) 624-8373 or (202) 334-3313 (in the Washington, DC metropolitan area) or via the NAP home page at www.nap.edu. Full text of the report and a free pdf copy of the Summary are also available at www.nap.edu. The study was funded by the Substance Abuse and Mental Health Services Administration, National Institute of Mental Health, National Institute on Drug Abuse, and the National Institute on Alcohol Abuse and Alcoholism.

This report brief is one in a series of three briefs with highlights from the NRC-IOM report. All three briefs are available at www.bocyf.org.

Copyright © 2009 by the National Academy of Sciences. All rights reserved.

Permission is granted to reproduce this document in its entirety, with no additions or alterations.

This study is a project of the Board on Children, Youth, and Families (BCYF) within the Division of Behavioral and Social Sciences and Education of the National Research Council and the Institute of Medicine.

www.bocyf.org 202-334-1935

THE NATIONAL ACADEMIES
Advisers to the Nation on Science, Engineering, and Medicine

The nation turns to the National Academies—National Academy of Sciences, National Academy of Engineering, Institute of Medicine, and National Research Council—for independent, objective advice on issues that affect people’s lives worldwide.

www.national-academies.org

STUDY STAFF

Mary Ellen O’Connell, Study Director
Bridget B. Kelly, Christine Mirzayan Science and Technology Policy Graduate Fellow (September-November 2007) and Senior Program Associate (December 2007-August 2008)
Wendy Keenan, Program Associate
Mary Ann Kasper, Senior Program Assistant