



Unleashing the Power of Prevention

Unleashing the Power of Prevention

J. David Hawkins
University of Washington

Jeffrey M. Jenson
University of Denver

Richard F. Catalano
University of Washington

Mark W. Fraser
University of North Carolina at Chapel Hill

Gilbert J. Botvin
Cornell University

Valerie Shapiro
University of California, Berkeley

Kimberly A. Bender
University of Denver

C. Hendricks Brown
Northwestern University

William Beardslee
Harvard University

David Brent
University of Pittsburgh

Laurel K. Leslie
Tufts University

Mary Jane Rotheram-Borus
University of California, Los Angeles

Pat Shea
*National Association of State Mental Health
Program Directors*

Andy Shih
Autism Speaks

Elizabeth K. Anthony
Arizona State University

Kevin P. Haggerty
University of Washington

Deborah Gorman-Smith
University of Chicago

Erin Casey
University of Washington-Tacoma

Susan Stone
University of California, Berkeley

The Coalition for Behavioral Health

GRAND CHALLENGES FOR SOCIAL WORK INITIATIVE

Working Paper No. 10

April 2015

Grand Challenge: *Ensure Healthy Development for All Youth*

This paper is reprinted with permission of the Institute of Medicine

American Academy of Social Work and Social Welfare

aaswsw.org

GRAND CHALLENGES FOR SOCIAL WORK INITIATIVE

The Grand Challenges for Social Work are designed to focus a world of thought and action on the most compelling and critical social issues of our day. Each grand challenge is a broad but discrete concept where social work expertise and leadership can be brought to bear on bold new ideas, scientific exploration and surprising innovations.

We invite you to review the following challenges with the goal of providing greater clarity, utility and meaning to this roadmap for lifting up the lives of individuals, families and communities struggling with the most fundamental requirements for social justice and human existence.

The Grand Challenges for Social Work include the following:

- Ensure healthy development of all youth
- Close the health gap
- Stop family violence
- Eradicate social isolation
- End homelessness
- Promote smart decarceration
- Reduce extreme economic inequality
- Build financial capability for all
- Harness technology for social good
- Create social responses to a changing environment
- Achieve equal opportunity and justice
- Advance long and productive lives

EXECUTIVE COMMITTEE

Co-Chairs

John Brekke
University of Southern California

Rowena Fong
University of Texas at Austin

Claudia Coulton
Case Western Reserve University

Michael Sherraden
Washington University in St. Louis

Diana DiNitto
University of Texas at Austin

Eddie Uehara
University of Washington

Marilyn Flynn
University of Southern California

Karina Walters
University of Washington

J. David Hawkins
University of Washington

James Herbert Williams
University of Denver

James Lubben
Boston College

Richard Barth (ex officio)
*American Academy of Social Work and
Social Welfare and University of
Maryland*

Ronald W. Manderscheid
*National Association of County
Behavioral Health & Developmental
Disability Directors*

Sarah Christa Butts (staff)
*American Academy of Social Work and
Social Welfare and University of
Maryland*

Yolanda C. Padilla
University of Texas at Austin

GRAND CHALLENGES FOR SOCIAL WORK INITIATIVE

Working Paper



Unleashing the Power of Prevention

J. David Hawkins, Jeffrey M. Jenson, Richard F. Catalano, Mark W. Fraser, Gilbert J. Botvin, Valerie Shapiro, Kimberly A. Bender, C. Hendricks Brown, William Beardslee, David Brent, Laurel K. Leslie, Mary Jane Rotheram-Borus, Pat Shea, Andy Shih, Elizabeth K. Anthony, Kevin P. Haggerty, Deborah Gorman-Smith, Erin Casey, Susan Stone, and the Coalition for Behavioral Health

Every day, across America, behavioral health problems in childhood and adolescence from anxiety to violence take a heavy toll on millions of lives. For decades, the approach to these problems has been to treat them only after they've been identified – at a high and ongoing cost to young people, families, entire communities, and our nation. Now we have a 30-year body of research and more than 50 programs showing that behavioral health problems can be prevented. This critical mass of prevention science is converging with growing interest in prevention across healthcare, education, child psychiatry, child welfare and juvenile justice. Together, we stand at the threshold of a new age of prevention. The challenge now is to mobilize across disciplines and communities to unleash the power of prevention on a nationwide scale. We propose a grand challenge that will advance the policies, programs, funding, and workforce preparation needed to promote behavioral health and prevent behavioral health problems among all young people – including those at greatest disadvantage or risk, from birth through age 24.

Within a decade, we can reduce the incidence and prevalence of behavioral health problems in this population by 20% from current levels through widespread policies and programs that will serve millions and save billions. Prevention is the best investment we can make, and the time to make it is now.

THE NEED FOR PREVENTION NOW

When it comes to giving young people a healthy start in life, our nation faces very different challenges than it did just 30 years ago

As a result of successful efforts to combat infectious diseases and increase investments in child health, the greatest challenge to health has shifted from communicable to non-communicable diseases and the behavioral health problems implicated in their development. Promoting health among young people requires us to refocus to address behavioral health problems.¹

GRAND CHALLENGES FOR SOCIAL WORK INITIATIVE

We define behavioral health problems as behaviors that compromise a young person's mental or physical well-being. These include anxiety and depression; autism; self-inflicted injury; risky sexual behaviors; unwanted pregnancies; obesity; risky driving; alcohol, tobacco, and other drug use; delinquent behavior, violence and aggressive behavior; and school dropout. We cast a wide net because many of these behavioral health problems are predicted by shared risk factors. For example, high levels of conflict in families predict substance use, delinquency, teen pregnancy, school dropout, violence, depression and anxiety.

Behavioral health problems in childhood and adolescence take a heavy toll over a lifetime, with significant impacts on rates of economic independence, morbidity, and mortality.²

According to the Centers for Disease Control and Prevention (CDC), 72% of all deaths among adolescents are due to motor vehicle crashes, accidents, suicide, violence, and difficulties in pregnancy. Every day, an average of 1,700 young people are treated in hospital emergency rooms for assault-related injuries. Smoking, which begins in adolescence for 80% of adult smokers, increases the risk of morbidity and mortality through adulthood.

The costs to our country are high. In the United States, underage drinking costs society \$27 billion per year, and delinquent behavior costs society \$60 billion per year.³ Each year, over six million young people receive treatment for mental, emotional, or behavioral problems. The financial costs for treatment services and lost productivity attributed to behavioral health problems such as depression, conduct disorder, and substance abuse are estimated at \$247 billion per year.⁴ Other costs are literally incalculable, as parents, teachers, physicians, child psychiatrists, child welfare workers, juvenile justice probation officers, and entire communities experience the adverse effects of human suffering, lost potential, and fraying social fabric.

Behavioral health problems reflect and perpetuate social inequities. Different social groups, characterized by gender, race, ethnicity, citizenship, sexual orientation, and class, experience dramatically different levels of behavioral health. For example, almost 83% of the deaths of American Indian and Alaskan Natives are attributed to behavioral health problems.⁵ Homicide rates are more than six times higher for young males than females, and nearly 14 times higher for African-American youth compared to non-Hispanic white youth.

For decades, public policies have focused on protecting, treating, rehabilitating, and, often, controlling young people with behavioral health problems. Year after year, billions of dollars are devoted to rehabilitating and confining youth who exhibit mental health difficulties or engage in delinquent, aggressive, or substance-abusing behaviors.⁶⁻⁸ These policies have actually increased social inequity.^{9,10}

Although treatment and control are clearly necessary to protect children and insure public safety, we now have over 30 years of research on effective programs and policies showing that we can prevent behavioral health problems from developing in the first place.

THE PROMISE OF PREVENTION

A large body of scientific evidence over 30 years shows that behavioral health problems can be prevented

Prior to 1980, few preventive interventions for behavioral health problems had been tested, and virtually no effective preventive interventions had been identified.¹¹ But the last 30 years have been filled with proof that prevention works: Longitudinal studies have identified malleable individual and environmental risk factors that predict wide-ranging behavioral health problems.¹²⁻¹⁵ Research has also identified positive attributes and protective environmental influences that buffer or minimize the adverse effects of exposure to risk.^{16,17}

These discoveries laid the foundation for developing and testing new preventive interventions. Over the last three decades, more than 50 programs have been found effective in controlled studies of interventions aimed at preventing behavioral health problems in children, adolescents, and young adults.^{4,18} Effective preventive interventions have been identified at three levels:

1. *Universal programs*, which seek to reach all children and youth without regard to level of risk exposure.
2. *Selective programs*, which focus on young people who have been exposed to elevated levels of risk but who do not yet manifest behavioral health problems.
3. *Indicated programs*, which focus on youth who evidence early symptoms of behavioral health problems.¹⁹

Evaluations of youth development programs aimed at promoting positive behavior in young people also show positive effects.^{20,21} These programs seek to prepare young people to lead healthy, productive lives. Initiatives such as the CDC's Racial and Ethnic Approaches to Community Health (REACH) have reduced disparities in behavioral health by pairing a strong national vision for health promotion with local preventive interventions.²²

Advances in technology over the last 30 years offer game changing potential to scale preventive interventions quickly and dramatically increase access to gold-standard programs.

A critical mass of prevention science points to what's possible

The basis for this bold grand challenge is the large body of scientific findings from studies in medicine, public health, child welfare, criminal justice, disabilities, education, employment and income assistance, juvenile justice, mental health, and substance abuse. The following examples are only a small sampling of the positive impact of preventive interventions on a wide range of behavioral health problems:

Anxiety

Approximately 25% of 13- to 18-year-olds have had an anxiety disorder in their lifetimes.²³ Studies of universal prevention strategies in school settings have revealed reductions in anxiety

symptoms for all children and beneficial effects for children at higher risk for anxiety disorders.^{24,25} This shows that universal preventive interventions can also have effects on vulnerable, “at risk” individuals. Evidence from selective prevention trials indicates that cognitive-behavioral interventions targeted to children at elevated risk are superior to other treatments in reducing anxiety and stress, while also increasing self-esteem and positive behaviors.²⁶⁻²⁸ Family-based interventions, which engage parents, can be even more potent. Evidence from indicated prevention efforts shows that cognitive-behavioral interventions can significantly reduce symptoms of anxiety and anxiety diagnoses among children already experiencing anxiety.²⁹ Computer-based programs and mobile phone applications show promise in dramatically increasing access to effective preventive interventions.³⁰

Depression

About one in five young people experiences at least one major depressive disorder during adolescence. Depression is associated with educational and occupational underachievement, unsatisfactory interpersonal relationships, and an increased risk for suicide and suicidal behavior.³¹ A number of preventive interventions for depression have been tested, including universal, selective, and indicated school- and family-based programs. Preventive interventions appear to be most effective for females and for adolescents of both sexes over age 14.³² Programs designed to prevent anxiety, substance abuse, and delinquency that show wider effects when universally administered are helpful in preventing depression, since anxiety is often a precursor of depression, and the qualities of parenting promoted in most family-focused substance abuse and delinquency prevention interventions are also protective against depression.³³ *Familias Unidas*, a selective family-focused program aimed at preventing delinquency and substance abuse among Latino children, showed reduced depressive symptoms among youth with higher internalizing symptoms and poorer parent-child communication at intake.³⁴ *New Beginnings*, a selective preventive intervention for parents and youth experiencing divorce, reduced rates of depression and anxiety in the children 15 years after the completion of the intervention.³⁵ Interventions to promote physical activity, especially in overweight youngsters, have also had salutary effects on depressive symptoms.³⁶

Autism

The CDC estimates that one in every 68 children has been diagnosed with autism. It is the fastest-growing developmental disability in the nation, increasing 119.4% from 2000 to 2010.³⁷ According to the Autism Society, based on a 2006 GAO Report on Autism, early diagnosis and intervention can reduce the cost of lifelong care by two-thirds. Studies show that autism can be detected as early as 12-16 months in children, and that early intervention is key. With research showing that interventions beginning before three years of age have the greatest impact on a child’s social communication, language and behavior, Wetherby and colleagues at the Florida State University College of Medicine have developed Autism Navigator® to provide early home-based interventions. They have also developed a course for primary care physicians.³⁸ Similarly, recent reports by Green³⁹ as well as Baranek⁴⁰ using simple parent-mediated intervention targeting early behavioral risk-markers in children as young as 7-12 months at risk

for autism resulted in a wide range of developmental outcomes consistent with reduced risk for autism later in life.

