PROMOTE PREVENT

Special Commission on

Behavioral Health Promotion and Upstream Prevention

PromotePrevent.com

April 2018

A plan to promote mental, emotional, and behavioral health and to prevent behavioral health issues in our Commonwealth

Representative James M. Cantwell, House Chair
Vice Chair, Joint Committee on Judiciary
4th Plymouth, Marshfield and Scituate

The Commonwealth of Massachusetts

General Court

State House, Boston 02113-1054

April 2, 2018

History has proven time and again that one person can make a difference in our society. With regard to the genesis of our Promote Prevent Commission that one person was, sadly, a young mother of four, Rene O'Donnell, who died from an opiate overdose in 2014. The death of this young mom could have been just another tragic consequence of this epidemic, but for the fact that her nephew was Ben Thomas, my State House aide.

Ben recognized that the loss of his aunt would not only have rippling impacts on his family for years, but that thousands of other families were also experiencing the same devastation. Even with the noble, necessary efforts to strengthen treatment and recovery systems, we learned that far less was being done to promote behavioral health and to prevent disorders, like addiction, in the first place.

Not long after the death of Ben's aunt, we began crafting legislation that ultimately created the Promote Prevent Commission, formally titled the "*Special Legislative Commission on Behavioral Health Promotion and Upstream Prevention*." Over the last thirteen months a dedicated group of twenty-four Promote Prevent Commissioners—leaders from across the fields of government, public health, behavioral health, education, criminal justice, and insurance—have been hard at work. We have coalesced around the belief that if we act early, we can save individuals and families from tragedy and create a happier, healthier, and more prosperous Commonwealth.

I am honored to join my esteemed Commissioners and my aide, Ben Thomas, in presenting the Promote Prevent Commission report and recommendations. To all those who have committed themselves to this mission and to giving voice to the prevention community, I offer my deepest gratitude. To the dedicated servants who commit themselves every day to preventing behavioral issues in our Commonwealth, we see you, and we commend your work and success. Together we heed the call to action to ***unleash the power of prevention***.

James M. Cantwell
State Representative, 4th Plymouth, Marshfield and Scituate

Dedicated to Shane, Lucas, Lance, Destiny,
and all of the children forever impacted by the opiate epidemic.

The Promote Prevent Commission

House Chair	**Jim Cantwell**	Representative, 4th Plymouth
Senate Chair	**Jennifer Flanagan**	Senator, Worcester & Middlesex
House Minority Leader Appointee	**Kim Ferguson**	Representative, 5th Worcester
Senate Minority Leader Appointee	**Patrick O'Connor**	Senator, Plymouth and Norfolk
Department of Public Health	**Allison Bauer**	Director, Bureau of Substance Addiction Services
Health Policy Commission	**David Seltz**	Executive Director
Trial Courts	**Paula Carey**	Chief Justice
Department of Mental Health	**Joan Mikula**	Commissioner
Executive Office of Public Safety and Security	**Brian Merrick**	Director, Government Affairs
Department of Elementary and Secondary Education	**Rachelle Engler Bennett**	Associate Commissioner
Department of Public Health	**Natalie Nguyen Durham**	Director, Office of Data Management and Outcomes Assessment
Division of Insurance	**Tracey McMillan**	Director, Bureau of Managed Care
Center for Health Information and Analysis	**Ray Campbell**	Executive Director
Association for Behavioral Healthcare	**Amanda Gilman**	Senior Director of Public Policy
Massachusetts Public Health Association	**Jessica Collins**	Executive Director, Partners for Health Community, Inc.
Massachusetts Organization for Addiction Recovery	**Maryanne Frangules**	Executive Director
Mental Health Legal Advisors Committee	**Phil Kassel**	Executive Director
National Association of Social Workers	**Yaminette Diaz-Linhart**	Intervention Development, Boston Medical Center
Environmental Health	**Barry Keppard**	Health Policy Dir., Metropolitan Area Planning Council
Community-Based Public Health	**Raymond Tamasi**	President, Gosnold, Inc.
Behavioral Health Promotion	**Christie Hager**	VP, Beacon Health Options
Health Insurance Rep.	**David Shore**	VP, Borislow Insurance
Social-Emotional Learning Alliance for MA	**Jim Vetter**	Associate Director, Education Development Center
School-Based Public Health	**Margaret Hannah**	Executive Director, Freedman Center, William James College

Subcommittees

Steering / Scope
Representative James M. Cantwell
Senator Patrick O'Connor
Representative Kimberly Ferguson
Christie Hager
Margaret Hannah
Ray Tamasi
Chief Justice Paula Carey / Judge Rosemary Minehan

Systems Change
Margaret Hannah, Chair
Ray Campbell
Natalie Nguyen Durham
Rachelle Engler Bennett

Early Intervention
Yaminette Diaz-Linhart, Chair
Maryanne Frangules
Phil Kassel
Amanda Gilman

Prevention Programs
James Vetter, Chair
Christie Hager
Chief Justice Paula Carey
Barry Keppard
Kimberly Ferguson

Funding Prevention and Fostering Public-Private Partnerships
Rep. James Cantwell, Chair / Ben Thomas, Chief of Staff
Senator Patrick O'Connor
Ray Tamasi
Tracey McMillan
David Shore
Allison Bauer
David Seltz

Prevention Policy
Rep. James Cantwell, Chair / Ben Thomas, Chief of Staff
Commissioner Joan Mikula
Jessica Collins
Brian Merrick

PromotePrevent.com

Acknowledgements

Robert DeLeo, House Speaker
Harriette Chandler, Senate President
Marylou Sudders, Secretary of Health and Human Services
Denise Garlick, State Representative, 13th Norfolk
Elizabeth Malia, State Representative, 11th Suffolk
Joint Committee on Mental Health, Substance Use, and Recovery
Executive Office of Health and Human Services
100+ public testifiers at public hearings in Boston, Waltham, & Plymouth

Promote Prevent Commission Staff, Office of Rep. James M. Cantwell
Ben Thomas, Chief of Staff, Commission Director
Cate McAnulty, Intern Coordinator
MacKenzie Mahoney, Intern Coordinator
Timothy Lumnah, Intern Coordinator
Tane Webb, Intern Coordinator

Special Presenters
U.S. Senator Edward Markey
Monica Bharel, Commissioner, Department of Public Health
Michael Botticelli, Director, Boston Medical Center's Grayken Center for Addiction Medicine
Kathryn Power, U.S. Substance Abuse and Mental Health Services Administration
J. David Hawkins, PhD, Endowed Professor in Prevention, University of Washington
Dr. Dennis Embry, PAXIS Institute
William Beardslee, MD, Harvard University's Judge Barker Children's Center
Jeffrey Jenson, PhD, Endowed Professor for Children and Youth, University of Denver
Laurel Leslie, MD, MPH, Vice President, Research, American Board of Pediatrics
Dr. Shella Dennery, Boston Children's Hospital
Andria Amador, Boston Public Schools
Scarlett Lewis, Founder, Jesse Lewis Choose Love Movement
Thomas Abt, Center for International Development, Harvard Kennedy School
Molly Baldwin, Founder, ROCA

Agency / Organization Designees & Support Staff
Anne Gilligan, Department of Elementary and Secondary Education
The Honorable Rosemary Minehan, Massachusetts Trial Courts
Brian Merrick, Government Affairs, Executive Office of Public Safety and Security
Erika Scibelli, Deputy Chief of Staff, Health Policy Commission
Sophie Hansen, National Association of Social Workers
Susan Fendell, Mental Health Legal Advisors Committee

Pew-MacArthur Results First Initiative
Ben Fulton, Senior Associate
Steve Lize, PhD, Officer
Elizabeth Ryder, Associate

DPH & DMH Results First Analysis Team
Lindsey Tucker, Associate Commissioner, DPH
Emily Sherwood, Deputy Commissioner, DMH
Allison Bauer, Director, Bureau of Substance Addiction Services, DPH
Heather Strother, DMH
Fernando Perfas, DPH
Brian Jenney, DPH
Hermik Babakhanlou-Chase, DPH
Conor Duffy, DPH
Paige Shaffer, DPH

Promote Prevent Commission Science Advisors
Dr. William Beardslee, Harvard University's Judge Barker Children's Center
Lauren Gilman, Massachusetts Technical Assistance Partnership for Prevention
Dr. Amy Turncliff, Director, Ashland Decisions at Every Turn Coalition
Dr. Nancy Norman, MD, MPH, Medical Director of Integration, Beacon Health Options
Annmarie Galvin, Coordinator, ScituateFACTS Coalition
Kat Allen, Coordinator, Franklin County Communities That Care Coalition
Danna Mauch, PhD, Massachusetts Association for Mental Health
Jessica Larochelle, Massachusetts Association for Mental Health
Kate Ginnis, MPH, Boston Children's Hospital

Community Coalition Advisory Group
Carol Read, M.Ed., Needham Coalition for Youth Substance Abuse Prevention
Elizabeth Parsons, Coordinator, Mystic Valley Substance Abuse Prevention Collaborative
Annmarie Galvin, Chair, ScituateFACTS Coalition
Kat Allen, Coordinator, Franklin County Communities That Care Coalition
Dr. Amy Turncliff, Director, Ashland Decisions at Every Turn Coalition

Other State Information Providers
Ali Maffey, MSW, Colorado Department of Public Health and Environment
Jessica Corvinus, Colorado Office of State Planning and Budgeting
Geoffrey Kolchin, Pennsylvania Office of Juvenile Justice and Delinquency
Phillis Law, PA Evidence-based Prevention and Intervention Support Center (EPISCenter)


MASSACHUSETTS PUBLIC HEALTH ASSOCIATION
Action for Equity in Health
communities that care
ED MARKEY
United States Senator for Massachusetts
CHILDREN'S MENTAL HEALTH CAMPAIGN
pax Good Behavior Game
Gosnold ON CAPE COD
PREVENTION | INTERVENTION
TREATMENT | RECOVERY
beacon health options
MOAR
Massachusetts Organization for Addiction Recovery
ABH
ASSOCIATION FOR BEHAVIORAL HEALTHCARE
NASW MASSACHUSETTS CHAPTER
National Association of Social Workers
THE PEW CHARITABLE TRUSTS
MacArthur Foundation
SEL4MA.ORG
Mass DMH
Department of Mental Health
Thank you to the many organizations
who contributed
their time, attention, and intellect to the
Promote Prevent Commission
CHIA.
center for health information and analysis
MASSACHUSETTS DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION
MASSACHUSETTS HEALTH POLICY COMMISSION
COMMONWEALTH OF MASSACHUSETTS THE TRIAL COURT
DIVISION OF INSURANCE - COMMONWEALTH OF MASSACHUSETTS
COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH
EXECUTIVE OFFICE OF PUBLIC SAFETY AND SECURITY
MENTAL HEALTH LEGAL ADVISORS COMMITTEE
Commonwealth of Massachusetts Supreme Judicial Court
MAMH
EDC Learning transforms lives.
MASSACHUSETTS ADVOCATES for CHILDREN
BOSTON PUBLIC HEALTH COMMISSION
MAPC
METROPOLITAN AREA PLANNING COUNCIL
Boston Children's Hospital
Until every child is well™

Acronyms & Abbreviations

ACEs — Adverse Childhood Experiences
ACO — Accountable Care Organization
ADHD — Attention-Deficit/Hyperactivity Disorder
BSAS — Massachusetts Bureau of Substance Addiction Services
CASEL — Collaborative for Academic, Social, and Emotional Learning
CBITS — Cognitive Behavioral Intervention for Trauma in Schools
CBT — Cognitive Behavioral Therapy
COPD — Chronic Obstructive Pulmonary Disease
CTC — Communities That Care
DESE — Department of Elementary and Secondary Education
DMH — Massachusetts Department of Mental Health
DPH — Massachusetts Department of Public Health
EEC — Department of Early Education and Care
EOE — Executive Office of Education
EOHHS — Executive Office of Health and Human Services
EBP — Evidence-Based Program
HIPPY — Home Instruction Program for Preschool Youngsters Program
LST — Life Skills Training
MassTAPP — Massachusetts Technical Assistance Partnership for Prevention
MCPAP — Massachusetts Child Psychiatry Access Project
MCSP — Massachusetts Coalition for Suicide Prevention
MHVI — Massachusetts Home Visiting initiative
MEB — Mental, Emotional, and Behavioral
MST — Multisystemic Therapy
NPV — Net Present Value
NREPP — National Registry of Evidence-based Programs and Practices
OJJDP — United States Office of Juvenile Justice and Delinquency Prevention
PAX GBG — PAXIS Institute Good Behavior Game
PFS — Pay For Success
PBIS — Positive Behavioral Interventions and Supports
PREP — Prevention and Recovery in Early Psychosis
PROSPER — PROmoting School-community-university Partnerships to Enhance Resilience
PTSD — Post-Traumatic Stress Disorder
PWTF — Prevention and Wellness Trust Fund
ROI — Return on Investment
SAMHSA — U.S. Substance Abuse and Mental Health Services Administration
SEL — Social and Emotional Learning
SPF — Strategic Prevention Framework
SUD — Substance Use Disorder
TBI — Traumatic Brain Injury
YRBS — Youth Risk Behavior Survey

Table of Contents

Executive Summary

Behavioral health promotion and upstream prevention works. Decades of rigorous scientific study and community-level practice prove evidence-based programs, policies, and practices can prevent addiction, substance misuse, depression, anxiety, suicide, violence, risky behaviors, and many other behavioral health issues. If the Commonwealth acts early, we can save individuals and families from the consequences and potential tragedy of unaddressed behavioral health issues.