Alcohol, tobacco, and other drug use

Rates of alcohol, cigarette, and illicit drug use increase two- to three-fold between grades eight and 12.⁴¹ Rigorous experimental trials have identified effective interventions for preventing adolescent substance use and misuse. These include universal school-based programs such as *Life Skills Training* (LST), a three-year middle-school classroom curriculum that teaches students personal self-management, social, and drug-resistance skills. LST has been found to produce sustained effects in preventing adolescent tobacco use,^{42,43} alcohol use,⁴⁴ binge drinking,⁴⁵ and marijuana use.⁴⁶ A high school curriculum called *Project Toward No Drug Abuse* has produced sustained reductions in cigarette, marijuana, and other illicit drug use in both general and alternative high schools.⁴⁷⁻⁵⁰

Universal and selective family-focused prevention programs also have shown sustained effects in reducing adolescent substance use. These include *Strengthening Families 10-14*, a seven-session universal program for families with young adolescents⁵¹ and *Guiding Good Choices*, a five-session universal program for parents of children in middle school.⁵² The *Familias Unidas* program for Latino families reduced illicit drug use and alcohol dependence⁵³ as well as STI risk behaviors.⁵⁴ Universal and selective community-based preventive interventions also have reduced substance use among adolescents in controlled trials. The selective one-on-one *Big Brothers Big Sisters* mentoring program reduced illicit drug use initiation among children by 46%.⁵⁵ The *Communities That Care* (CTC) prevention system, which mobilizes communities to use proven preventive interventions matched to community needs, reduced tobacco use initiation by 33%, alcohol use initiation by 32%, and delinquent behavior by 25% community-wide.⁵⁶ Effects on initiation of these behaviors were sustained throughout high school.⁵⁷

Finally, universal, selective, and indicated preventive interventions have reduced substance use among college students. *InShape*, a universal, fitness-focused intervention using a self-administered behavior image survey and a one-on-one meeting with a fitness specialist, produced short-term reductions in frequent and heavy alcohol use, driving after drinking, and marijuana use.⁵⁸

Depression, anxiety and substance abuse (alcohol, tobacco and drugs) are behavioral health problems that can particularly affect youth experiencing physical health problems such as cancer, asthma, and diabetes. Preventing behavioral health problems in youth experiencing physical health problems can enhance mental and physical health – for example, by increasing compliance with medication. The focus on behavioral health has become especially important because survival to adulthood has increased dramatically for many medical conditions; medical care needs to prepare these children for adulthood. According to the Standards of Care for Adolescent Medicine, preparation should include counseling on prevention of health risk behaviors.⁵⁹

Risky driving

Traffic fatalities due to crashes are the leading cause of death worldwide for 10- to 24-year-olds.⁶⁰ The leading risk factors for adolescents are inexperienced driving, non-use of seat belts, driving with other passengers – especially teenagers, nighttime driving, and drunk driving. Several universal policies have been effective in preventing traffic crashes and fatalities. Some have specific effects for teens, while others have shown effects for all drivers. For example, Wagenaar and Toomey found that increasing the minimum legal drinking age to 21 reduced traffic crashes, alcohol use, and injury among 18- to 21-year-olds.⁶¹ Universal prevention programs using sobriety checkpoints⁶² and universal and selective parent education and involvement strategies^{63,64} have also been effective in reducing drunk driving and auto accidents involving adolescents. In addition to preventing substance use, the school-based LST program has been shown to reduce risky driving.⁶⁵

Aggressive behavior and conduct problems in childhood

Substantial progress has been made in preventing early conduct problems and aggression. A recent meta-analysis of 249 experimental studies designed to prevent aggressive and disruptive behavior in childhood yielded a significant mean effect size for aggression of .21.⁶⁶ Universal preventive interventions produced an effect size of .21, with larger effects for younger children and those of lower socio-economic status, indicating positive effects of universal preventive interventions for vulnerable populations.

A recent report from a task force of the CDC supports the efficacy of universal school-based models for preventing violence.⁶⁷ For example, the *PATHS Curriculum* is a universal program for preschool- and elementary school-aged children provided by classroom teachers and focused on emotional awareness, self-control, and social problem-solving. Controlled trials have shown significant effects on prosocial behavior and reductions in aggressive/disruptive behaviors, as well as improvements in executive functioning and classroom atmosphere.⁶⁸ Disruptive behavior disorders, such as attention-deficient/hyperactivity disorder and oppositional defiant disorder, cause long-term morbidity. Although symptoms are often evident before preschool, few children receive appropriate early intervention during that period. *The Incredible Years* is a selective intervention designed to reduce child conduct problems by improving parenting skills and increasing parent involvement in school.⁶⁹ Findings from studies in the United States and abroad⁷⁰⁻⁷² have demonstrated its effectiveness in improving parenting practices and reducing child conduct problems with selective samples, including young people at risk for maltreatment.⁷³

Pediatric and family medicine practices are in a good position to intervene early when indicated. *The Incredible Years* has been implemented in pediatric offices through group parenting workshops. The program is offered to parents of children who have been screened for disruptive behaviors during well-health visits at ages 2 and 3. It was tested in a randomized clinical trial involving diverse pediatric practices in the Greater Boston area. Sessions were co-led by trained practice staff including nurses, nurse practitioners, social workers, pediatricians, and

administrators. The study found that group parent training provided in pediatric clinics reduced negative parenting, child disruptive behaviors, and negative parent-child interactions.⁷⁴

Delinquent behavior

Controlled trials of delinquency prevention strategies have produced positive results in school,^{75,76} family,⁷⁷ and community settings.⁷⁸ Effective school-based preventive interventions seek to prevent delinquent conduct by enhancing social, cognitive, and behavioral skills. A recent meta-analysis of 40 family-focused preventive interventions found that the odds of offending for young people in prevention programs were 34% compared to 50% for control youths.⁷⁷ Programs that used behavioral parent-training strategies at all levels of intervention were found to be most effective over time. *Functional Family Therapy* (FFT) is a family-based intervention targeting adolescents who have already broken the law. The program has reduced substance use and delinquency among young offenders and prevented their younger siblings from engaging in delinquent behaviors.⁷⁹ The *Multidimensional Treatment Foster Care Program* (MTFC) targets young people in foster care placements who are at elevated risk for residential treatment, incarceration, or hospitalization.⁸⁰ Youth participating in MTFC are placed with families in the community who have received intensive training in parent management skills. In addition, the biological parents of participating youth attend skills training classes in preparation for their child's return home.⁸¹ Randomized trials of MTFC have been effective in preventing and reducing delinquency, substance use, and school dropout.^{82,83} Research assessing the effects of universal community-based prevention systems has revealed positive effects on reducing delinquent conduct. The CTC system produced significantly lower rates of delinquency through 12th grade in a longitudinal panel compared to those in the panel from control communities.^{56,57,78} Independent cost-benefit analyses found a positive benefit-cost ratio of \$3.69 for every \$1.00 spent on community-based delinquency prevention using the CTC system.⁸⁴

Adolescent violence

According to the CDC Youth Risk Behavior Survey, in 2013, almost 20% of 12th-grade students had been in a fight, more than 13% were bullied at school, 10% experienced sexual dating violence, and 12% experienced dating violence.⁸⁵ Randomized trials of school, family, and community violence prevention programs have produced positive effects on reducing violence.⁸⁶ A recent systematic review of universal prevention programs conducted by the Task Force for Community Preventive Services found that preventive interventions were responsible for a 15% reduction in violent behavior.⁸⁷

Both universal school and targeted family-focused programs have reported significant and sustained reductions in violence. For example, a randomized controlled trial of *Schools and Families Educating Children*, an intervention emphasizing family support strategies aimed at helping children succeed in school, found significant reductions in violence among youth participants.⁸⁸ *Safe Dates*, a universal, selective, and indicated school-and community-based curriculum for middle- and high-school students, reduced rates of sexually and physically aggressive behavior toward romantic partners.⁸⁹

Self-inflicted injury

Suicide is the third leading cause of death for people between the ages of 10 and 24, contributing to the loss of nearly 4,600 young lives each year. Suicide death rates are four times higher among young males than young females, although girls are more likely to report attempting suicide than are boys.⁹⁰ Preventive interventions have been implemented in schools, community settings, and healthcare systems and through changes in policies.⁹¹ Universal preventive interventions that restrict access to lethal means through changes and enforcement of policy, including gun control and restrictions on pesticides and analgesics, have shown effectiveness.⁹² Restrictions on guns appear to reduce the overall suicide rate,^{93,94} with the greatest effects for adolescents and young adults.⁹⁵ Systematic reviews of school-based suicide prevention programs indicate moderate effectiveness in reducing suicidal thoughts.^{96,97} Selective and indicated family-focused interventions have shown effects in reducing suicidal behaviors.^{98,99}

Risky sexual behavior

Rates of adolescent pregnancy in the United States remain among the highest in the world, and more than half of all new sexually transmitted infections in the nation occur among 15- to 24-year-olds.¹⁰⁰ The most effective preventive interventions targeting risky sexual behaviors include delaying the onset of sexual activity, increasing knowledge, skills, and behavior related to effective contraception use, and enhancing relationship communication and safety strategies for young people.

School-based universal and selective programs for adolescents have increased knowledge about HIV and condom use¹⁰¹ and reduced the frequency of sexual activity.¹⁰² Universal comprehensive sex education interventions that include contraception education have yielded more effective results than abstinence-only prevention strategies.¹⁰² Programs using a youth development approach to reduce risky sexual behavior have had lasting effects by promoting protective factors in classrooms and families during childhood and early adolescence.²¹ For example, the *Seattle Social Development Project* used a school- and family-focused universal preventive intervention called *Raising Healthy Children* in elementary schools serving high-crime Seattle neighborhoods. When compared with controls, children in intervention classrooms delayed sexual initiation and had fewer sexual partners during adolescence,¹⁰³ experienced significantly lower rates of teen pregnancy and childbirth among young women under 21,¹⁰⁴ and reported significantly lower rates of sexually transmitted infections through age 30,¹⁰⁵ eliminating STI disparities between African Americans and European Americans.

School dropout

The national high school graduation rate is 80%; graduation rates among African Americans and Latinos are lower.¹⁰⁶ Research has identified both individual and institutional risk factors for school dropout.^{107,108} Systematic reviews of interventions aimed at preventing dropout^{109,110} and meta-analytic studies of effects of dropout prevention have found significant positive effects of structured and well-implemented universal and selective programs on school dropout and

completion,^{111,112} on high school graduation and enrollment rates,¹¹³ and on school absenteeism and attendance.¹¹⁴ Findings from these reviews suggest that the effects of programs on school dropout and completion do not substantially differ by program type. However, case management, school restructuring, skills training, and college-oriented programs are generally more effective than traditional approaches such as attendance monitoring.

Several preventive interventions have produced positive effects on more than one behavioral health outcome

To illustrate, Hale and colleagues recently reviewed randomized trials of interventions aimed at preventing or reducing two or more behavioral health problems. They found that 44 universal and selective prevention programs were effective in reducing several problems at once, and that effect sizes were comparable to those produced by interventions targeting only a single behavioral health problem.¹¹⁵ It is important to note that young people exposed to the highest levels of risk, children and adolescents who are often disproportionately low-income and/or youth of color, often benefit most from preventive interventions.^{105,116-118}

The evidence of beneficial effects described above is bolstered by cost-benefit analyses that show preventive interventions offer significant cost savings over alternatives such as incarceration or long-term treatment.^{119,120} The wide-scale implementation of evidence-based prevention is critical to reining in the escalating costs of healthcare. If nothing is done, the cost of healthcare and lost productivity from preventable disease is projected to be \$4.2 trillion by 2023. Investing in prevention and early intervention could save as much as \$1 trillion a year.¹²¹ Furthermore, because preventable disease has a disproportionate impact on the poor and disadvantaged, promoting evidence-based prevention has the potential to reduce health disparities. Scaling proven prevention approaches can improve health and well-being, save lives, reduce the economic burden of preventable disease, and promote health equity.

BRINGING THE POWER OF PREVENTION TO SCALE

Now that we know preventive interventions are effective, the challenge is to “scale up,” expanding them in order to achieve population-wide reductions in behavioral health problems

This challenge is two-fold:

1. Implement and sustain, at scale, effective universal promotion and preventive interventions designed to benefit all young people; and
2. Provide and sustain, at scale, effective selective and indicated interventions that target children, adolescents, and young adults at elevated levels of risk or early stages of problem involvement.

Reducing risk and enhancing protection among all young people will reduce the rates of behavioral health problems. Universal prevention has the potential to reach those who are not directly involved in the formal health and social service delivery sectors. Simultaneously ensuring that preventive interventions reach the highest-risk children and youth, who will benefit disproportionately from these efforts, will promote health equity. Preventing problems before they occur reduces human suffering and pre-empts costly punitive responses to these problems from education, law enforcement, child welfare, mental health, or juvenile justice systems. It is imperative that strategies to bring preventive interventions to scale pursue these dual objectives of overall population health and health equity for the most vulnerable and underserved populations.

Knowing the difference we can make within the next 10 years, we share a sense of urgency and a set of clear, achievable goals to accomplish this grand challenge. We must develop effective strategies to implement tested and proven preventive interventions in ways that reach all young people, including those least privileged and most vulnerable. Meeting the challenge can significantly reduce the burden of behavioral health problems across the life course nationwide and, ultimately, worldwide.¹

The health and human service professions including medicine (e.g., pediatrics, family medicine, and child psychiatry), nursing, psychology, public health, education, and social work are positioned to design, deliver, and test programs aimed at preventing behavioral health problems

It will be important to establish interdisciplinary programs and training in evidence-based prevention that involve the full complement of practice settings – including healthcare, education, mental health, child welfare, law enforcement, and juvenile justice. Practitioners from health and human service professions will be needed as catalysts for the work ahead – keeping the big picture in mind, “connecting the dots,” leveraging the latest prevention science, and tracking progress toward clear, measurable goals.

Using social ecological theories to guide epidemiological assessment of the social determinants of behavior provides a strong foundation for advancing policies, programs, and practices that promote behavioral health.^{122,123} Interdisciplinary and multi-level practice creates opportunities for practitioners to help individuals change their wellness behaviors, for organizations to adopt and implement effective prevention programs and practices, and for communities to organize local services that promote health equity.

The health and human service professions can play a transformative role in promoting a focus on prevention in healthcare and education. The emphasis on prevention in the *Patient Protection and Affordable Care Act* (ACA) creates a major new opportunity to address this emerging grand challenge over the next decade.¹²⁴ It creates an opportunity to advance healthcare’s move to integrated primary care through medical homes. In the realm of education, the recent White House Early Education Summit underscored the critical importance of behavioral health for school success, noting the large numbers of disadvantaged children expelled and suspended from

preschools for aggressive and disruptive behaviors.¹²⁵ Social and emotional learning is gaining visibility as a key to student attainment of the Common Core and state educational standards. It is also a key ingredient of educational reforms as championed by the Collaborative for Academic, Social and Emotional Learning (CASEL). Health and allied professionals, like public health workers and social workers, can be the “glue” for shared efforts to prevent behavioral health problems, bringing together community residents and professionals to shape local education, health and human service delivery and state and national initiatives to unleash the power of prevention.¹²⁶

If allied in unleashing the power of prevention, health and human service professionals can help ensure that effective preventive interventions are supported by initiatives in healthcare, education, public health, mental health, child welfare, and juvenile justice. It will be important to actively advocate for increased emphasis on preventing behavioral health problems in federal and state policies and budgets.

Detailed information about effective preventive interventions is available at the following national registries and clearinghouses:

- *Blueprints for Healthy Youth Development* (<http://www.blueprintsprograms.com>). The *Blueprints for Healthy Youth Development* initiative applies rigorous standards to assess a range of preventive intervention; eight model programs and 36 promising programs are currently listed on the project’s website. Positive findings from two randomized trials or results from one randomized and one high-quality quasi-experimental study are necessary to be listed as a model program. Model programs must also show sustained effects for at least 12 months following intervention in one study.
- The *Office of Juvenile Justice and Delinquency Prevention’s (OJJDP) Model Program Guide* (www.ojjdp.gov/mpg/) allows users to search prevention programs by a variety of outcomes (e.g. academic skills, truancy, bullying, and substance use). The database can be searched by type of intervention (e.g. classroom curricula, cognitive-behavioral training, and school-wide strategies); selecting a program category provides a summary of the empirical evidence in a specific problem area and produces a list of effective programs. A description of the intervention, evaluation results, ratings of effectiveness, and targeted risk and protective factors are available for each program.
- *Crime Solutions* is an on-line resource provided by the Office of Justice Programs to inform practitioners and administrators of effective delinquency prevention programs (<http://www.crimesolutions.gov/TopicDetails.aspx?ID=69>). Twenty-six prevention programs are included in the list of effective programs. The website offers both brief and detailed descriptions of effective programs. Evaluation methodology, program outcomes, implementation information, and cost factors are also described and summarized.
- The *Campbell Collaboration Library and Database* (<http://www.campbellcollaboration.org/library.php>) posts systematic reviews and random clinical trials of social, psychological, criminological, and educational interventions. Critical reviews of the existing research provide practitioners, administrators, and policymakers with a synthesized summary of knowledge in a certain area. For example, the Campbell

Collaboration recently reviewed school dropout prevention programs and school-based programs for the prevention of sexual abuse. Access to full text reviews is available to the public free of charge.

- The *California Evidence-Based Clearinghouses for Child Welfare* (<http://www.cebc4cw.org>) is a searchable database of effective preventive interventions in child welfare settings. Programs are organized by topic areas and receive a scientific rating of effectiveness.
- The *What Works Clearinghouse* (<http://ies.ed.gov/ncee/wwc/>) developed by the Institute of Education Sciences identifies effective programs, products, practices, and policies in education.
- The *National Registry of Evidence-based Programs and Practices (NREPP)*, established by the Substance Abuse and Mental Health Services Administration (SAMHSA), is a searchable database of more than 210 interventions aimed at preventing and treating substance abuse and mental health problems (<http://nrepp.samhsa.gov/Search.aspx>). The NREPP includes program descriptions, participant outcomes, ratings associated with the rigor of evaluation, and assessments of training and implementation materials for each intervention.

THE PREVENTION DECADE: ACTIONABLE GOALS

This grand challenge will make meaningful and measurable progress to prevent behavioral health problems over the next 10 years

The overarching goals of this grand challenge are to reduce the incidence and prevalence of behavioral health problems in the population of young people from birth through age 24 by 20% from current levels and to reduce racial and socioeconomic disparities in behavioral health problems by 20% over the next decade. Here are desired outcomes and goals for success:

1. Develop and increase public awareness of the advances and cost savings of effective preventive interventions that promote healthy behaviors for all.

Goal: In a decade, a majority of the U.S. adult population will report in surveys that it is possible and cost-effective to prevent behavioral health problems among children and adolescents.

2. Ensure that 10% of all public funds spent on young people support effective prevention programs.

Goal: In a decade, at least 10% of all state and federal expenditures on the education, health, protection, and welfare of children will be allocated to effective universal, selective, and indicated interventions for preventing behavioral health problems.

3. Implement community-assessment and capacity-building tools that guide communities to systematically assess and prioritize risk and protective factors, and select and implement evidence-based prevention programs that target prioritized factors.

Goal 1: In a decade, at least 1,000 communities in the United States will actively monitor population levels of risk and protective factors and behavioral health problems among young people.

Goal 2: In a decade, at least 1,000 U.S. communities will implement effective health promotion approaches and evidence-based preventive interventions.

Goal 3: In a decade, at least 1,000 U.S. communities will have a multi-sector coalition of stakeholders who actively monitor the reach and fidelity of a comprehensive system of effective interventions to promote behavioral health for young people from birth to age 24.

4. Establish and implement criteria for preventive interventions that are effective, sustainable, equity-enhancing, and cost-beneficial.

Goal: In a decade, all 50 states in the United States will use outcome data from controlled studies and information from cost-benefit analyses to inform policy decisions regarding investments in prevention, treatment, and control of behavioral health problems.

5. Increase infrastructure to support the high-quality implementation of preventive interventions.

Goal: In a decade, 25 states will have cross-agency “backbone” organizations that provide coaching, technical assistance, and monitoring services to local community organizations that provide behavioral health promotion and prevention services for youth and their families.