The impacts of behavioral health issues contribute to enormous human suffering and significant financial burdens. Mental, emotional, and behavioral health issues—including both substance use disorders and mental illness—are associated with a wide range of negative outcomes, including reduced academic and professional attainment, disconnection from school and work, unhealthy behaviors like smoking, chronic physical conditions like diabetes, and even early death. **Annually, 6-7 billion dollars are spent on behavioral health services and prescription drugs in the Commonwealth.[1] MassHealth alone expended an estimated $1.4 billion on behavioral health services in FY2015.[2]** And when the continuum of care leaves gaps, criminal justice and social service systems are often forced to act and expend enormous resources to address downstream problems.

America's Health Rankings
www.americashealthrankings.org

Even though prevention and promotion can reduce behavioral health issues and their associated consequences, the Commonwealth is investing very little in promotion and prevention. For example, the Department of Mental Health (DMH) and the Department of Public Health's Bureau of Substance Addiction Services (BSAS) direct less than 1% of their combined budgets to prevention or promotion (**combined DMH & BSAS investments in behavior health promotion and prevention: only $14.3 million of $899 million in FY18**).[3] Moreover, even though educators are relied upon to promote the behavioral health of children, the Departments of Early Education and Care and Elementary and Secondary Education spends less than $10 million on behavioral health promotion and prevention out of their nearly $6 billion in state funding.[4] **Underfunding behavioral health promotion and prevention contributes to dramatic downstream consequences.**

The unprecedented effects of the opiate epidemic exemplify how behavioral health challenges can dramatically alter life in our state. And opiate addiction is not the first behavioral health epidemic we have experienced. For example, Massachusetts, along with many other states, struggled with a crack cocaine epidemic in the 1980s and then a rash of youth violence in the 1990s. **History tells us another epidemic will be on the horizon just as the opiate epidemic wanes. Fortunately, behavioral health promotion and prevention infrastructure—featuring evidence-based programs and practices, a well-trained and funded prevention workforce, and strong data collection and analysis systems—will help us reduce risk factors, build protective factors, detect problems early, and prevent or diminish the next behavioral health epidemic.**

Behavioral health is more than just the absence of illness. Positive behavioral health—including social-emotional skills and strong family relationships—provide the foundation on which people thrive in their schools, homes, work, and communities.[5] [6] **By promoting mental and emotional health, fostering behaviorally healthy environments, and strengthening social-connectedness, residents of our Commonwealth will be happier, healthier, and more successful.**

As detailed throughout this report, **there is a compelling, actionable path to strengthen behavioral health promotion and prevention in the Commonwealth:**

1. **ACT EARLY AND INVEST UPSTREAM.** Half of chronic mental health conditions begin by age 14 and seventy-five percent begin by age 24. Similarly, early initiation of substance misuse as a youth is strongly linked to later addiction issues**. Promotion and prevention will be most effective when it begins before these issues tend to appear.** The risks for behavioral health issues appear early (e.g. poor self-regulation, perception of harm from substances, and even social determinants of health like family income). Fortunately the protective factors that can counteract those risks also appear early (e.g. family stability and positive school environments).

   Effective prevention and promotion initiatives will seek to reduce risks and promote protective factors (learn more on page 24).

2. **APPLY AN INTEGRATED BEHAVIORAL HEALTH APPROACH.** Nearly half of people with psychiatric conditions actually have two or more conditions. Behavioral health disorders, e.g. mental illness and substance misuse, often appear together or co-occur. Because these issues are so deeply intertwined, they can increase the risks for and exacerbate the symptoms of one and other (learn more on page 13).

Instead of siloing behavioral health issues, an integrated approach recognizes the tendency of disorders to co-occur and also to share common underlying factors. An integrated approach will address commonalities, wherever appropriate, and promote behavioral health in a coordinated fashion.

3. **IMPLEMENT WHAT WORKS, AND APPLY THE SCIENCE OF PREVENTION.** Prevention programs and practices are not created equal. Some are supported by evidence and rigorous evaluations. Others may seem like they would work but the evidence, or lack thereof, suggests otherwise. There are hundreds of prevention programs and practices that have been tested and proven effective.[7] Numerous public and private institutions have compiled and summarized these programs and rated their evidence for effectiveness. Likewise, organizations like the Pew-MacArthur Foundation Results First Initiative are available to provide research and technical advice to support evidence-based decision-making.

   The Commonwealth has finite resources to invest in behavioral health prevention, and promotion. Investing in what is proven to work will ensure limited dollars actually help the people they are intended to serve.

4. **INVEST ACROSS THE CONTINUUM OF CARE: PROMOTION -> PREVENTION-> TREATMENT -> RECOVERY.** This means supporting those **recovering** from a disorder, providing high quality and evidence-based **treatment** services to those experiencing a disorder or acute symptoms, implementing **prevention** efforts to reduce the incidence of disorders, and **promoting** the behavioral health of all.

   While investment in evidenced-based treatment and recovery services are necessary to meet the urgent needs of those suffering today, investments in evidence-based prevention and promotion initiatives can prevent the challenges of tomorrow. **Even though prevention will reduce downstream costs over the long term, the answer is NOT to siphon dollars from treatment and recovery in the short term.**

5. **BUILD THE INFRASTRUCTURE FOR LOCAL PREVENTION AND PROMOTION.** Michael Botticelli, former Director of the White Office of National Drug Control Policy, advised our Commission, ***"Like all politics is local, all prevention is local."*** **Evidence-based community coalitions (driven by local needs assessment and data) are the key infrastructure through which communities and the Commonwealth can implement promotion, prevention, and early intervention programs and practices.**

Fortunately, community-based prevention, led by local prevention experts and interdisciplinary partnerships, has a long history of success in the Commonwealth. But even while some local efforts are recognized nationally, many communities lack the necessary prevention infrastructure and funding. This creates dramatic inequities across the Commonwealth.

The Commonwealth can build local prevention infrastructure by:

- **Supporting partnerships (coalitions) of local community stakeholders, including citizens, educators, law enforcement, public health, mental health, and civic, faith and business leaders**
- **Investing in and encouraging data collection and analysis on community-level assets, problems, and risk and protective factors**
- **Funding evidence-based programs and strategies to address local needs and fulfill the local vision**

6. **PARTNER INTERDISCIPLINARY PUBLIC AND PRIVATE STAKEHOLDERS IN PREVENTION AND PROMOTION.** Upstream prevention and promotion efforts cannot be confined to schools. Behavioral health issues impact multiple settings including primary healthcare, law enforcement, homes, and schools. Strategies exist across these settings to reduce behavioral health disorders. **Successful prevention will reduce silos and foster interdisciplinary partnerships at both the local and state level.**

   Preventing issues in one setting, e.g. through school-based programs, will accrue benefits and reduce costs in other settings, e.g. healthcare. **Funding promotion and prevention depends on enabling and encouraging various public and private stakeholders to contribute to and cover the costs of prevention and promotion.**

By building on the Commonwealth's long history of leadership in public health and heeding the lessons from other states, the Commonwealth can lead the nation in behavioral health promotion and upstream prevention.

Summary of Commission Recommendations

Executive agency staff abstained from votes on recommendations; however they were instrumental in informing deliberations and discussions. Excluding abstentions from executive agency staff, all recommendations were unanimously approved by all other Commissioners.
Full recommendations and rationales can be found on page 54. The Commission offers the following recommendations:

INFUSING PREVENTION, PROMOTION, & RESULTS FIRST SCIENCE INTO STATE GOVERNMENT

1. Legislature and agencies employ a data-driven approach, like the Results First Initiative, to inventory programs, review evidence, and conduct cost-benefit analyses
2. Establish a permanent Commission on Behavioral Health Promotion and Upstream Prevention to create a permanent platform for prevention and promotion
3. Legislature, HHS, and other agencies develop definitions for key concepts relating to program evidence-base; and develop guidance to inform and direct policy and budgetary decisions based on said concepts

INNOVATIVE FUNDING PROMOTION AND PREVENTION: BeHaPPe, Public-Private Partnerships & Addressing Externalities

4. Administration and Finance release a "Pay for Success" RFI to pursue a public-private partnership to prevent substance misuse, mental illness, and other behavioral health issues and associated risk and protective factors
5. Appropriate no less than 33% or $10M from cannabis revenues to fund community-based prevention coalitions
6. Establish a "partnerships for prevention" program to offer tax credits and community advertising for organizations that pledge financial support to community coalitions
7. Establish a Behavioral Health Promotion, Prevention, and Early Intervention (BeHaPPE) Trust Fund to fund a statewide vision for promoting behavioral health and preventing behavioral health issues through evidence-based programing
8. Establish an assessment on opiate manufacturers and wholesalers to fund evidence-based prevention, treatment, recovery, and harm reduction services, including but not limited to those initiatives funded through the BeHaPPE Trust Fund (see rec. 7)

BUILDING PREVENTION INFRASTRUCTURE: SUPPORTING LOCAL LEADERS & COMMUNITY COALITIONS

9. Build community coalitions through evidence-based systems, like **Communities That Care** and the **Strategic Prevention Framework**
10. Advance data collection through a modified youth health survey by including risk and protective factors; directing DESE to establish guidance for all Mass school districts to conduct a modified youth health survey; establishing a center of excellence to help communities with data collection and analysis; and appropriating cannabis revenues, or other sources, to support surveying, analysis, and distribution of data

11. Fund and expand technical assistance, training, and guidance for communities engaging in prevention and promotion
12. Establish a formula grant to support municipal youth commission with funding evidence-based programing and supports

INVESTING IN WHAT WORKS: EVIDENCE-BASED PREVENTION AND PROMOTION PROGRAMMING & SYSTEMS

13. Invest in evidence-based prevention and promotion programs
14. Invest in family-based stability and economic security
15. Invest in Safe and Supportive Schools Framework initiatives, suicide prevention training and awareness for educators, and marijuana public awareness campaign
16. Reauthorize the Prevention and Wellness Trust Fund (PWTF); add substance misuse and mental illness as priority conditions to PWTF; and amend the PWTF advisory board to include behavioral health expertise