6. Monitor and increase access of children, youth, and young adults to effective preventive interventions.

Goal 1: In a decade, child welfare, disability, education, employment, health, justice, and other agencies in 20 states will use integrated data structures that enable cross-agency collaboration in monitoring the provision of effective behavioral health and preventive interventions and that promote cross-agency quality assurance in providing a full range of effective programs.

Goal 2: In a decade, integrated data structures will have the capacity to be disaggregated by local community area and social group and will be used to monitor the provision of effective behavioral health and preventive interventions to promote health equity.

Goal 3: In a decade, tested technology-assisted approaches will be widely used to ensure the accessibility and reach of effective preventive interventions.

7. Create workforce development strategies to prepare practitioners in health and human service professions for new roles in promotion and preventive interventions.

Goal 1: In a decade, 20 universities will include cross-disciplinary, prevention-focused training programs in behavioral health that will include primary care medicine, nursing, psychiatry, social work, and psychology.

Goal 2: In a decade, 25 schools of social work or schools of public health will include an evidence-based behavioral health promotion and prevention curriculum track in their masters programs.

Our goals are achievable. They are well within the outcomes evidenced in many prevention-based programs to date. For example, existing multi-site trials of community-wide prevention systems using tested and effective prevention programs have produced relative reductions of 25% to 33% in delinquency and drug-use indicators.^{78,127}

Success will be measurable. Existing national data systems are already in place to provide systematic tracking of trends in behavioral health problems to measure attainment of these goals over this 10-year span. These databases include:

- *America's Children: Key National Indicators of Well-Being* (<http://www.childstats.gov/americaschildren/index.asp>). The *America's Children* database includes a range of behavioral health problem indicators including substance use, delinquent conduct, violent behavior, and sexual activity. Data reflecting indicators of family and social environment, economic circumstances, healthcare, education, and health are also available. Most measures are collected annually and date back to approximately 1980. Selected substance use measures from the *Monitoring the Future* survey (<http://www.monitoringthefuture.org>) are included in the database.
- *Centers for Disease Control and Prevention: Youth Risk Behavior Surveillance System* (YRBSS) (http://www.cdc.gov/HealthyYouth/yrbs/index.htm?s_cid=tw_cdc16). The YRBSS provides annual data on the prevalence of unintentional injuries, sexual behaviors, substance use, dietary behaviors, physical activity, obesity, and asthma among youth and young adults.
- *Centers for Disease Control and Prevention: National Health Interview Survey* (NHIS) (http://www.cdc.gov/nchs/nhis/about_nhis.htm). The NHIS produces detailed annual estimates of the incidence and prevalence of health conditions by age, gender, and race/ethnicity for states, major metropolitan areas, and the country. Interview data are gathered to assess healthcare access and health-related problems and behaviors. The NHIS is used in assessing progress toward meeting the goals of *Healthy People 2020*.
- *Substance Abuse and Mental Health Services Administration: National Survey on Drug Use and Health* (NSDUH) (<https://nsduhweb.rti.org/respweb/homepage.cfm>). The NSDUH provides annual data on the prevalence of mental health and alcohol, tobacco, and other drug use from a random sample of approximately 70,000 individuals age 12 and older.

- *Kids Count* (<http://www.aecf.org/work/kids-count>). Sponsored by the Annie E. Casey Foundation, *Kids Count* provides current and historical data on the educational, social, economic, and physical well-being of children and adolescents.
- *Healthy People 2020* (HP 2020) (<http://www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=2>). The federal Department of Health and Human Services has set health and behavior goals for the nation; HP 2020 includes a set of indicators for monitoring progress on each goal. These include adolescent health indicators that provide national tracking of progress toward reaching goals in underage drinking, graduation rates, suicide, depression, obesity, and smoking.
- *National Survey of Children's Health* (<http://childhealthdata.org/learn/NSCH>). This survey provides a searchable database that includes indicators of children's physical and mental health status, access to health care, and family and neighborhood influences.

JOINING FORCES ACROSS DISCIPLINES

The challenge of promoting behavioral health will generate a new era of interdisciplinary and cross-sector collaboration

Making measurable progress in promoting behavioral health for children, adolescents, and young adults will require interdisciplinary and cross-sector collaboration across the vertically organized (“siloes”) agencies that currently provide health, education, social, protection, and justice services for young people. Collaboration across these service sectors to leverage the power of prevention to achieve the goal of behavioral health for all will be essential.

Big changes are needed. Some states and cities have begun by creating children's cabinets at executive levels to enhance and oversee cross-cutting prevention initiatives.¹²⁸ Success will depend on creating, expanding, and studying data and delivery systems for public and community accountability using prevention science to promote prevention and early intervention.

Research provides a strong rationale for cross-sector support of prevention and early intervention. For example, studies have found that child maltreatment and other traumas have enduring and adverse impacts on brain and neuroendocrine development and, further, on emotional, psychological, and social well-being in adolescence and young adulthood.¹²⁹⁻¹³¹ Consequently, preventing child maltreatment is likely to be of common interest to the child welfare, health, education, criminal justice, and business sectors, and implementing effective prevention strategies will require collaborative efforts across these sectors.

At least three levels of collaboration must be developed: 1) state-level backbone structures; 2) community-level coalitions; and 3) agency-level inter-professional teams.

The first level of collaboration

State inter-departmental backbone structures – blue-ribbon commissions, cabinet task forces, public-private partnerships, and gubernatorial executive committees – provide organizational structures and political capital to overcome the siloed delivery of services for children, youth, and young adults. These structures serve to mobilize public support, create vision, stimulate innovation, generate fiscal resources, create data and infrastructure support for accountability and contracting, and provide technical assistance to community organizations. In part, this first level of collaboration creates the political climate for innovation in providing prevention and promotion services for youth.

A second level of collaboration will be required at the community level

As research on community-based prevention demonstrates, collaborative structures that include multi-sector representation to promote broader engagement among public systems and community residents provide support for significant progress in adapting prevention principles to local communities.¹³² Because risk and protective factors vary with each community's unique and distinguishing features, multi-sector community-level coalitions will have central roles in developing prevention systems to reduce behavioral health problems.

One example of community-level collaboration builds community coalitions that assess and prioritize local needs by conducting school and community surveys of risk and protective factors. Community coalitions assess existing services and, drawing from menus of evidence-supported preventive interventions, develop a plan to fill gaps in existing services to address prioritized risk and protective factors.¹³³ This process of assessing and prioritizing community risks and protective factors, and filling service gaps with proven preventive interventions, is inherently collaborative and depends on building capacity to overcome disciplinary boundaries and share accountability.¹³⁴

A third layer of collaboration will be needed at the practice level

Service providers will have complementary roles in community assessment, screening, prevention, early intervention, and treatment. For example, in health and mental health, the ACA offers the potential to provide an integrated structure for cross-sector collaboration involving physicians, nurses, social workers, and allied health disciplines. In patient medical homes, inter-professional teams will provide concurrent, often co-located, physical and mental health services including preventive interventions.

Collaborations among allied professions and community residents to improve behavioral health outcomes for children and youth already are emerging under provisions of the ACA. It is important to expand these nascent collaborations to include child welfare, schools, mental health, and justice agencies. Schools of social work, nursing, public health, and criminal justice should be active in creating these new collaborative structures and providing a workforce to sustain them.

As part of its cross-disciplinary focus, this grand challenge will help advance the move in

healthcare toward integrated primary care

Access to adequate and affordable care, including both prevention and treatment, is a growing public health concern for children, youth, and families in the United States. Lack of access to behavioral health services is among our nation's greatest healthcare problems, and access is particularly problematic for transitional-age youth (16-25 years) when prevention and early intervention can have great benefit.¹³⁵ Under the ACA, the integration of behavioral and physical health care is intended to improve health outcomes for all children and youth, including those served by traditional systems of care. These include child welfare, juvenile justice, mental health, and substance abuse service systems.

Developmentally, unresolved behavioral health problems tend to cascade into more complicated health problems that have long-term effects on life-course outcomes and public expenditures for housing, education, employment, disability, income support, criminal justice, and other social welfare services.¹³⁶⁻¹³⁸ In part, this is because behavioral health is correlated with mental and physical health. The risk factors that give rise to behavioral health problems are correlated with the risk factors that give rise to other health problems. These correlated risks may be incompletely addressed when services are provided within a traditional system with a legitimate but limiting mission, such as protecting children in child welfare systems or insuring public safety in criminal justice systems.

The poor health and mental health outcomes observed in the United States are not a function of lack of knowledge. Rather they are a function of our failure to create a comprehensive services architecture that provides population-based universal care, including prevention, screening, early intervention, and treatment. To improve developmental outcomes for children and youth, dramatic change is needed. We must build an integrated services framework that addresses the behavioral as well as physical determinants of health status in patient-centered medical homes.¹³⁹ Providing prevention and treatment services in primary care settings is intended to increase access to care by creating a single source for integrated care. This should insure that effective prevention strategies are brought to bear before behavioral problems cascade into costly mental and physical health problems. As envisioned, a new integrated system of primary care will provide health promotion and prevention services along with treatment or intervention for physical and mental health problems, including substance abuse. It will require work to make this vision a functioning reality.

Integrating behavioral and physical healthcare will require grand changes in policy and practice. The key idea is that, from first contact through continuing care, a team of co-located specialists will provide prevention, assessment, treatment, and referral services. From universal through indicated prevention services, a range of health promotion, education, and intervention programs will be provided to address, from early in childhood, factors known to contribute to poor health and other developmental outcomes. Inter-professional teams that include nurses, primary care practitioners, social workers, and other specialists will be deployed. Their potential activities will range from providing empirically supported preventive interventions, to case management, to providing behavioral interventions to prevent and reduce both behavioral and physical health problems. To unleash the full power of prevention in these settings, practitioners will need to

understand and be able to identify risk factors for poor health outcomes, match risk profiles to a menu of evidence-supported brief interventions, and either provide interventions directly or make and monitor referrals to effective specialized services.

IGNITING INNOVATION

Solutions to the grand challenge of promoting behavioral health will require significant innovation

Promoting behavioral health and bringing preventive interventions and policies to scale across the population will require innovation in a number of spheres:

1. *Local prevention decision and implementation support infrastructures must be created to plan, implement, and monitor evidence-based behavioral health promotion systems.* Currently, few towns, cities, or states have created systems for promoting behavioral health. As noted above, some pioneering communities have established innovative efforts – including children’s cabinets, city and neighborhood coalitions, interagency planning groups, and cross-cutting initiatives focused on achieving collective impact on desired outcomes.¹⁴⁰ More backbone infrastructure is needed to promote collaboration across agencies and organizations to use resources effectively to prevent behavioral health problems.¹⁴¹

2. *Sustainable efficient methods will be needed to spread effective preventive interventions with sufficient fidelity to produce outcomes and sufficient adaptability to ensure widespread uptake.* Promoting widespread use of effective preventive interventions will require greater use of technology. This may involve mobile- and media-based interventions that reach entire populations, and innovations such as brief and effective systems for mental health screening in primary care settings.¹⁴² Innovations in methods of training, coaching, and technical assistance to support use of interactive intervention delivery systems will be required. Data-based modeling and simulation methods used in engineering should be applied to spreading and scaling preventive interventions.

3. *Systems will need to be developed to monitor the epidemiology of risk, protection, and youth behavioral health outcomes in local communities, and aggregated into national reports of trends in the epidemiology of the predictors and behavioral health of the nation’s youth.* Existing data systems that monitor epidemiologic data do not provide accurate community- or neighborhood-level estimates of the prevalence of behavioral health problems needed for local prevention planning. Further, these databases measure only a small number of empirically validated risk and protective factors for youth behavioral health outcomes.

A national data monitoring system is needed that provides community data on the prevalence of risk and protective factors and behavioral health outcomes for local prevention planning. It would also allow these data to be disaggregated for the sake of examining and promoting healthy equity as well as aggregated to state and national levels for monitoring epidemiology. A national

monitoring system, somewhat like the FBI Uniform Crime reporting system that aggregates local crime statistics nationally, could use anonymous school surveys both to provide local data for community prevention planning and to monitor trends in risk, protection, and behavioral health outcomes.

4. *Methods for creating demand, or “uptake,” and policy support for tested and effective preventive interventions must be applied and used.* If effective preventive interventions are to affect levels of risk, protection, and behavioral health problems, they must be widely used. For this to happen, parents, teachers, social workers, doctors, nurses, and public health workers must be willing to use them. Important work with policymakers, led by the nonpartisan Coalition for Evidence Based Policy, has focused on creating support in Congress and the Executive Branch for investing federal resources in tested, effective prevention programs.¹⁴³ This work is increasing the potential *supply* of evidence-based interventions for preventing youth behavioral health problems. Now innovations are needed to increase *demand* for effective preventive interventions.

5. *Health and human service professions must be prepared to take on new roles in promoting behavioral health in the population.* Public health and social work are professions well positioned to lead and coordinate the growth of preventive interventions in communities. Opportunities to help individuals change their behaviors, organizations to adopt and implement effective prevention programs and practices, and communities to organize local services for the promotion of health and health equity will increase. New experiential and community-based learning opportunities will need to be developed in masters level training programs to ensure that health and human service professionals acquire skills in stakeholder and resource mapping, coalition building, using epidemiologic data to guide community-wide prevention planning, matching community needs with suitable evidence-based interventions, and planning the introduction, implementation, and monitoring of preventive interventions.^{144,145}

Ensuring sustainable and equitable gains in behavioral health will also require a workforce skilled in providing tested and effective preventive interventions in health, education, and other service settings. Under the ACA, health and allied health professionals will be expected to participate in interdisciplinary teams in integrated primary care settings. Opportunities will emerge to provide child- and family-focused preventive services for behavioral health problems in pediatric, family practice, and other primary care contexts. School-based health clinics will increasingly provide opportunities to prevent risky sexual behavior and unwanted teen pregnancies. In both integrated primary care and school-based health clinics, the need for practitioners skilled in screening, brief intervention, and referral to treatment (SBIRT) is likely to grow.¹⁴⁶ Increasing investment in effective universal preventive interventions will drive growing demand for skilled prevention specialists capable of leading preventive interventions in schools. Professional training programs need to explore new opportunities to prepare students for these emerging roles in healthcare and educational settings to promote behavioral health for all.

6. *Payment systems and resource allocation must be restructured to fund dissemination of tested and effective preventive interventions.* The vast majority of resources allocated to health, justice, and social services support work with those who already manifest identified problems and needs. The ACA recognizes that broad improvements in health outcomes will require shifting resources

from delivering treatment services toward prevention strategies.¹⁴⁷ New strategies and policies are emerging to pay for prevention:

- *Social impact bonds* provide a market-based approach to pay for evidence-based interventions to improve social, environmental, and economic conditions essential to behavioral well-being.¹⁴⁸ These involve raising capital from private investors to fund preventive interventions.¹⁴⁹ Increasing evidence of positive benefit-to-cost ratios of interventions that prevent adolescent behavioral health problems, including delinquency, violence and substance abuse, suggest that social impact bonds can be effective in supporting the widespread use of these preventive interventions.¹⁵⁰
- *Wellness trusts* are another emerging policy approach to sustainably generate funding for prevention.¹⁵¹ Trusts create a funding pool to support prevention and improve health outcomes in a population. Funds may come from a variety of sources – partnering with private foundations, taxing insurers and hospitals to support preventive efforts, as in the Massachusetts Prevention and Wellness Trust,¹³³ or using Tobacco Master Settlement funds to support prevention, as in the North Carolina Health Trust Fund.¹⁴⁷
- *Community benefit requirements*, imposed on nonprofit hospitals and health plans as a condition of their tax-exempt status, can also provide funds for promoting behavioral health. Since 2012, the Internal Revenue Service has allowed hospitals to count economic development, environmental improvements, training for community members, coalition building, community health improvement advocacy, and workforce development as community benefit expenditures, opening new sources for investment in community-based prevention. The Cincinnati Children’s Hospital Medical Center has used community benefit resources to fund a Community Health Initiative that partners with community-based organizations to address a range of preventable illnesses and injuries.¹⁵² Community benefit requirements could be used to engage nonprofit hospitals and health plans in promoting behavioral health for young people.
- *Accountable care organizations* in the ACA provide another opportunity to support prevention as part of population health management. Accountable care organizations involve coordinated healthcare providers working in concert to provide a continuum of care for a designated population of patients. Reimbursements are tied to improved outcomes in the patient population, rather than to units of service provided. Accountable care organizations create a huge interest in, and potential for, investment in effective prevention initiatives such as proven family-focused programs to prevent adolescent substance use and violence that may reduce the need and costs for healthcare treatment services over time.¹⁵³

HEALTHY YOUTH, HEALTHY FUTURE

Unleashing the power of prevention is a call to action that our nation can’t afford to miss

Behavioral health problems now surpass communicable diseases as the country’s most pressing concerns for the well-being of our young people. Over 30 years of evidence shows that advances

in prevention and promotion research have transformative potential to prevent problems before they develop. Now our challenge is to broadly implement these recent discoveries – developing and delivering on their potential through programs and policies that reach all young people.

Given its proven ability to dramatically reduce a wide range of behavioral health problems and save billions of dollars year after year, prevention is one of our nation’s most valuable – and underused – resources. It’s time to unleash the power of prevention – creating programs, training and infrastructures that put prevention to work nationwide for all young people, and yielding results in healthier lives, families, communities and economies. *Prevention is the best investment we can make, and the time to make it is now.*

REFERENCES

1. Catalano RF, Fagan AA, Gavin LE, et al. Worldwide application of the prevention science research base in adolescent health. *Lancet*. 2012;379(9826):1653-1664.
2. Hale DR, Viner RM. Policy responses to multiple risk behaviours in adolescents. *J Public Health (Oxford)*. 2012;34 Suppl 1:i11-9.
3. Kuklinski MR, Briney JS, Hawkins JD, Catalano RF. Cost-benefit analysis of Communities That Care outcomes at eighth grade. *Prev Sci*. 2012;13(2):150-161.
4. O'Connell ME, Boat T, Warner KE, editors. Preventing mental, emotional, and behavioral disorders among young people: Progress and possibilities. Washington, DC: National Academies Press; 2009.
5. Hoyert DL, Xu J. Deaths: Preliminary data for 2011. *National Vital Statistics Reports*. 2012;61(6).
6. Catalano RF. Prevention is a sound public and private investment. *Criminol Public Policy*. 2007;6(3):377-398.
7. Hawkins JD. Science, social work, prevention: Finding the intersections. *Soc Work Res*. 2006;30(3):137-152.
8. Woolf SH. The power of prevention and what it requires. *JAMA*. 2008;299(20):2437-2439.
9. Gilman AB. *Incarceration and the life course: Predictors, correlates, and consequences of juvenile incarceration (Doctoral Dissertation)* [Seattle WA: University of Washington; 2014.
10. Western B, Pettit B. Incarceration & social inequality. *Daedalus*. 2010;139(3):8-19,146-147.
11. Berleman WC. *Reports of the National Juvenile Justice Assessment Centers. Juvenile delinquency prevention experiments: A review and analysis*. Washington, DC: U.S. Department of Justice, Law Enforcement Assistance Administration, Office of Juvenile Justice and Delinquency Prevention; 1980.
12. Catalano RF, Haggerty KP, Hawkins JD, Elgin J. Prevention of substance use and substance use disorders: The role of risk and protective factors. In: Kaminer Y, Winters KC, eds. *Clinical manual of adolescent substance abuse treatment*. Washington, DC: American Psychiatric Publishing; 2011:25-63.
13. Hawkins JD, Catalano RF, Miller JY. Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance-abuse prevention. *Psychol Bull*. 1992;112(1):64-105.

14. Farrington DP. The Twelfth Jack Tizard Memorial Lecture. The development of offending and antisocial behaviour from childhood: key findings from the Cambridge Study in Delinquent Development. *J Child Psychol Psychiatry*. 1995;36(6):929-964.
15. Loeber R, Farrington DP, Stouthamer-Loeber M, Van Kammen WB. *Antisocial behavior and mental health problems: Explanatory factors in childhood and adolescence*. Mahwah, NJ: Lawrence Erlbaum Associates; 1998.
16. Luthar SS. *Resilience and vulnerability: Adaptation in the context of childhood adversities*. Cambridge, UK: Cambridge University Press; 2003.
17. Lerner RM, Almerigi JB, Theokas C, Lerner JV. Positive youth development A view of the issues. *J Early Adolesc*. 2005;25(1):10-16.
18. Center for the Study and Prevention of Violence at the University of Colorado. (n.d.). Blueprints for Healthy Youth Development. Retrieved from <http://www.blueprintsprograms.com>.
19. Mrazek PJ, Haggerty RJ, Eds.; Committee on Prevention of Mental Disorders--Institute of Medicine,. *Reducing risks for mental disorders: Frontiers for prevention intervention research*. Washington, DC: National Academy Press; 1994.
20. 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 Treat*. 2002;5(1):Article 15, June 24, 2002.
21. Gavin LE, Catalano RF, David-Ferdon C, Gloppen KM, Markham CM. A review of positive youth development programs that promote adolescent sexual and reproductive health. *J Adolesc Health*. 2010;46(3 Suppl.):S75-S91.
22. Cohen L, Chávez V, Chehimi S. *Prevention is primary: Strategies for community well-being*. 2nd ed. San Francisco, CA: Jossey Bass. 2010.
23. Merikangas KR, He J, Burstein M, et al. Lifetime prevalence of mental disorders in US adolescents. *Manuscript submitted for publication*. 2014.
24. Barrett PM, Turner CM, Sonderegger R. Childhood anxiety in ethnic families: Current status and future directions. *Behav Change*. 2000;17(03):113-123.
25. Lowry-Webster HM, Barrett PM, Dadds MR. A universal prevention trial of anxiety and depressive symptomatology in childhood: Preliminary data from an Australian study. *Behav Change*. 2001;18(01):36-50.
26. Barrett PM, Sonderegger R, Xenos S. Using FRIENDS to combat anxiety and adjustment problems among young migrants to Australia: A national trial. *Clin Child Psychol Psychiatry*. 2003;8(2):241-260.