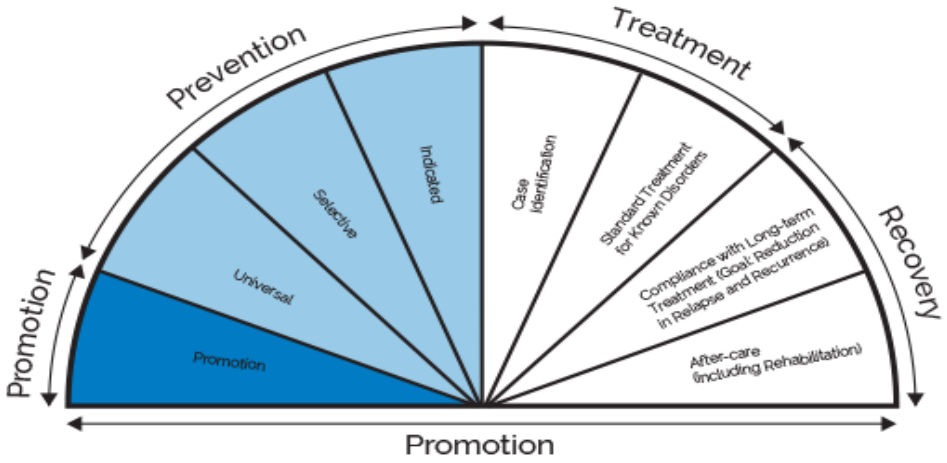
PREVENTION WORKFORCE: INTEGRATING BEHAVIORAL HEALTH

17. Advance embedded behavioral health services in primary pediatric care by expanding assistance to pediatricians and staff on how to integrate behavioral health services
18. Advance prevention and promotion in the healthcare system by supporting ACO initiatives, establishing a partnership between Medicaid, HPC, DPH, DMH, and DESE to guide ACOs, and incorporating risk and protective factors and social determinants into community needs assessments
19. Investing in crisis response and mental health first aide training for key professionals and the general public.
20. Investing in crisis training and other behavioral health training for law enforcement
21. Establishing time-limited taskforce for Medicaid, DOI, and Behavioral Health Trade Association, and other stakeholders to investigate on how to improve access to pediatric behavioral healthcare

PROMOTING BEHAVIORAL HEALTH IN SCHOOLS

22. Advance social-emotional learning through (1) a partnership between the Departments of Higher Ed, Elementary and Secondary Education, and Early Education and Care and local colleges or universities to advance pre-service educator training in SEL; (2) enhancing SEL in MA professional standards; (3) and continuing investments in training and education for school principals in SEL
23. Enable and encourage public schools to incorporate mental health promotion education into their comprehensive health education curriculum
24. Add mental health promotion in DESE revised health curriculum framework
25. Direct DESE to conduct a survey on school recess policies and develop district guidance on recess including limiting exclusion from recess as a discipline tool; and establishing recess standards based on the survey

Invest in the full Continuum of Behavioral Health Care



Behavioral health in the Commonwealth demands being attentive to the full continuum of care: Promotion-Prevention-Treatment-Recovery. This means supporting those **recovering** from a disorder, providing high quality and evidence-based **treatment** services to those experiencing a disorder or acute symptoms, implementing **prevention** efforts to reduce risks for new disorders, and **promoting** the behavioral health of all.

PROMOTION—designed to create the environments and conditions that support behavioral health and the ability of individuals to withstand challenges. Promotion underpins the continuum of care, supporting treatment, recovery and prevention[8]

Promotion examples include: nurse home visits for pregnant women, school-based social and emotional programs for students, and efforts to address social determinants of health through family-based initiatives

PREVENTION—delivered prior to the onset of a disorder, these interventions are intended to prevent or reduce the risks of developing a behavioral health problem, such as underage alcohol use, prescription drug misuse, and illicit drug use

Prevention examples include school-based life skills programs, public awareness campaigns, mental health first aid trainings, policies that protect public health (e.g. by restricting access to substances that cause harm), and family-based programs that teach parents positive parenting skills

TREATMENT—clinical services for people diagnosed with a substance use or other behavioral health disorder, including detoxification, inpatient and outpatient services

RECOVERY—support services to help individuals sustain their recovery from a behavioral health problem and live productive lives in the community

Promotion and **prevention** are key components of the continuum of care, and partners with treatment and recovery in securing the behavioral health of Commonwealth residents.[9]

The Promote Prevent Commission was charged by the Legislature with ***only*** focusing on promotion and prevention. However, the Commissioners, and many of the testifiers, affirm the enormous value of supporting, strengthening, and investing in the full continuum of care—especially evidence-based programs, practices, systems, and services.

Underinvestment in prevention and promotion

> *"For decades, the approach to behavioral health problems has been to treat them one at a time and only after they were identified—at a high and ongoing price. Now we have more than 30 years of research and more than 60 effective programs across the country showing that behavioral health problems can be prevented. We can promote social justice and public health by transforming findings from prevention science into innovative policies and effective programs that will serve millions and save billions."—**Unleashing the Power of Prevention*, National Academy of Medicine Report**

Even with strong evidence supporting promotion and prevention and the significant costs associated with acute disorders or issues, our public spending is largely focused on intervening after problems develop. For example, general estimates suggest that we spend less than 3% of **dollars relating to substance misuse on prevention,** as dollars instead flow downstream to Criminal Justice, treatment, and social Services.[10]

Our Departments of Mental Health and Public Health must, appropriately, expend significant resources to fund critical behavioral health services, including inpatient addiction and mental health care. These services serve the health and well-being of vulnerable Massachusetts citizens.

While investment in evidenced-based treatment and recovery services are necessary to meet the urgent needs of those suffering today, investments in evidence-based prevention and promotion initiatives can prevent the challenges of tomorrow.

As currently funded, agencies have extremely limited resources to direct to promotion and prevention services, e.g.:

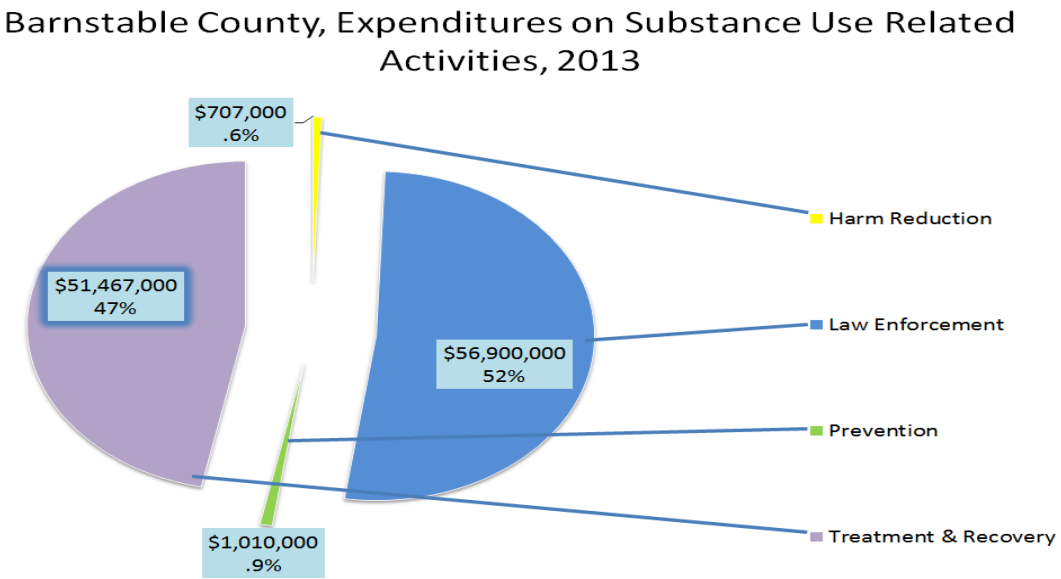
- **Department of Mental Health (DMH):** Spends less than 1% (.79%) on prevention, and promotion, or an estimated $6 million of the $772 million FY18 budget[11]

- **Department of Public Health's Bureau of Substance Addiction Services (BSAS):** Spends 6.2% on substance use prevention, or just over $8.3 million of the $133 FY18 million budget[12]
    - **The vast majority of the $8.3 million is the result of the 20% prevention spending requirement of the U.S. Substance Abuse and Mental Health Services Administration Block Grant**

- **Department of Elementary and Secondary Education (DESE)**: Spends approximately 0.013% of DESE state funding on direct work to address behavioral health promotion and prevention efforts. This totals approximately $700,000 of the $5.331 billion FY18 state budget for DESE.[13]

- **Department of Early Education and Care (EEC)**: Spends less than 1% (.43%) on childhood behavioral health, or approximately $2,500,000 of its $593 million budget[14]

Evidence for inadequate investments in prevention and promotion initiatives is also illustrated regionally. The Barnstable County Department of Human Services conducted a comprehensive analysis of on substance use related spending. The County estimated that less than 1 percent of dollars are spent on substance use prevention and harm reduction on Cape Cod, while 98 percent of dollars flow downstream to law enforcement and treatment systems.[15]



The Commonwealth's poor investments upstream create dramatic consequences and human tragedy downstream. Although there are also significant social service and criminal justice costs associated with behavioral health disorders, expenditures on healthcare are the most significant:[16] [17]

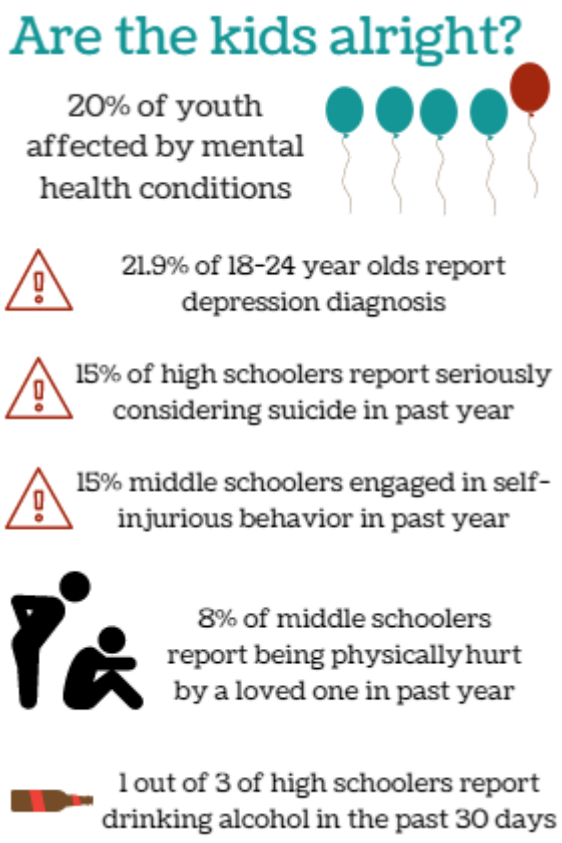
- **$6-$7 billion annual direct spending on services and prescription drug for behavioral health**
- Patients with both physical and behavioral health diagnoses have **2-2.5 times higher health care expenditures** than those with only a chronic disease
- $1,414,123,546 on behavioral health services in FY2015 through MassHealth (or 10% of total MassHealth spending)

Increasing investments upstream in promotion and prevention can help to reduce downstream acute costly issues.