27. Cooley MR, Boyd RC, Grades JJ. Feasibility of an anxiety preventive intervention for community violence exposed African-American children. *J Prim Prev.* 2004;25(1):105-123.
28. Rapee RM, Kennedy S, Ingram M, Edwards S, Sweeney L. Prevention and early intervention of anxiety disorders in inhibited preschool children. *J Consult Clin Psychol.* 2005;73(3):488-497.
29. Bernstein GA, Layne AE, Egan EA, Tennison DM. School-based interventions for anxious children. *J Am Acad Child Adolesc Psychiatry.* 2005;44(11):1118-1127.
30. Barak A, Hen L, Boniel-Nissim M, Shapira Na. A comprehensive review and a meta-analysis of the effectiveness of internet-based psychotherapeutic interventions. *J Tech Human Serv.* 2008;26(2-4):109-160.
31. Lewinsohn PM, Rohde P, Seeley JR. Major depressive disorder in older adolescents: Prevalence, risk factors, and clinical implications. *Clin Psychol Rev.* 1998;18(7):765-794.
32. Stice E, Shaw H, Bohon C, Marti CN, Rohde P. A meta-analytic review of depression prevention programs for children and adolescents: Factors that predict magnitude of intervention effects. *J Consult Clin Psychol.* 2009;77(3):486-503.
33. Yap MB, Pilkington PD, Ryan SM, Jorm AF. Parental factors associated with depression and anxiety in young people: A systematic review and meta-analysis. *J Affect Disord.* 2014;156:8-23.
34. Perrino T, Pantin H, Prado G, et al. Preventing internalizing symptoms among Hispanic adolescents: A synthesis across Familias Unidas trials. *Prev Sci.* 2014;15(6):917-928.
35. Wolchik SA, Sandler IN, Tein JY, et al. Fifteen-year follow-up of a randomized trial of a preventive intervention for divorced families: effects on mental health and substance use outcomes in young adulthood. *J Consult Clin Psychol.* 2013;81(4):660-673.
36. Brown HE, Pearson N, Braithwaite RE, Brown WJ, Biddle SJ. Physical activity interventions and depression in children and adolescents : a systematic review and meta-analysis. *Sports Med.* 2013;43(3):195-206.
37. Centers for Disease Control and Prevention. (2014). CDC estimates 1 in 68 children has been identified with autism spectrum disorder. Retrieved from <http://www.cdc.gov/media/releases/2014/p0327-autism-spectrum-disorder.html>.
38. Florida State University Autism Institute. (2012). Autism Navigator for Early Intervention Providers™. College of Medicine, Florida State University. Retrieved from <http://med.fsu.edu/index.cfm?page=autismInstitute.autismNavigator>.
39. Green J, Charman T, Pickles A, et al. Parent-mediated intervention versus no intervention for infants at high risk of autism: a parallel, single-blind, randomised trial. *The Lancet Psychiatry.* 2015;2(2):133-140.

40. Baranek GT, Watson LR, Turner-Brown L, et al. Preliminary efficacy of adapted responsive teaching for infants at risk of autism spectrum disorder in a community sample. *Autism research and treatment*. 2015;2015:Advance online publication. doi: 10.1155/2015/386951.
41. Johnston LD, O'Malley PM, Miech RA, Bachman JG, Schulenberg JE. *Monitoring the Future national results on drug use: 2013: Overview, Key finding on adolescent drug use*. Ann Arbor: Institute for Social Research, The University of Michigan; 2014.
42. Botvin GJ, Eng A, Williams CL. Preventing the onset of cigarette smoking through life skills training. *Prev Med*. 1980;9:135-143.
43. Botvin GJ, Griffin KW, Paul E, Macaulay AP. Preventing tobacco and alcohol use among elementary school students through life skills training. *J Child Adolesc Subst Abuse*. 2003;12(4):1-17.
44. Botvin GJ, Griffin KW, Diaz T, Scheier LM, Williams C, Epstein JA. Preventing illicit drug use in adolescents: long-term follow-up data from a randomized control trial of a school population. *Addict Behav*. 2000;25(5):769-774.
45. Botvin GJ, Griffin KW, Diaz T, Ifill-Williams M. Preventing binge drinking during early adolescence: one- and two-year follow-up of a school-based preventive intervention. *Psychol Addict Behav*. 2001;15(4):360-385.
46. Botvin GJ, Baker E, Filazzola AD, Botvin EM. A cognitive-behavioral approach to substance abuse prevention: One-year follow-up. *Addict Behav*. 1990;15(1):47-63.
47. Sussman S, Dent CW, Stacy AW. Project Towards No Drug Abuse: A review of the findings and future directions. *Am J Health Behav*. 2002;26(5):354-365.
48. Dent CW, Sussman S, Stacy AW. Project Towards No Drug Abuse: generalizability to a general high school sample. *Prev Med*. 2001;32(6):514-520.
49. Rohrbach LA, Gunning M, Sun P, Sussman S. The Project Towards No Drug Abuse (TND) dissemination trial: implementation fidelity and immediate outcomes. *Prev Sci*. 2010;11(1):77-88.
50. Sun P, Sussman S, Dent CW, Rohrbach LA. One-year follow-up evaluation of Project Towards No Drug Abuse (TND-4). *Prev Med*. 2008;47(4):438-442.
51. Spoth R, Trudeau L, Gyll M, Shin C, Redmond C. Universal intervention effects on substance use among young adults mediated by delayed adolescent substance initiation. *J Consult Clin Psychol*. 2009;77(4):620-632.
52. Mason WA, Kosterman R, Hawkins JD, Haggerty KP, Spoth RL, Redmond C. Influence of a family-focused substance use preventive intervention on growth in adolescent depressive symptoms. *J Res Adolesc*. 2007;17(3):541-564.

53. Prado G, Cordova D, Huang S, et al. The efficacy of Familias Unidas on drug and alcohol outcomes for Hispanic delinquent youth: Main effects and interaction effects by parental stress and social support. *Drug Alcohol Depend.* 2012;125(Suppl 1):S18-S25.
54. Prado G, Pantin H, Briones E, et al. A randomized controlled trial of a parent-centered intervention in preventing substance use and HIV risk behaviors in Hispanic adolescents. *J Consult Clin Psychol.* 2007;75(6):914-926.
55. Grossman JB, Tierney JP. Does mentoring work? An impact study of Big Brothers Big Sisters program. *Eval Rev.* 1998;22(3):403-426.
56. Hawkins JD, Oesterle S, Brown EC, et al. Results of a type 2 translational research trial to prevent adolescent drug use and delinquency: A test of Communities That Care. *Arch Pediatr Adolesc Med.* 2009;163(9):789-798.
57. Hawkins JD, Oesterle S, Brown EC, Abbott RD, Catalano RF. Youth problem behaviors 8 years after implementing the Communities That Care prevention system. A community-randomized trial. *JAMA Pediatr.* 2014;168(2):122-129.
58. Werch CE, Bian H, Moore MJ, et al. Brief multiple behavior health interventions for older adolescents. *Am J Health Promot.* 2008;23(2):92-96.
59. Elster AB, Kuznets NJ. *AMA guidelines for adolescent preventive services.* Baltimore, MD: Williams and Wilkins; 1994.
60. Patton GC, Coffey C, Sawyer SM, et al. Global patterns of mortality in young people: a systematic analysis of population health data. *Lancet.* 2009;374(9693):881-892.
61. Wagenaar AC, Toomey TL. Effects of minimum drinking age laws: Review and analyses of the literature from 1960 to 2000. *J Stud Alcohol.* 2002;Suppl. 14:206-225.
62. Shults RA, Elder RW, Sleet DA, et al. Reviews of evidence regarding interventions to reduce alcohol-impaired driving. *Am J Prev Med.* 2001;21(4 Suppl):66-88.
63. Simons-Morton BG, Hartos JL, Leaf WA, Preusser DF. The effect on teen driving outcomes of the Checkpoints Program in a state-wide trial. *Accid Anal Prev.* 2006;38(5):907-912.
64. Haggerty KP, Fleming CB, Catalano RF, Harachi TW, Abbott RD. Raising Healthy Children: Examining the impact of promoting healthy driving behavior within a social development intervention. *Prev Sci.* 2006;7(3):257-267.
65. Griffin KW, Botvin GJ, Nichols TR. Long-term follow-up effects of a School-Based Drug Abuse Prevention Program on Adolescent Risky Driving. *Prev Sci.* 2004;5(3):207-212.
66. Wilson SJ, Lipsey MW. School-based interventions for aggressive and disruptive behavior: Update of a meta-analysis. *Am J Prev Med.* 2007;33(2,Suppl):S130-S143.

67. Hahn R, Fuqua-Whitley D, Wethington H, et al. Effectiveness of universal school-based programs to prevent violent and aggressive behavior: A systematic review. *Am J Prev Med.* 2007;33(2,Suppl):S114-S129.
68. Greenberg MT, Kusche CA, Cook ET, Quamma JP. Promoting emotional competence in school-aged children: The effects of the PATHS curriculum. *Dev Psychopathol.* 1995;7(1):117-136.
69. Webster-Stratton C, Reid MJ. A school-family partnership: Addressing multiple risk factors to improve school readiness and prevent conduct problems in young children. In: Christenson SL, Reschly AL, eds. *Handbook on school-family partnerships.* New York: Routledge/Taylor and Francis; 2010:204-227.
70. Brotman LM, Gouley KK, Huang K-Y, et al. Preventive intervention for preschoolers at high risk for antisocial behavior: Long-term effects on child physical aggression and parenting practices. *J Clin Child Adolesc Psychol.* 2008;37(2):386-396.
71. Baker-Henningham H, Scott S, Jones K, Walker S. Reducing child conduct problems and promoting social skills in a middle-income country: Cluster randomised controlled trial. *Br J Psychiatry.* 2012;201(2):101-108.
72. Scott S, O'Connor TG, Futh A, Matias C, Price J, Doolan M. Impact of a parenting program in a high-risk, multi-ethnic community: The PALS trial. *J Child Psychol Psychiatry.* 2010;51(12):1331-1341.
73. Hurlburt MS, Nguyen K, Reid J, Webster-Stratton C, Zhang J. Efficacy of the Incredible Years group parent program with families in Head Start who self-reported a history of child maltreatment. *Child Abuse Neglect.* 2013;37(8):531-543.
74. Perrin EC, Sheldrick RC, McMenemy JM, Henson BS, Carter AS. Improving parenting skills for families of young children in pediatric settings: a randomized clinical trial. *JAMA Pediatr.* 2014;168(1):16-24.
75. Durlak JA, Dymnicki AB, Taylor RD, Weissberg RP, Schellinger KB. The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Dev.* 2011;82(1):405-432.
76. Wilson DB, Gottfredson DC, Najaka SS. School-based prevention of problem behaviors: A meta-analysis. *J Quant Criminol.* 2001;17(3):247-272.
77. Farrington DP, Welsh BC. Family-based prevention of offending: A meta-analysis. *Aust N Z J Criminol.* 2003;36(2):127-151.
78. Hawkins JD, Oesterle S, Brown EC, et al. Sustained decreases in risk exposure and youth problem behaviors after installation of the Communities That Care prevention system in a

randomized trial. *Arch Pediatr Adolesc Med.* 2012;166(2):141-148.