Childhood Mental Health

> *"Don't give up! I believe in you all. A person's a person, no matter how small."* –**Dr. Seuss**

Mental health conditions and their effects are not confined to adulthood. These conditions often begin in childhood and have rippling impacts across a lifetime. At very early ages children can show clear signs of anxiety disorders, attention-deficit hyperactivity disorder (ADHD), conduct disorder, depression, post-traumatic stress disorder (PTSD), and neurodevelopmental disabilities, such as autism.[18] [19]

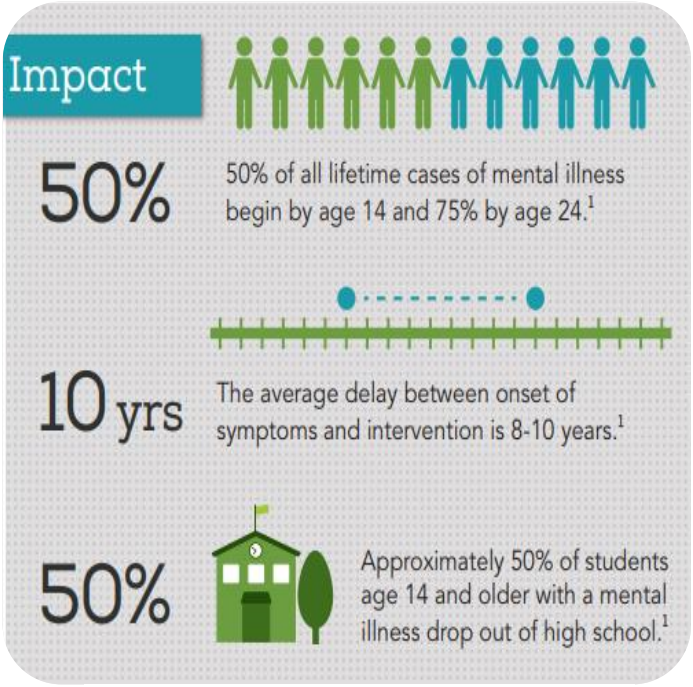


Mental health conditions are preventable. And where there are negative social determinants of mental health present and related life challenges, there is also opportunity for change in environmental factors or family support levels to make a difference. Parents, caregivers, educators, pediatricians, policymakers and other stakeholders can begin fostering a child's lifelong mental health at a very early age (including infancy). This can involve fostering

individual social and emotional competencies and resiliency, providing access to healthy environments and foods, strengthening caregiver-child relationships, and improving coping and self-regulation skills.[20] [21] [22]

KEY CHILDHOOD MENTAL HEALTH STATS[23] [24] [25]

- 70% of youth in juvenile justice systems have at least one mental health condition and at least 20% live with a serious mental illness
- Over one-third (37%) of students with a mental health condition age 14-21 and older who are served by special education drop out—**the highest dropout rate of any disability group**
- More than 90% of children who die by suicide have a mental health condition
- Being at risk for mental health problems in first grade leads to a 5% drop in academic performance in just two years



Graphic excerpted from *Mental Health Facts: Children and Teens*, **National Alliance on Mental Illness**

Evidence-based prevention, promotion, and early intervention empowers stakeholders to reduce the incidence and acuity of mental health conditions among children, to provide appropriate early access to services when needed, and to prevent the impacts of stigma and lack of understanding too often associated with mental health conditions (such as exclusion from school).

Recognizing the potential vastness of its charge, its limited time for action, and the potential opportunity for future action, **the Commission moved unanimously to focus its 2018 recommendations and reports on young people, age 0-22.** Likewise, as this report and recommendations describe, behavioral health promotion and prevention initiatives implemented in childhood can and do affect individuals' behavioral health trajectory for decades. This offers significant long-term benefits for children, families, communities and the Commonwealth.

Comorbidity: Integrate Behavioral Health

> *"We must help everyone see that addiction is not a character flaw – it is a chronic illness that we must approach with the same skill and compassion with which we approach heart disease, diabetes, and cancer."* **-Dr. Vivek Murthy, U.S. Surgeon General (former)**

Behavioral health disorders, e.g. mental illness and substance misuse, often appear together, or co-occur. The tendency for chronic conditions to co-occur is called comorbidity.[26] Rates of comorbidity are significant elevated among those suffering from behavioral health disorders, e.g.:[27] [28] [29] [30] [31]

- 45% of people with psychiatric conditions actually have two or more conditions
- 36% to 40% of young adults with a serious mental health condition meet the criteria for a substance use disorder (SUD)
- 60% of adolescents in mental health treatment have a co-occurring SUD and non-SUD, and more than 50% of those adolescents having a conduct disorder and 15% having major depressive disorder or ADHD

Elevated rates of comorbidity are not relegated to a particular set of behavioral health conditions. For example, individuals who suffer from a mood or anxiety disorder are twice as likely to suffer from substance misuse.[32] Likewise, people who suffer from bipolar disorder, PTSD, intermittent explosive disorder, and oppositional defiance disorder are also at much higher risk for SUD later in life.[33] From mood and anxiety disorders to conduct disorders and substance misuse, behavioral health disorders (and broader issues) are deeply intertwined.

Among individuals with:	Percentage of individuals who also have:					
	Alcohol Use Disorder	Nicotine Dependence	Marijuana Use Disorder	Cocaine Use Disorder	Prescription Opioid Use Disorder	Heroin Use Disorder
Alcohol Use Disorder	-	23.8	9.5	3.3	3.9	0.9
Nicotine Dependence	12.9	-	4.3	1.4	2.7	1.3
Marijuana Use Disorder	38.7	32.6	-	4.8	7.9	1.8
Cocaine Use Disorder	59.8	47.7	21.3	-	16.4	13.4
Prescription Opioid Use Disorder	35.2	45.4	17.6	8.2	-	11.2
Heroin Use Disorder	24.5	66.3	12.3	20.9	34.9	-

Table from the National Institute of Drug Abuse, Comorbid Substance Use Disorders at drugabuse.gov

Comorbidity among behavioral health disorders is due to a complex interplay of multiple shared risk [and protective] factors, including:[34]

- **Genetic and familial vulnerabilities:** Genetic or familial predisposition can create susceptibility to both addiction and other behavioral health conditions
- **Overlapping environmental triggers:** Environmental factors, such as poor parenting, neglect, or family conflict, can exacerbate or increase risks
- **Neurological abnormalities:** Behavioral health disorders, including unsafe use of substances, can create neurological abnormalities, affecting stress and reward functions of the brain, which can encourage substance misuse, increase depression, and contribute to psychosis

An integrated approach to behavioral health recognizes that these issues tend to co-occur and share common risk and protective factors. When supported by science and evidence, integration seeks to address behavioral health through a coordinated fashion, instead of separating issues from one and other. Many evidence-based prevention and promotion initiatives can address the commonalities across disorders and offer the Commonwealth the opportunity to address multiple disorders at once.

Behavioral health: Linked to injury, risk-taking, and other unhealthy behaviors

> *"What do you do with the mad that you feel: When you feel so mad that you could bite. When the whole wide world seems oh so wrong, and nothing you do seems very right. What do you do? Do you punch a bag? Do you pound some clay or some dough? Do you round up friends for a game of tag? Or see how fast you go? It's great to be able to stop when you've planned the thing that's wrong. And be able to do something else instead -- and think this song --*
> *'I can stop when I want to. Can stop when I wish. Can stop, stop, stop anytime...And what a good feeling to feel like this! And know that the feeling is really mine. Know that there's something deep inside that helps us become what we can."*
> **-Mr. Rogers addressing Congress May 1, 1969**

The benefits of behavioral health promotion and prevention extend beyond the prevention of specific disorders. These initiatives can also reduce the incidence of injuries and physical illness closely associated with behavioral health disorders. ADHD, conduct disorders,

bipolar disorder, substance misuse, depression, and anxiety are linked to risk-taking, impulsivity, and other unhealthy behaviors, such as:[35] [36] [37] [38] [39] [40] [41] [42] [43]

- Behaviors leading to unintentional and intentional injuries, such as driving under the influence, distracted driving, carrying a weapon, being in a physical fight, and self-injurious behaviors such as suicide and cutting
- Unsafe sexual behaviors that can lead to sexually transmitted infections and unwanted pregnancy
- Unsafe alcohol or drug use, including binge drinking, misuse of prescription drugs, and use of other illicit substances (see page 13 on comorbidity).
- Unhealthy behaviors, including nicotine use and inadequate physical activity

High risk behaviors can and do contribute to injury, infection, and early death. For example, individuals with mental illness consume almost 40% of cigarettes smoked by adults.[44] The significant health consequences of smoking include the leading causes of death, such as heart disease and stroke. Smoking and other unhealthy behaviors contribute to people with mental illness dying on average approximately 5-years earlier than those without mental illness.[45]

Where behavioral health disorders may increase the risks for injury, infection, and early death, injury and infection can also increase the risks for behavioral health disorders, including depression and anxiety. For example, traumatic brain injuries (TBIs) contribute to long-term behavioral health issues and can initiate and exacerbate the symptoms of mental illness.[46] [47] Likewise TBIs are linked to other behavioral health issues, including substance misuse, criminal justice involvement, and suicide.

> **TBIs and Changes in Behavioral Health**: *On September 13, 1848, Vermont railroad foreman Phineas Gage, 25, was using a 43 inch long tamping iron to pack explosives into a hole when the explosives accidentally detonated. The explosion shot the tamping iron skyward, piercing Gage's skull and damaging his frontal lobe. Following the injury, Gage's personality changed dramatically: he shifted from a socially well-adapted man to "negligent, irreverent and profane, unable to take responsibility." Gage's Doctor advised that balance between his ""intellectual faculties and animal propensities" seemed gone. "He could not stick to plans, uttered "the grossest profanity" and showed "little deference for his fellows.""[48] The brain injury altered Gage's social and emotional health and capacity for self-regulation.*

Evidence-based behavioral health promotion and prevention initiatives can reduce risk-taking and unhealthy behaviors, preventing injury and other negative consequences. Approaches include:[49] [50] [51]

- Developing individual skills that help youth and adults make positive decisions, avoid impulsivity, and self-regulate
- Supporting families with young children to help caregivers instill and model positive social-emotional skills and to reduce abuse, neglect, and other ACEs associated with risk-taking

Suicide: A symptom of behavioral health issues?

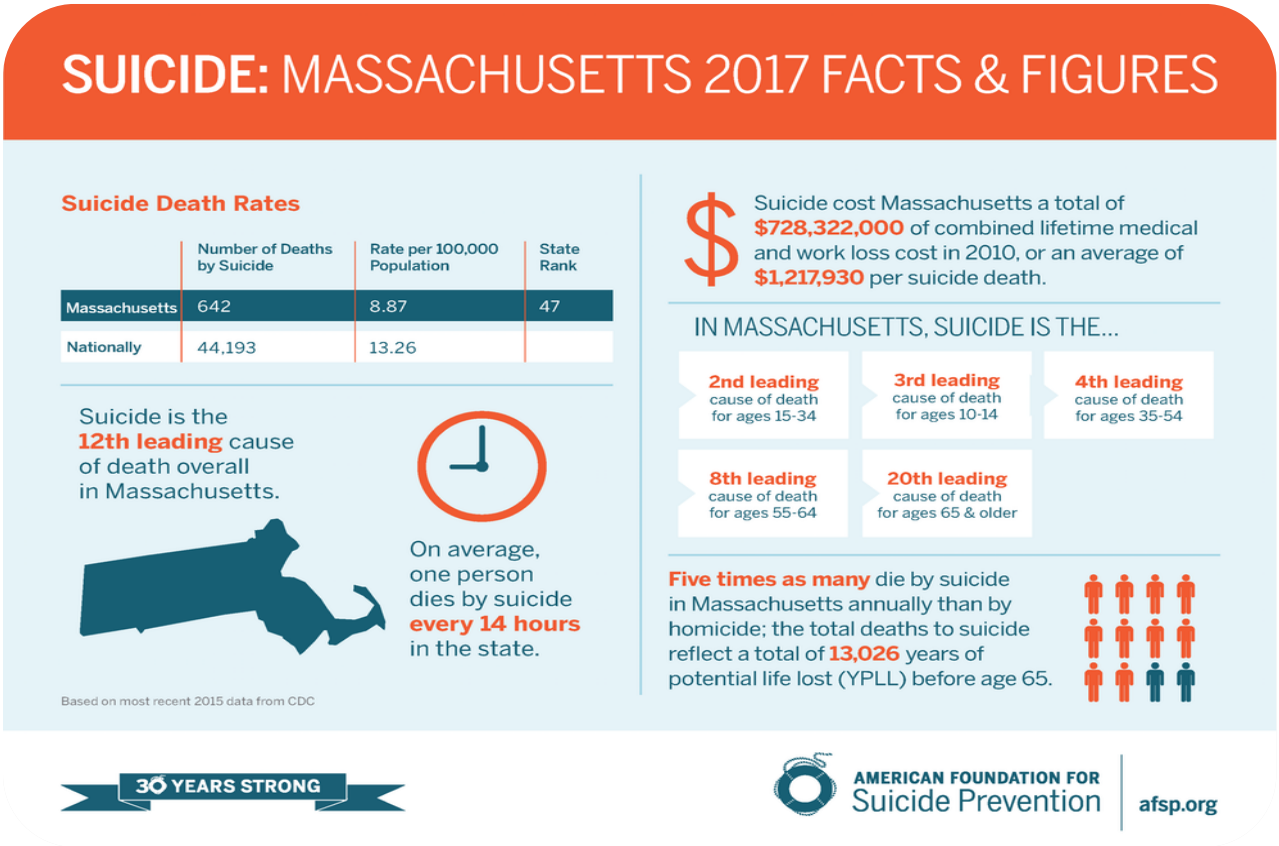
> *"It is critical that we recognize the connections that mental health conditions and substance disorders have to suicide as well as how other external factors, including harassment, bullying, and discrimination, can play a role. Suicide can touch any of us -- regardless of age, gender, or race -- and leave a lasting mark on communities. We must strive to build safe and supportive environments and eliminate the stigma surrounding mental health issues that too often prevents people from seeking the care they need."* **-Barack Obama, Presidential Proclamation, World Suicide Prevention Day, 2016**

Between 2004 and 2014 suicide rates in Massachusetts rose 40%, largely driven by increased suicides among middle-aged men. In 2015, 631 people died from suicide, more than motor vehicle accidents and homicides combined.[52] The Massachusetts Coalition for Suicide Prevention (MCSP) estimates nearly 15,000 Massachusetts residents attempt suicide each year. Beyond the tragic human cost, the economic costs from suicide are enormous. As of 2015, the average estimated cost of one suicide is $1,329,553.[53] As estimated, suicide deaths cost the Massachusetts economy an estimated 838 million dollars in 2015.

While suicide occurs across all demographics; the highest risk groups include: **working-aged white males** (**nearly 4 times as many men die from suicide as do women**); **veterans**; **LGBTQ individuals**; people bereaved by suicide; and those who have previously attempted suicide.[54]

Suicide is one of the most preventable causes of death. Because of the commitment of the Legislature and the Executive Branch, the Commonwealth invests the highest per capita funding towards suicide prevention in the country. Under the leadership of the Department

of Public Health (DPH), the MCSP helps initiate statewide suicide prevention efforts. The Commonwealth also has 10 regional coalitions that cover all of Massachusetts and provide locally driven initiatives, including gatekeeper trainings, public education campaigns, and school-based trainings for students. This commitment to prevention contributes strongly to Massachusetts ranking 47th in the country for suicide rate.



Effective suicide prevention is multifaceted and requires a comprehensive approach. Upstream prevention efforts include:[55]

- Identifying and assisting persons at risk through gatekeeper training and public education about the warning signs
- Programs that enhance life skills and resilience and, thus, enable people to manage stress and adversity
- Promoting social connectedness and support through positive individual and community relations, activities that promote belonging, and programs that foster emotional supports
- Increasing help seeking through self-help tools, outreach campaigns, and by fostering positive help seeking social norms
- Improving response to individual crises
- Reducing access to lethal means

Behavioral Health Contributes to Academic Success

The emergence of mental illness or substance misuse during formative years can negatively impact life outcomes and development. In particular, youth who suffer from mental, emotional, and behavioral (MEB) disorders tend to perform less well in school and attain lower levels of education than their peers.[56] Academic challenges vary by disorder, but affected adolescents can find it difficult to fulfill cognitive demands, use social skills to abide by rules and engage positively with peers, and satisfy the physical activities of the school day.[57]

Depression is associated with increased absenteeism and suspensions, poor academic performance, and reduced motivation, concentration, and interest in activities.[58] [59] [60] [61] A study of nearly 7,000 teenagers found that those who reported symptoms of depression were more than twice as likely to drop out than those who did not report such symptoms. Likewise, 1 out of 4 students who dropped out reported significant depressive symptoms.[62]

Anxiety can interfere with a students' ability to concentrate and perform on tests and projects. Approximately 25% of 13 to 18 year-olds have had an anxiety disorder in their lifetimes.[63] Anxiety disorders—impacting 31.9% of adolescents and co-occurring in 33% of depressed youth—are associated with a reduced likelihood of attaining postsecondary education.

Alcohol and other drug use, as measured by the National Youth Risk Behavior Survey, have a strong negative relationship with academic achievement.[64] Students with higher grades are significantly less likely to have used alcohol before age 13, engaged in binge drinking, used marijuana in the last 30 days, or misused other drugs including prescription painkillers (opioids) and ecstasy.[65] Substance misuse is significantly associated with termination in secondary school, not continuing on to postsecondary education, and dropping out of college[66] Youth alcohol misuse increases the risks for academic failure, but researchers also advise that the relationship may be even stronger in the other direction: **academic failure increases the risks for alcohol misuse**.[67]

Attention Deficit / Hyperactive Disorder and conduct disorders are also associated with academic underachievement.[68] As expected, attention challenges are an especially strong predictor of diminished academic achievement.[69] Although internalized mental illness is known to negatively affect academic outcomes, students with emotional and behavioral disorders who exhibit externalized problem behaviors (i.e. conduct disorders) are even more likely to experience academic difficulties and challenges in school.

Behavioral health promotion and prevention can help students succeed inside and outside of the classroom. Evidence-based programs can prevent depression, anxiety, substance misuse, ADHD and other disorders while also fostering factors integral to academic success, such as self-regulation, social competence, and attentiveness and concentration.[70] Effective universal interventions, offered to an entire classroom or school, increase school grades, standardized test scores, grade point averages, and teacher-rated academic competence for all students.[71] [72] Effective programs can also reduce absenteeism, aggression, disciplinary referrals, school violence, suspensions, and expulsions.[73]

Criminal Justice System: Gaps in Prevention and Treatment

Where our behavioral health systems leave gaps in prevention and treatment, our criminal justice system must often fill in. Too many individuals with mental health and behavioral health needs, including SUDs, become enmeshed in the criminal justice system—a system that does not have the resources to address the many complex needs of those suffering from behavioral health disorders.

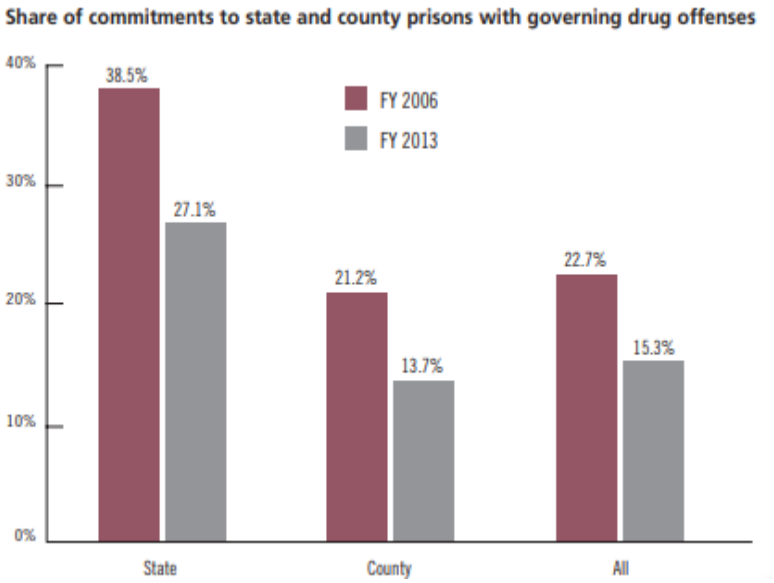
People suffering from mental illness and SUD's are over represented in the criminal justice system nationwide and in Massachusetts. Estimates suggest 70% of youth incarcerated nationwide have a behavioral health disorder.[74] Local data helps paint the picture in the Commonwealth:[75] [76] [77] [78]

- 34% of state prisons inmates receive ongoing mental health services for a variety of disorders including SUD, thought disorders, mood disorders, adjustment disorders, anxiety disorders, personality disorders, and intellectual disability[79]
- 8% of DOC inmates have a serious mental illness,[80] compared to 4% in the general population[81]
- 22.7% of commitments to state prisons and county jails had governing drug offenses
- 42% percent of inmates in county jail system have a form of mental illness (2013)
- 89 percent of men and 84 percent of women in the 2015 Hampden County release cohort were identified with a substance-use disorder
- 80% of jailed individuals self-identify as substance dependent in Middlesex County

Various factors can contribute to the overrepresentation of those suffering from behavioral health disorders in the prison system.[82] For one, led by the federal government, the Commonwealth joined many other states in deinstitutionalizing those with mental illness. As state mental health facilities were closed or downsized, many individuals with mental illness entered community settings that were ill-prepared to manage or treat them. When

left untreated, behavioral health disorders can erode a person's social and financial well-being, placing them at significant risk of entering the criminal justice system.

With gaps in access to a community-based behavioral health support system that was neither adequately funded nor constructed, many individuals with mental illness and SUD's faced poverty, inadequate housing, unemployment and homelessness and were propelled into the criminal justice system. Consequently, within the framework of the criminal justice system and civil commitment system, the courts, law enforcement and corrections were called upon to manage complex aspects of behavioral health care and treatment services in ways they were ill-equipped to provide.



Excepted from MassINC Report: Mounting an Evidence-based Criminal Justice Response to Substance Abuse and Drug Offending in Massachusetts

Beyond lack of treatment and supports for those with mental illness, certain disorders, such as ADHD, bipolar disorder, and SUD, are associated with illegal risk-taking and unhealthy behaviors (e.g. driving under the influence, and misuse and possession of illegal substances) (see risk taking behavior on page 14). As described on page 49, ACEs may also contribute to rates of incarceration among those with mental illness. Children who experience ACEs are at significantly increased risk for criminal behaviors, juvenile delinquency, risk-taking, as well as behavioral health disorders like substance misuse.[83] [84] [85] A study from the National Institute of Justice found that children who experience abuse or neglect (ACEs) were at:[86]

- 59% increased risk of juvenile arrest
- 29% increased risk of adult arrest
- 30% increased risk for violent crime arrest

Because of leadership within the Trial Courts, the Executive Branch (especially the DMH), Sheriffs, and the Legislature, and other advocacy organization, the Commonwealth is focused on reducing incarceration rates among those with mental illness. Initiatives have included: (1) ongoing efforts to expand drug and mental health courts; (2) expanded law enforcement training on behavioral health and crisis intervention; and (3) increased investments in treatment and community-based services.

Evidence-based prevention and promotion programs can help intercept residents at-risk for criminality and play an important role in reducing incarceration rates. Promotion and upstream prevention approaches to prevent criminal behavior and juvenile delinquency include:

- Fostering social-emotional skills (like empathy, self-awareness, and self-regulation) which can reduce aggression, risk-taking behaviors, and impulsivity (all linked to criminality)
- Educating stakeholders (like educators and law enforcement) about behavioral health and trauma to empower them to appropriately support, refer, and intervene early with youth who are in-need, preventing inappropriate referral to the criminal justice system or exclusion from or isolation within social institutions
- Supporting parents and caregivers can help them take proactive steps to prevent disorders through positive parenting and supports
- Educating the general public about behavioral health conditions to reduce stigma

Investing in Behavioral Health Vaccines

> *"Behavior vaccines like lap belts and children's car seats have prevented tens of thousands of deaths and countless injuries in recent decades. Behavioral vaccines like PAX Good Behavior Game can save hundreds of thousands of America's children and thousands of Massachusetts children from psychiatric disorders each year."* –**Dr. Dennis Embry, PAXIS Institute, Prevention Scientist**

Childhood vaccinations are one of the most significant public health successes. Within the United States, vaccines have contributed to the near-elimination of once dreaded illnesses: Polio, Diphtheria, Measles, Rubella, and Smallpox. Routine vaccinations of U.S. children born from 1994-2013 have prevented:[87] [88]

- 322 million illnesses nationwide (4.1 illnesses per child)
- 732,000 childhood deaths
- $295 billion in direct costs
- $1.38 trillion in societal costs

Where these infectious diseases once threatened children and families, behavioral health disorders and their associated physical illnesses have taken hold.[89] Fortunately, there are proven and tested interventions that prevent the manifestation and the transmission of behavioral health issues such as anxiety, substance misuse, toxic stress, and depression.[90] These "behavioral health vaccines" come in the form of evidence-based, cost effective

school-, home-, and community-based programs that target risk and protective factors for behavioral health disorders.[91]

Behavioral health vaccinations, like the PAX GBG (see page 23 for snapshot) and Life Skills Training (see page 46 for more details) build immunity from behavioral health disorders by:[92] [93]

- Fostering social-emotional learning and emotional resilience
- Developing self-regulation skills
- Teaching children how to make positive decisions
- Targeting risk and protective factors shared across multiple disorders
- Strengthening the caregiver-child relationships
- Promoting prenatal and post-natal strategies that improve lifetime mental health

Institutions like University of Colorado's Blueprints for Healthy Youth Development compile information on evidence-based programs for public use (see page 32).[94] Likewise the U.S. National Library of Medicine (www.pubmed.gov) indexes relevant science that policy makers can use. Despite the success, behavioral health vaccines are not widely available for Massachusetts children and families because we underinvest in prevention and promotion (see page 9).