79. Sexton TL, Alexander JF. *Functional Family Therapy*. Rockville, MD: Juvenile Justice Clearinghouse; 2000.

80. Chamberlain P, Leve LD, Degarmo DS. Multidimensional treatment foster care for girls in the juvenile justice system: 2-year follow-up of a randomized clinical trial. *J Consult Clin Psychol.* 2007;75(1):187-193.

81. Eddy JM, Whaley RB, Chamberlain P. The prevention of violent behavior by chronic and serious male juvenile offenders: A 2-year follow-up of a randomized clinical trial. *J Emot Behav Disord.* 2004;12(1):2-8.

82. Rhoades KA, Chamberlain P, Roberts R, Leve LD. MTFC for high risk adolescent girls: A comparison of outcomes in England and the United States. *J Child Adolesc Subst Abuse.* 2013;22(5):435-449.

83. Smith DK, Chamberlain P, Eddy JM. Preliminary support for multidimensional treatment foster care in reducing substance use in delinquent boys. *J Child Adolesc Subst Abuse.* 2010;19(4):343-358.

84. David-Ferden C, Simon TR. *Preventing youth violence: Opportunities for action*. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention; 2014.

85. Centers for Disease Control and Prevention. (2013). Youth Online, High School Health Risk Behavior Survey, 2013. Retrieved from <http://nccd.cdc.gov/youthonline/App/Default.aspx>.

86. Farrington DP. Longitudinal and experimental research in criminology. *Crime Justice.* 2013;42(1):453-527.

87. Community Preventive Services Task Force. (n.d.). All findings of the Community Preventive Services Task Force. Retrieved from <http://www.thecommunityguide.org/about/conclusionreport.html>.

88. Henry DB, Tolan PH, Gorman-Smith D, Schoeny ME, Zwanziger J, Kim S. (2012). Evaluating the effectiveness of a family-focused prevention program: effectiveness of SAFE children. Retrieved from http://www.ncdsv.org/images/EvaluatingImplementationFamily-FocusedPreventionProgramEffectivenessOfSAFEChildren_2-2012.pdf.

89. Foshee VA, Bauman KE, Ennett ST, Linder GF, Benefield T, Suchindran C. Assessing the long-term effects of the Safe Dates program and a booster in preventing and reducing adolescent dating violence victimization and perpetration. *Am J Public Health.* 2004;94(4):619-624.

90. Centers for Disease Control and Prevention. (n.d.). National Suicide Statistics at a Glance. Retrieved from <http://www.cdc.gov/ViolencePrevention/Suicide/statistics/index.html>.

91. Gould MS, Greenberg T, Velting DM, Shaffer D. Youth suicide risk and preventive interventions: A review of the past 10 years. *J Am Acad Child Adolesc Psychiatry*. 2003;42(4):386-405.
92. World Health Organization. *Violence prevention: The evidence*. Geneva: Author; 2010.
93. Boor M, Bair JH. Suicide rates, handgun control laws, and sociodemographic variables. *Psychol Rep*. 1990;66(3 Pt 1):923-930.
94. Carrington PJ, Moyer S. Gun control and suicide in Ontario. *Am J Psychiatry*. 1994;151(4):606-608.
95. Cantor CH, Slater PJ. The impact of firearm control legislation on suicide in Queensland: preliminary findings. *Med J Aust*. 1995;162(11):583-585.
96. Miller DN, Mazza JJ, Eckert TL. Suicide prevention programs in the schools: A review and public health perspective. *Sch Psychol Rev*. 2009;38(2):168-188.
97. Katz C, Bolton SL, Katz LY, Isaak C, Tilston-Jones T, Sareen J. A systematic review of school-based suicide prevention programs. *Depress Anxiety*. 2013;30(10):1030-1045.
98. Diamond GS, Wintersteen MB, Brown GK, et al. Attachment-based family therapy for adolescents with suicidal ideation: a randomized controlled trial. *J Am Acad Child Adolesc Psychiatry*. 2010;49(2):122-131.
99. Huey SJ, Henggeler SW, Rowland MD, et al. Multisystemic Therapy effects on attempted suicide by youths presenting psychiatric emergencies. *J Am Acad Child Adolesc Psychiatry*. 2004;43(2):183-190.
100. Centers for Disease Control and Prevention. (2012). Sexually transmitted disease surveillance. Atlanta, GA: U.S. Department of Health and Human Services. Retrieved from <http://www.cdc.gov/std/stats/>.
101. Albarracín D, Gillette JC, Earl AN, Glasman LR, Durantini MR, Moon-Ho H. A test of major assumptions about behavior change: A comprehensive look at the effects of passive and active HIV-prevention interventions since the beginning of the epidemic. *Psychol Bull*. 2005;131(6):856-897.
102. Kirby D. The impact of abstinence and comprehensive sex and STD/HIV education programs on adolescent sexual behavior. *Sex Res Soc Policy*. 2008;5(3):18-27.
103. Hawkins JD, Catalano RF, Kosterman R, Abbott R, Hill KG. Preventing adolescent health-risk behaviors by strengthening protection during childhood. *Arch Pediatr Adolesc Med*. 1999;153(3):226-234.
104. Lonczak HS, Abbott RD, Hawkins JD, Kosterman R, Catalano RF. Effects of the Seattle

Social Development Project on sexual behavior, pregnancy, birth, and sexually transmitted disease outcomes by age 21 years. *Arch Pediatr Adolesc Med.* 2002;156(5):438-447.

105. Hill KG, Bailey JA, Hawkins JD, et al. The onset of STI diagnosis through Age 30: Results from the Seattle Social Development Project intervention. *Prev Sci.* 2014;15 (Suppl 1):S19-S32.

106. U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. (2013). Public school graduates and dropouts from the Common Core of Data: School year 2009-10. Retrieved from <http://nces.ed.gov/pubs2013/2013309/>.

107. De Witte K, Cabus S, Thyssen G, Groot W, van den Brink HM. A critical review of the literature on school dropout. *Educ Res Rev.* 2013;10:13-28.

108. Rumberger RW. *Dropping out.* Cambridge, MA: Harvard University Press; 2011.

109. Hammond C, Linton D, Smink J, Drew S. *Dropout risk factors and exemplary programs: A technical report.* Clemson, SC: National Dropout Prevention Center/Network and Alexandria, VA: Communities In Schools, Inc.; 2007.

110. Klima T, Miller M, Nunlist C. (2009). What works? Targeted truancy and dropout programs in middle and high school (Washington State Institute for Public Policy Report No. 09-06-2201). Olympia: Washington State Institute for Public Policy. Retrieved from <http://www.wsipp.wa.gov/pub.asp?docid=09-06-2201>.

111. Wilson SJ, Tanner-Smith EE, Lipsey MW, Steinka-Fry K, Morrison J. Dropout prevention and intervention programs: Effects on school completion and dropout among school-aged children and youth. *Campbell Syst Rev.* 2011;8.

112. Wilson SJ, Tanner-Smith E. Dropout prevention and intervention programs for improving school completion among school-aged children and youth: A systematic review. *J Society Soc Work Res.* 2013;4(4):357-372.

113. Steinka-Fry K, Wilson SJ, Tanner-Smith E. Effects of school dropout prevention programs for pregnant and parenting adolescents: A meta-analytic review. *J Society Soc Work Res.* 2013;4(4):373-389.

114. Tanner-Smith E, Wilson S. A meta-analysis of the effects of dropout prevention programs on school absenteeism. *Prev Sci.* 2013;14(5):468-478.

115. Hale DR, Fitzgerald-Yau N, Mark Viner R. A systematic review of effective interventions for reducing multiple health risk behaviors in adolescence. *Am J Public Health.* 2014;104(5):e19-e41.

116. Campbell FA, Ramey CT, Pungello E, Sparling J, Miller-Johnson S. Early childhood education: Young adult outcomes from the Abecedarian Project. *Appl Dev Sci.* 2002;6(1):42-57.

117. Clark DB, Cornelius JR, Kirisci L, Tarter RE. Childhood risk categories for adolescent substance involvement: A general liability typology. *Drug Alcohol Depend.* 2005;77(1):13-21.
118. Conduct Problems Prevention Research Group. Impact of early intervention on psychopathology, crime, and well-being at age 25. *Am J Psychiatry.* 2014;doi: 10.1176/appi.ajp.2014.13060786. [Epub ahead of print].
119. Aos S, Lee S, Drake E, et al. *Return on investment: Evidence-based options to improve statewide outcomes (Document No 11-07-1201)*. Olympia: Washington State Institute for Public Policy; 2011.
120. Aos S, Drake E. *Prison, police, and programs: Evidence-based options that reduce crime and save money*. Olympia: Washington State Institute for Public Policy; 2013.
121. DeVol R, Bedroussian A. *An unhealthy America: The economic burden of chronic disease*. Santa Monica, CA: Milken Institute; 2007.
122. Almgren G, Kemp SP, Alison E. The Legacy of Hull House and the Children's Bureau in the American Mortality Transition. *Soc Serv Rev.* 2000;74(1):1-27.
123. Bronfenbrenner U. *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press; 1979.
124. . Patient Protection and Affordable Care Act, 42 USC, 18001; 2010.
125. Samuels CA. (2014). Pre-K suspension data prompt focus on intervention. Retrieved from <http://www.edweek.org/ew/articles/2014/04/02/27ocrprek.h33.html?tkn=WVUFI066aps1cjK35RCm3VfFCzGxB5x2DdAy&print=1>.
126. U.S. Department of Health and Human Services. *The health consequences of smoking—50 Years of Progress: A Report of the Surgeon General*. Atlanta, GA: Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2014.
127. Spoth R, Gyll M, Redmond C, Greenberg M, Feinberg M. Six-year sustainability of evidence-based intervention implementation quality by Community-University Partnerships: The PROSPER study. *Am J Community Psychol.* 2011;48(3-4):412-425.
128. Tibbits MK, Bumbarger BK, Kyler SJ, Perkins DF. Sustaining evidence-based interventions under real-world conditions: Results from a large-scale diffusion project. *Prev Sci.* 2010;11(3):252-262.
129. De Bellis MD, Woolley DP, Hooper SR. Neuropsychological findings in pediatric maltreatment: Relationship of PTSD, dissociative symptoms, and abuse/neglect indices to neurocognitive outcomes. *Child Maltreat.* 2013;18(3):171-183.

130. McCrory E, De Brito SA, Viding E. The impact of childhood maltreatment: a review of neurobiological and genetic factors. *Front Psychiatry*. 2011;2:48.
131. Mills R, Scott J, Alati R, O'Callaghan M, Najman JM, Strathearn L. Child maltreatment and adolescent mental health problems in a large birth cohort. *Child Abuse Negl*. 2013;37(5):292-302.
132. Hawkins JD, Shapiro VB, Fagan AA. Disseminating effective community prevention practices: Opportunities for social work education. *Res Soc Work Pract*. 2010;20(5):518-527.
133. Lazar K. (2012). Massachusetts health cost-control bill contains first-in-nation fund for prevention programs. Retrieved from <http://www.boston.com/whitecoatnotes/2012/07/31/massachusetts-health-cost-control-bill-contains-first-nation-fund-for-prevention-programs/Z4b1qhC9UwAgnDTsNRWn51/story.html?comments=all#readerComm>.
134. Shapiro VB, Oesterle S, Hawkins JD. Relating coalition capacity to the adoption of science-based prevention in communities: Evidence from a randomized trial of Communities That Care. *Am J Community Psychol*. 2014:Advance online publication. doi:10.1007/s10464-014-9684-9.
135. Center for Behavioral Health Statistics and Quality. *Results from the 2012 National Survey on Drug Use and Health: Mental health findings [HHS Publication No. SMA 13-4805, NSDUH Series H-47]*. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2013.
136. Center for Behavioral Health Statistics and Quality. *Serious mental health challenges among older adolescents and young adults*. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2014.
137. Kieling C, Baker-Henningham H, Belfer M, et al. Child and adolescent mental health worldwide: evidence for action. *Lancet*. 2011;378(9801):1515-1525.
138. Gralinski-Bakker JH, Hauser S, Billings R, Allen J, Lyons P, Melton G. (2005). Transitioning to adulthood for young adults with mental health issues Retrieved from <http://transitions.s410.sureserver.com/wp-content/uploads/2011/08/mental-health-formatted.pdf>.
139. Adrian M, Charlesworth-Attie S, Vander Stoep A, McCauley E, Becker L. Health promotion behaviors in adolescents: prevalence and association with mental health status in a statewide sample. *J Behav Health Serv Res*. 2014;41(2):140-152.
140. Kania J, Kramer M. Collective impact. *Stanford Soc Innov Rev*. 2011;9(1):36-41.
141. Hanleybrown F, Kania J, Kramer M. Channeling change: Making collective impact work. *Stanford Soc Innov Rev*. 2012.
142. Gibbons RD, Weiss DJ, Pilkonis PA, et al. Development of a computerized adaptive test for

depression. *JAMA Psychiatry*. 2012;69(11):1104-1112.

143. Coalition for Evidence-Based Policy. (2011). HHS's maternal, infant, and early childhood home visiting program. Retrieved from <http://coalition4evidence.org/wp-content/uploads/2011/08/Review-of-8-hv-models-Aug-2011-FINAL.pdf>.

144. Hoge MA, Stuart GW, Morris J, Flaherty MT, Paris M, Jr., Goplerud E. Mental health and addiction workforce development: Federal leadership is needed to address the growing crisis. *Health Aff (Millwood)*. 2013;32(11):2005-2012.

145. Williams JH, Chapa T, Des Marias EA. *Advanced social work practice behaviors to address behavioral health disparities*. Washington, DC: National Association of Deans and Directors of Social Work. U.S. Department of Health and Human Services Office of Minority Health; 2013.

146. Substance Abuse and Mental Health Services Administration. (n.d.). Screening, Brief Intervention, and Referral to Treatment (SBIRT). Retrieved from <http://beta.samhsa.gov/sbirt>.

147. Cantor J, Mikkelsen L, Simons B, Waters R. *How can we pay for a health population? Innovative new ways to redirect funds to community prevention*. Oakland, CA: Prevention Institute; 2013.

148. Hernandez M, Syme SL, Brush R. (2012). A market for health: Shifting the paradigm for investing in health. Retrieved from http://collectivehealth.net/new/about_files/Health%20Capital%20Market%20FINAL%20March%202012.pdf.

149. Rosenberg T. (2012, June 20). The promise of social impact bonds. Retrieved from <http://opinionator.blogs.nytimes.com/2012/06/20/the-promise-of-social-impact-bonds/>.

150. Aos S. *Return on (taxpayer) investment: Evidence-based options to improve statewide outcomes-update for the legislature*. Olympia: Washington State Institute for Public Policy; 2010.

151. Lambrew JM. (2007). A wellness trust to prioritize disease prevention. The Brookings Institution. Retrieved from <http://www.brookings.edu/research/papers/2007/04/useconomics-lambrew>.

152. Cincinnati Children's Hospital Medical Center. (2011). Cincinnati Children's launches community health improvement initiative, 2011. Retrieved from <http://www.cincinnatichildrens.org/news/release/2011/community-health-10-11-2011/>.

153. Spoth R, Redmond C, Shin C, Azevedo K. Brief family intervention effects on adolescent substance initiation: School-level growth curve analyses 6 years following baseline. *J Consult Clin Psychol*. 2004;72(3):535-542.

ABOUT THE AUTHORS

J. DAVID HAWKINS is the Social Work Endowed Professor of Prevention at the School of Social Work, University of Washington.

JEFFERY M. JENSON¹ is the Phillip D. & Eleanor G. Winn Professor for Children and Youth at Risk at the Graduate School of Social Work, University of Denver.

RICHARD F. CATALANO is the Bartley Dobb Professor for the Study and Prevention of Violence at the School of Social Work, University of Washington.

MARK W. FRASER is the John A. Tate Distinguished Professor for Children in Need and Associate Dean for Research at the School of Social Work, University of North Carolina- Chapel Hill.

GILBERT J. BOTVIN is a Professor Emeritus in the Schools of Public Health and Psychiatry at Cornell University.

VALERIE SHAPIRO is Assistant Professor and Co-Director at the Center for Prevention Research in Social Welfare in the School of Social Welfare at University of California – Berkeley.

KIMBERLY A. BENDER is Associate Professor in the Graduate School of Social Work, University of Denver.

C. HENDRICKS BROWN is Professor and Director of the Center for Prevention Implementation Methodology in the Feinberg School of Medicine at Northwestern University.

WILLIAM BEARDSLEE is the Gardner-Monks Professor of Child Psychiatry in the Harvard Medical School at Harvard University.

DAVID BRENT is Endowed Chair in Suicide Studies and Professor of Psychiatry, Pediatrics, Epidemiology, and Clinical Translation Science in the School of Medicine at the University of Pittsburgh.

LAUREL K. LESLIE is Professor of Medicine, Pediatrics, and Public Health in the School of Medicine at Tufts University.

MARY JANE ROTERAM-BORUS is the Bat-Yaacov Professor of Child Psychiatry and Biobehavioral Sciences in the Department of Psychiatry at the University of California-Los Angeles.

PAT SHEA is Deputy Director for Technical Assistance and Prevention at the National Association of State Mental Health Program Directors.

ANDY SHIH is Senior Vice President for Autism Speaks.

ELIZABETH K. ANTHONY is Associate Professor in the School of Social Work, Arizona State University.

KEVIN P. HAGGERTY is Associate Professor and Director of the Social Development Research Group

¹ Corresponding author. Email: Jeffrey.jenson@du.edu; office phone: 303-871-2526.

in the School of Social Work at the University of Washington.

DEBORAH GORMAN-SMITH is Professor in the School of Social Service Administration, University of Chicago.

ERIN CASEY is Associate Professor in the School of Social Work, University of Washington-Tacoma.

SUSAN STONE is the Catherine Mary and Eileen Clare Hutto Professor of Social Services in Public Education in the School of Social Welfare at the University of California-Berkeley.

THE COALITION FOR BEHAVIORAL HEALTH.²

ACKNOWLEDGMENTS

Sandra Audia Little at the University of Maryland School of Social Work designed the cover. John Gabbert at Washington University's Center for Social Development and Karen Wilson provided editorial support.

SUGGESTED CITATION

Hawkins, J. D., Jenson, J. M., Catalano, R. F., Fraser, M. W., Botvin, G. J., Shapiro, V., ... the Coalition for Behavioral Health. (2015). *Unleashing the power of prevention* (Grand Challenge for Social Work Initiative Working Paper No. 10). Cleveland, OH: American Academy of Social Work and Social Welfare

CONTACT

American Academy of Social Work and Social Welfare
Sarah Christa Butts, Assistant to the President

academy@aswsw.org

² A list of Coalition for Behavioral Health members is found at the end of this document.

COALITION FOR THE PROMOTION OF BEHAVIORAL HEALTH

Anamika Barman-Adhikari
University of Denver

Yolanda Anyon
University of Denver

Wendy Auslander
Washington University

Jennifer A. Bailey
University of Washington

William Beardslee
Harvard University

Jennifer Bellamy
University of Denver

Anthony Biglan
Oregon Research Institute

Thomas Boat
University of Cincinnati

David Brent
University of Pittsburgh

Laurie Brotman
New York University

Brian Bumbarger
Pennsylvania State University

Felipe Gonzalez Castro
University of Texas at El Paso

Doug Coatsworth
Colorado State University

Peter Delany
Substance Abuse and Mental Health Services Administration

Diane DePanfilis
University of Maryland at Baltimore

Naihua Duan
Columbia University

Delbert S. Elliott
University of Colorado

Andy Frey
University of Louisville

Mark Greenberg
Penn State University

Susan Haws
Innovation Research and Training

Todd Herrenkohl
University of Washington

Karl G. Hill
University of Washington

Matthew Howard
University of North Carolina at Chapel Hill

Kelly J. Kelleher
Nationwide Children's Hospital

Elizabeth Kim
University of California, Berkeley

Patricia Kohl
Washington University

Uma R. Kotagal
Cincinnati Children's Hospital Medical Center

Flavio Marsiglio
Arizona State University

Mary Ann McCabe
George Washington University

Bernadette Mazurek Melnyk
Ohio State University

Larissa N. Niec
Central Michigan University

Paula Nurius
University of Washington

Carrie Pettus-Davis
Washington University

Craig Povey
Utah State Division of Substance Abuse and Mental Health

Nathaniel Riggs
Colorado State University

Bryan Samuels
University of Chicago

Steven Schinke
Columbia University

Ciera Schoonover
Central Michigan University

Traci M. Schwinn
Columbia University

Pat Shea
National Association of State Mental Health Program Directors

David Shern
Mental Health America

José Szapocznik
University of Miami

Heather Taussig
University of Denver

Patrick Tolan
University of Virginia

Edwina Uehara
University of Washington

Lindsey Weiler
University of Minnesota

James Herbert Williams
University of Denver

Anne Williford
University of Kansas

Fred Wulczyn
University of Chicago