Recognizing the need to prevent public health crises, our state has long led the way in expanding access to lifesaving vaccinations for hundreds of years. Since 1894, MassBiologics, now a component of UMass Medical School, has produced and distributed lifesaving vaccines to Massachusetts residents. In 1950, MassBiologics introduced the first combination "triple vaccine" for pertussis, diphtheria, and tetanus. Today MassBiologics partners with DPH to provide this vaccine at-cost to Massachusetts residents.[95]

The Commission believes we can continue this history of preventive success by investing in the wide scale expansion of behavioral health vaccines. This will continue Massachusetts' revolutionary leadership in: disease prevention; promoting public health; reducing acute healthcare costs; and saving individuals and families from tragedy.

PAX Good Behavior Game (GBG)

How does the GBG help students?
Developed by elementary school teacher, Muriel Saunders, in 1967, and enhanced since then, GBG teaches "students to "flip on" their internal focus switch, required for any learning." It teaches students "how to work toward valued goals, and teaches them how to cooperate with each other to reach those goals."

What does PAX GBG do?
PAX teaches students self-regulation, self-control, and self-management in context of collaborating with others.

Benefits of PAX GBG compared to control classrooms in the same schools when the students were in their early 20's after 1-2 years of expsure to PAX GBG in 1st or 1st and 2nd grade.
Relative Difference = (GBG/Control)-1

Increased Outcomes	Student Groups	Control Classrooms	PAX GBG Classrooms	Relative Benefit	PAX GBG Benefits
High school graduation	All girls	58.6%	73.6%	+125.5%	Increase
	All boys	44.8%	53.3%	+118.9%	Increase
College attendance	All girls	26.4%	40.3%	+152.6%	Increase
	All boys	12.8%	26.6%	+207.8%	Increase
Decreased Outcomes	**Student Groups**	**Control Classrooms**	**PAX GBG Classrooms**	**Relative Benefit**	**PAX GBG Benefits**
Any special education services	All girls	26.2%	19.5%	-25.5%	Reduction
	All boys	43.2%	24.6%	-56.9%	Reduction
Regular smoking	All boys	19%	6%	-68.4%	Reduction
	Aggressive boys	83%	29%	-65.0%	Reduction
Alcohol abuse	All boys & girls	20%	13%	-35%	Reduction
Heroin, crack cocaine use	All boys & girls	7.3%	2.6%	-64%	Reduction
Any drug abuse disorder	All boys	38%	19%	-50%	Reduction
Anti-social personality disorder	Hi-aggressive boys	100%	40%	-60%	Reduction
Violent & criminal behavior & ASPD	Hi-aggressive boys	50%	34%	-32%	Reduction
Any services for behavioral, emotional, drug or alcohol problems	All boys	42%	25%	-40.4%	Reduction
Suicidal thoughts	Boys & Girls	12%	7.1%	-51.3%	Reduction

Reported Effects of GBG
Within 3-6 months, about half of the children with high-levels mental health or behavioral problems (e.g., hyperactivity, emotional problems, conduct problems, and peer problems) dropped to moderate or low risk in a province-wide evaluation of PAX GBG in Canada.[96] Standardized test scores increase—especially for children living in poverty.[97] Similar results are reported in the *Irish Teachers Journal* for students in high-risk areas,[98] as well as projects in the US and other countries.[99]

DMH-DPH Results First Per-Person Cost Benefit Analysis:

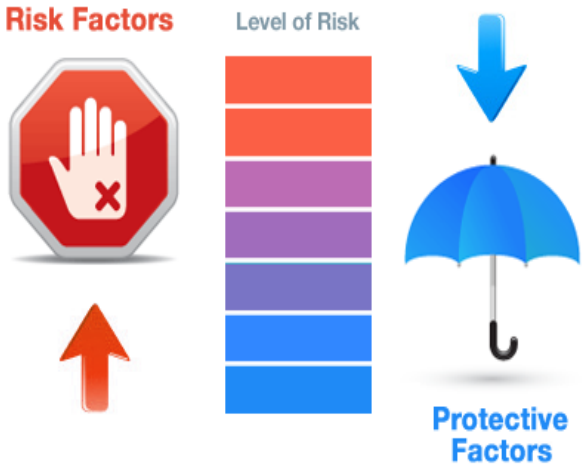
Expected Case	Dollars
Benefits - Costs (NPV)	$11,031
Benefits / Costs (Ratio)	$34.94

Risk and Protective Factors: Key to Prevention

Behavioral health vaccines, i.e. promotion and prevention programs, reduce risk factors for behavioral health disorders and increase protective factors.[100] As illustrated by the broad effects of the opiate epidemic, all individuals experience risks for behavioral health disorders. However any individual's risk level depends on the complex relationship between genetic, individual, family, social, and community factors.[101] In general, risk factors increase the likelihood that an individual will experience an MEB disorder and protective factors reduce that likelihood:[102] [103] [104]

Risk factors: Characteristics that precede and are associated with a higher likelihood of disorders, e.g. the density of alcohol establishments in a community is a risk factor for alcohol use among youth

Protective factors: Characteristics associated with a lower likelihood of negative outcomes or that reduce risk factors' impact, e.g. close family relationships and consistent parenting are a protective factor against MEB issues



As the number of risk factors increases, the likelihood a person will develop a disorder or issue also tends to increase. However, protective factors can buffer or counteract risk factors, diminishing the overall risk. Thus, even if a child is experiencing multiple risk factors, she may be protected from developing a disorder because of protective factors like strong relationships and a stable home environment.

Levels and development stages of risk and protective factors:[105]

- **Individual:** biological, genetic, or psychological dispositions, attitudes, values, knowledge, skills, and problem behaviors
- **School and Peers:** Norms and activities; bonding, climate, and policy, and performance
- **Family:** function, management, and bonding
- **Community:** bonding, norms, resources, awareness, and policy/laws

Risk and protective factors also emerge at different developmental stages: infancy, early childhood, middle childhood, adolescence, and young adulthood. The presence of any risk or protective factor in an earlier development stage can impact the risk of a disorder at later stages of development.

EX. RISK AND PROTECTIVE FACTORS FOR SUBSTANCE MISUSE[106] [107]

Level	Risk	Protective
Individual	Genetic predictors, difficult temperament (infancy), favorable attitudes toward substance use, and poor impulse control	Social-emotional competence, resilience, self-efficacy
Family	Family conflict, family history of substance misuse, low parental warmth, inconsistent discipline, peer substance use	Marriage or committed parents, healthy behaviors and standards, opportunities for positive social involvement
Community / School / Peer	High availability and/or low cost of substances, community laws and norms favorable to substance use, and community disorganization and high rates of mobility, school failure	Bonding and commitment to school or community, recognition for positive behavior

Behavioral health disorders (like addiction and mental illness) often share common risk and protective factors. Certain prevention efforts, like LST and the Good Behavior Game (add page number), target these shared risk and protective factors and, thus, prevent multiple disorders at once.

Examples of shared risk factors for mental health, school dropout, teen pregnancy, delinquency, and addiction:

- **Family level:** history of problem behavior; management problems; and conflict
- **Community/school level:** poverty; academic failure beginning in elementary school
- **Individual level:** Early and persistent antisocial behavior

Examples of shared protective factors for MEB issues[108]

- **Family level:** family structure & limits; supportive relationships; clear expectations
- **Community/school/neighborhood level:** access to mentors; positive norms; safety
- **Individual level:** emotional self-regulation, coping skills; academic achievement

The science of risk and protective factors illustrates that a comprehensive prevention approach will not relegate mental illness, addiction, violence, and even physical illness and injury to separate corners or agencies. Moreover, the Commonwealth does not need to rely on funding an individual specialized prevention program for every behavioral health issue. The way forward is through an integrated approach that addresses shared risk and protective factors across multiple disorders, domains, and developmental stages. Indeed the DMH and DPH collaborated to provide information on evidence-based, effective programs that address factors in both agencies' service domains. The table below provides some examples.

PROGRAM	DRUG USE	DELINQUENCY	VIOLENCE	MENTAL HEALTH
LifeSkills Training	+	+	+	
Multisystemic Therapy	+	+	+	+
Good Behavior Game	+	+	+	+

Five Core Concepts of Prevention & Promotion, Institute of Medicine's landmark 2009 Report: *Preventing Mental, Emotional, and Behavioral Disorders Among Young People: Progress and Possibilities*[109]

1. **Prevention requires a paradigm shift.** The shift breaks from the traditional and costly treatment model of waiting for an illness to occur and then providing treatment. Beginning before the first sign of symptoms, prevention asks what evidence-based efforts will build immunity, prevent disease, and promote healthy development over 5, 10, or more years.

2. **Mental health and physical health are inseparable.** Good physical health promotes good mental health, and good mental health promotes good physical health. MEB disorders increase the risk for costly and disabling physical illnesses like diabetes and costly unintentional and intentional injuries. Alternatively, individuals with chronic physical health problems (such as asthma) more often experience MEB disorders than their peers. The deep connections between physical and mental health illustrate the enormous potential benefits of prevention.

3. **Successful prevention is inherently interdisciplinary.** Behavioral health issues connect with multiple sectors including healthcare, law enforcement, and education systems. Strategies exist across these disciplines to prevent disorders. Preventing disorders in one setting, e.g. through school-based programs, will accrue benefits and reduce costs in other settings, e.g. criminal justice and healthcare.

4. **Mental, emotional, and behavioral disorders are developmental.** Opportunities to prevent disorders arise across multiple age groups (from prenatal to adulthood) and settings (home, schools, and community). The earliest years of life are one of the most opportune times to prevent disorders.

5. **Coordinated community-level systems are needed to support young people.** There are multiple local settings, from schools to healthcare, where promotion and prevention programming can be implemented. Strong local prevention infrastructure that coordinates multiple sectors to share in the work and costs of prevention can offer significant return on investment. Community-based prevention will build a web of prevention programming to immunize children and adults.

Behavioral Health Promotion

> *"In Massachusetts, zip code, more than any other factor, affects how well and how long we live" —**Monica Bharel, Commissioner, Department of Public Health***

Behavioral health is more than just the absence of disease. Behavioral health is also about people's capacity to thrive in their schools, homes, work, and communities.[110] [111]

Promotion focuses on fostering positive behavioral outcomes, like the ability to set and work toward personal goals, cooperate with others, resist inappropriate social pressure, negotiate conflict constructively, and seek and offer help when needed, achieve academic success, build healthy relationships, and other prosocial behaviors. Promotion nurtures youths' capacity to thrive by promoting positive mental health, creating healthy environments, and building strong relationships:[112] [113] [114] [115] [116] [117]

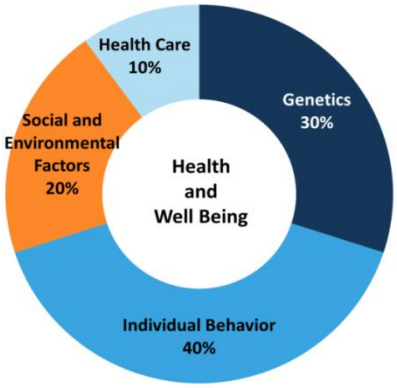
- **Promoting positive mental health** includes fostering assets, strengths, or skills like social-emotional health, self-esteem, or coping skills
- **Creating healthy environments** involves infusing positive behavioral health approaches where youth live, play, and learn, so those institutions can strengthen the mental, emotional, and behavioral well-being of young people (see snapshot on page 33)
- **Building strong relationships** includes educating and supporting the caregivers and groups who instill positive behaviors, provide mentorship, and help during a crisis

Promotion fosters the assets, or protective factors (see page 24), that enable people to avoid unhealthy behaviors, overcome adversity and trauma, and manage stressors in a positive way. Promotion programs can substantially reduce the risks for mental illness, addiction, and other issues like violence, conduct problems, and criminality.[118] [119]

Behavioral health promotion operates across a vast spectrum of policies, programs, and practices ranging from state legislative action to address social determinants of health (see next page), school-based social and emotional health practices, and positive parenting approaches in the home.[120] [121]

Promoting Behavioral Health through Social Determinants

Social determinants are the conditions in which people live, eat, work, and play. They are factors, usually external, that influence an individual's health outcomes.[122] [123] These conditions can include:[124] [125]



- Biology and genetics
- Individual behaviors like substance misuse and unprotected sex
- Social environment, including racism and discrimination, and socioeconomic class
- Physical environment, such as where a person lives and works
- Health care, including access to care and health insurance

Addressing social determinants of health can foster behavioral health for ***all*** regardless of socioeconomic status, race, sexuality, age or religious belief on health. Reducing the barriers that prevent individuals from accessing basic human needs (social determinants) optimizes living conditions, reduces health inequities, and promotes behavioral health.

Considering the Commission's limited time, expertise, and mission to focus directly on behavioral health, the Commissioners did not closely study or make recommendations on broader social policy issues, such as raising the minimum wage, establishing paid family leave, or promoting affordable housing. However, the Commission would be remiss if it did not highlight that the following issues are closely associated with behavioral health:

- Increased minimum wage and incomes linked to improved mental and physical health[126] [127] [128] [129] [130]
- Paid family leave associated with improved mental health for parents and child[131] [132] [133]
- Increased affordable housing and family housing stability linked to mental health[134] [135]

Stoughton – Behavioral Health Promotion through Environmental Design

When is a playground more than a playground? Built environments, like parks and playgrounds can provide supportive spaces for healthy behaviors and reduce risk through their design. However, a playground in disrepair can breed misperceptions that negative behaviors are normative in the community. The nuisance can also inadvertently support negative teen behaviors, such as drug and alcohol misuse. Stoughton's old CAPP playground (see left) had become one of those nuisance spaces due to an enclosed design and disrepair of its play structures and surrounding physical environment.

Applying the Strategic Prevention Framework (SPF) and Dr. Jeff Linkenbach's *Positive Community Norms* model, the Stoughton OASIS prevention coalition organized the necessary community support to build a new playground designed to support healthy behaviors and community norms. This project is an example of an ***Environmental Prevention Strategy*** and **Behavioral Promotion initiative**.

> *"Some people think prevention means you can say "at this park in 2018 nothing happened." But there's nothing further from the truth. At this park in 2018, lots of amazing, healthy, positive things happened: kids and families played with each other, people were building new connections with their friends and neighbors, and people were engaged in healthy behaviors."* **-Stephanie Patton, Prevention Coordinator, Stoughton Oasis Coalition**

Outcomes from the playground reconstruction (see right) initiative:

- Reduced drug and alcohol misuse at the playground as measured by fewer police calls and trash (needles & nips)
- A new municipal regulation to ban smoking in parks and playgrounds
- Increased collaboration between town departments focused on youth development
- Reduced barriers related to access including mobility and physical ability

LEVELS OF PREVENTION: Universal, Selective, and Indicated

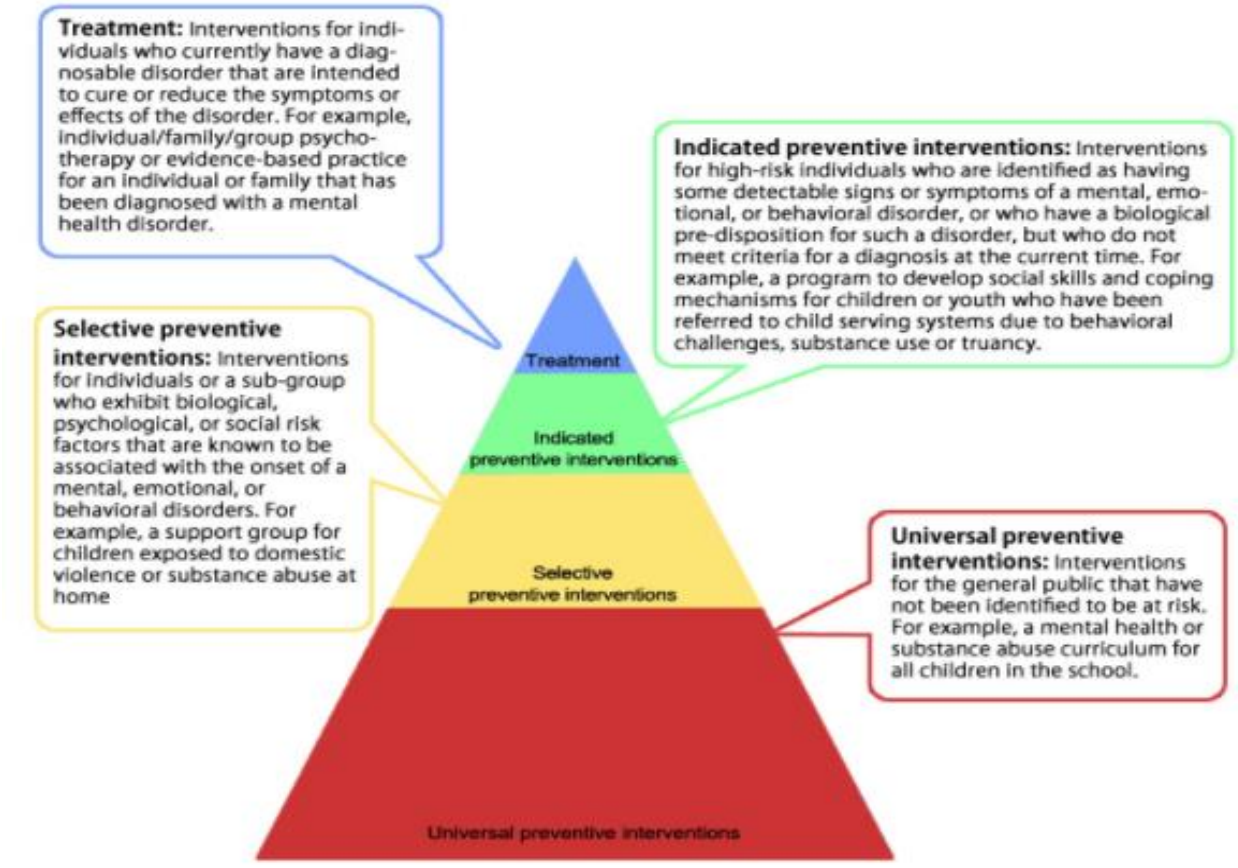
"An ounce of prevention is worth a pound of cure." **–Benjamin Franklin**

Upstream prevention, like wellness promotion, is also delivered prior to the onset of a disorder. These prevention interventions are intended to prevent or reduce the risks of developing a behavioral health problem, such as underage alcohol use and prescription drug and illicit drug misuse. There are three categories of prevention designed to address different levels of risk for a diagnosed disorder or behavioral health issue:[136] [137]

Universal: General public or an entire population to enhance individual competencies or change the environment in which decisions are made

Selective: Subgroups at elevated risks for a disorder due to psychological, biological, or social factors (e.g. strategies supporting children with a family history of addiction)

Indicated: Groups at the highest risk of developing a disorder or individuals with minimal but detectable symptoms (e.g. youth who are misusing substances



PROMOTION & PREVENTION IN ACTION			
	Issue example	Setting / Group	Strategy
PROMOTION	Positive behavioral health	School districts	Good Behavior Game (see page 23)
UNIVERSAL	Various behavioral issues	School districts	Positive Behavioral Intervention and Supports[138]
SELECTIVE	Serious mood disorders	Children of parents suffering from a serious MEB disorder	Cognitive Psychoeducational Intervention for Families[139]
INDICATED	Gang Violence	Gang involved teens	Cognitive Therapy[140]

Evidence-based Prevention: Proven Success

> *"After forty years of working on prevention of a wide range of common and costly psychological and behavioral problems, I am convinced we have the knowledge to achieve a healthier, happier, and more prosperous society than has ever been seen in human history."***—Anthony Biglan, PhD, The Nurture Effect: How the Science of Human Behavior Can Improve Our Lives and Our World**

Not all prevention programs and practices are created equal. Applying scientific research to decision-making will support the investment of the Commonwealth's limited resources into prevention programs proven to work. **Some programs have proven outcomes and have been rigorously evaluated, while others have not been evaluated or have neutral or even negative outcomes. There are multiple levels of evidence measuring the effectiveness of programs.**[141] [142] [143] [144] While the terminology and definitions vary among rating sources, here are four categories to describe the evidence levels of programs: [145]

- **Evidence-based**: demonstrated measurable impact on a desired outcome, collected through multiple rigorous evaluations
- **Evidence-informed**: demonstrated measurable impacts through at least two randomly controlled studies or comparison group evaluations;

- **Promising**: research demonstrating effectiveness through a single randomized controlled trial or evaluation; definitive results from scientific trials not available
- **Theory-based**: tested using a less rigorous scientific methods that do not qualify for evidence-based or promising distinction

Hundreds of prevention programs, systems, and practices have been rigorously evaluated and identified as effective.[146] These programs can prevent any number of problems or disorders and target various risk and protective factors. To help policymakers and leaders make informed decisions, multiple institutions have tried to gather programs into searchable databases. State, national, and international registries or clearinghouses, developed by government, nonprofit, and academic institutions, have gathered information on programs and practices into databases accessible to state and local decision makers.[147] Clearinghouses conduct their own literature reviews and rate programs in a range of policy areas based on evaluation studies. These databases summarize program information, evaluation results, target outcomes and groups, evidence ratings, and other information to support decision-making. Five example registries that provide evidence ratings for behavioral health prevention programs:

Substance Abuse and Mental Health Services Administration (SAMHSA) National Registry of Evidence-based Programs and Practices (NREPP): database of 210 programs, spanning nearly the entire continuum of behavior health care, and offering program summaries, results, and analyses of rigor, training, and implementation.[148]

Blueprints for Healthy Youth Development: A registry of evidence-based behavioral health prevention models that have can offer at least 12 months of sustained success. Programs and practices are evaluated by experts based on their ability to yield positive results in academic performance, emotional health, interpersonal skills, physical health, violence, delinquency, and substance misuse.[149]

U.S. Office of Juvenile Justice and Delinquency Prevention's (OJJDP) Model Program Guide: Focusing primarily on the juvenile justice system, provides a list of effective prevention programs which can be searched by outcome (i.e. social skills, truancy, substance use, and academic success) and type of intervention (i.e. cognitive behavioral therapy (CBT), school curricula, and SEL).[150]

California Evidence-Based Clearinghouse for Child Welfare: Contains evidence-based preventative child welfare interventions gathered through research in partnership with Rady Children's Hospital in San Diego and aimed at improving child welfare systems[151]

What Works Clearinghouse: Created by the Institute of Education Sciences to identify prevention programs, practices, educational policies, and products that improving behavioral health outcomes in schools. Free resources readily available for public use[152]

To address the challenges posed by multiple clearinghouses, the **Pew-MacArthur Results First Clearinghouse Database** has compiled information from several clearinghouses in one place, reconciled the different systems and vocabularies, and provided the data in a clear, accessible format. The Results First Clearinghouse Database is a one-stop online resource providing policymakers with an easy way to find information on the effectiveness of various interventions as rated by eight national research clearinghouses. While it does not provide a comprehensive list of all interventions that are worthy of funding, it serves as a starting point for gathering and reporting information to assist policymakers as they consider the multitude of factors that inform budget and policy priorities. [153]

Pew-MacArthur Results First Initiative: Infusing rigorous evidence and state-specific data into policymaking

The Pew-MacArthur Results First Initiative, a project of The Pew Charitable Trusts and the John D. and Catherine T. MacArthur Foundation, works with states and localities to develop tools policymakers can employ to identify and fund effective programs that yield high returns on investment. Using innovative and customizable methods, Results First partners learn to:

- Create an inventory of currently funded programs
- Review which programs work
- Conduct benefit-cost analysis to compare programs' likely return on investment
- Use evidence to inform spending and policy decisions

Taken together, these efforts have helped leaders make more informed decisions, ensuring that resources are directed toward effective, cost-beneficial approaches.

> *This approach has the potential to enhance the Commonwealth's ability to proactively and effectively identify and assess initiatives that impact and prevent risk factors and address the root causes that put our youth at greatest risk.* **–Mass DPH-DMH Results First Report**

Results First helps its partner jurisdictions implement a sophisticated econometric model that analyzes the costs and benefits of potential investments in public programs. The model relies on the best available research on program effectiveness to predict the outcomes of a program based on Massachusetts's unique population characteristics and the cost to provide these programs in the Commonwealth. For each program, the model produces separate projections for the benefits that would accrue to program participants and taxpayers. These are combined to produce a total bottom line benefit. The model then calculates the cost of producing these outcomes and the return on investment that Massachusetts would achieve if it chose to fund the program.

The Massachusetts Public Health (DPH) and Mental Health (DMH) departments implemented this approach by engaging in a cross-agency collaborative effort with technical assistance from Results First staff. They focused on identifying and collecting data on prevention and early intervention programs and strategic implementation frameworks designed to reduce the development of substance abuse and mental health disorders for school age youth. The departments were able to generate projective benefit-cost analysis both on currently funded programs and those that could be implemented in Massachusetts.

DPH-DMH-RESULTS FIRST ANALYSIS: Summary Report

(Full analysis from DPH and DMH can be found on page 89)

Program/Practice	Agency	Funded	Evidence-base Rating	Per Participant			Cost-Benefit Ratio
				Benefits	Costs	Net Present Value (benefits-costs)	
Community Prevention Systems							
Communities that Care	DPH	No	Highest	$3,437	$451	$2,986	**$7.62**
PROSPER	DPH	No	Highest	$1,576	$529	$1,047	**$2.98**
Universal Prevention Programs							
Life Skills Training	DPH	Yes	Highest	$1,479	$33	$1,446	**$44.81**
PAX Good Behavior Game	DPH	Yes	Highest	$11,356	$325	$11,031	**$34.94**
Strengthening Families	DPH	No	Highest	$5,125	$2,736	$2,389	**$1.87**
All Stars	DPH	No	Promising	$2,388	$173	$2,215	**$13.80**
Family Check Up	DPH	No	Highest	$444	$317	$127	**$1.40**
Selective / Indicated Prevention Programs							
Cognitive Behavioral Intervention for Trauma in Schools (CBITS)	DMH	Yes	Highest	$23,737	$374	$23,363	**$63.47**
NAVIGATE – 1st Episode Psychosis	DMH	Yes	Promising	$23,071	$2,444	$20,627	**$9.44**
CASASTART (MassSTART)	DPH	Yes	No Effect	**-$3,010**	$10,708	**-$13,718**	**$0.28**
Multidimensional Fam. Therapy	DPH	No	Highest	$6,924	$3,263	$3,661	**$2.12**
Multisystemic Therapy	DPH	No	Highest	$8,335	$7,074	$1,261	**$1.18**
FAST	DPH	No	Highest	$3,904	$5,995	-$2,091	**$0.65**

Coalition-based Substance Use Prevention

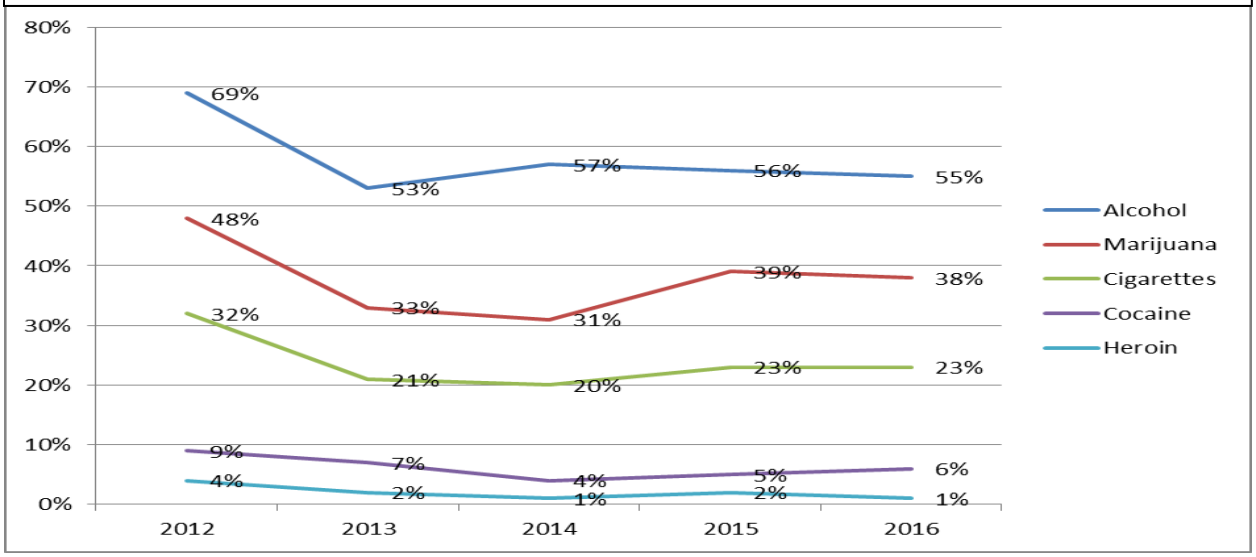
> *"Like all politics is local, all prevention is local."* **–Michael Botticelli, former director of the White House Office of National Drug Control Policy and current Director of Boston Medical Center's Grayken Center for Addiction Medicine**

The Commonwealth enjoys a long and successful history of locally led youth substance use prevention. Across the Commonwealth, community coalitions drive prevention work. These coalitions are made-up of concerned citizens and officials from local public safety, mental health, education, and public health sectors. Local leaders, trained in science and practice of prevention and promotion, lead coalition work, which includes assessing local outcomes, risks and strengths, engaging and building partnerships, identifying resources and grants, and planning for, implementing, and evaluating programs and initiatives. [See right for federal Drug Free Communities grant coalition make-up.]

With funding and technical support from the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA), the Massachusetts Bureau of Substance Addiction Services (BSAS), and the Massachusetts Technical Assistance Partnership for Prevention (MassTAPP), funded-coalitions are achieving measurable success reducing youth substance use. For example, after receiving a federal Drug Free Communities grant in 2012, Scituate has experienced significant reductions in 30-day use rates of alcohol, marijuana, cigarettes, and cocaine (see table on next page).

In recent years, BSAS has moved towards grant funding coalition "cluster" partnerships of 3 or more communities to undertake substance use prevention work under the leadership of a single lead community. However, even with these new regional cluster grants, BSAS is only able to fund 49% of Massachusetts communities, and very few communities are able to allocate dollars for prevention into their municipal budgets, or sustain programs beyond the state-funded period.

ScituateFACTS Coalition: changes in youth substance misuse since funding in 2012



Lack of funding leads to dramatic inequities between localities that (a) have been awarded grants and are undertaking evidence-informed approaches and (b) those communities that are not funded and may or may not have a local coalition. Moreover, even funded coalitions are limited, with few dollars available for implementing evidence-based programming.

BSAS currently administers three community-level grants funded by the U.S. Substance Abuse Mental Health Services Administration (SAMHSA) or other federal funding. These funds are completely dependent on continued federal appropriation.

Substance Abuse Prevention Collaborative: focused on preventing youth alcohol use and other drug use through regional multi-community grants led by an established community coalition

- Grant details: 26 municipalities and 2 counties receive grants; $100,000 per year; partnerships with 117 communities; 3-year grant

Massachusetts Opioid Abuse Prevention Collaborative: focused on preventing opioid abuse and overdoses through regional multi-community grants led by a veteran community coalition

- Grant details: 17 municipalities and 2 counties receive funds; $100,000 per year; grantees have partnerships with 99 communities; 3-year grant

Partnership for Success (2015): focused on preventing prescription drug misuse among high school aged youth

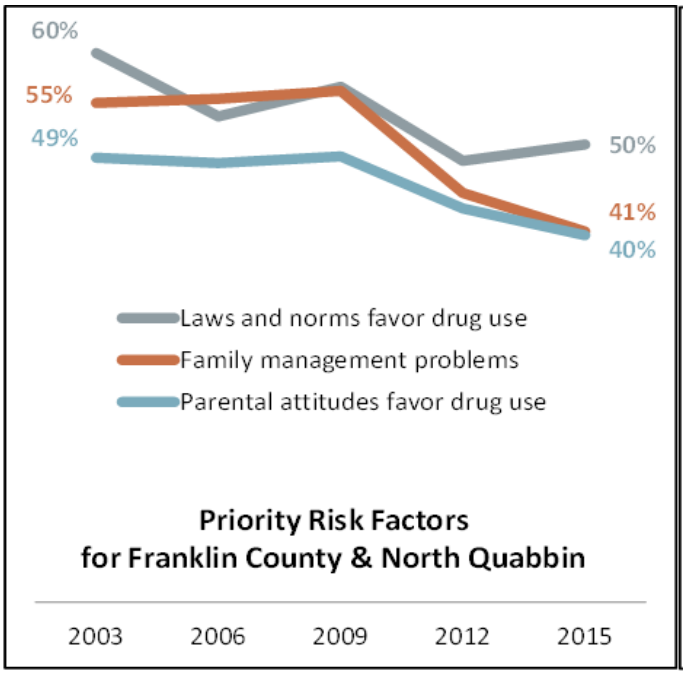
- Grant details: 16 communities; $85,000 per year, 5-year grant

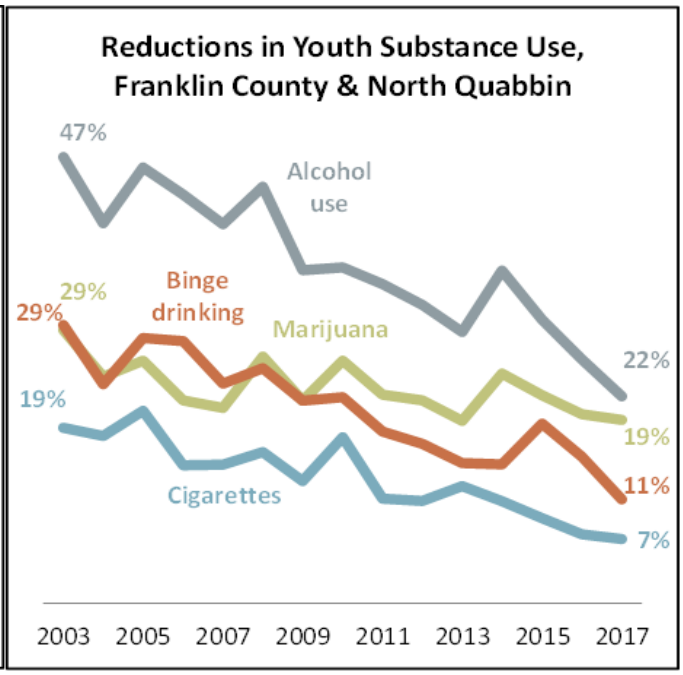
Significantly increasing investments in locally-led, data informed, evidence-based prevention efforts through a model prevention framework (see page 39) can reduce inequities, improve sustainability, and spread positive outcomes across the Commonwealth.

Communities That Care (CTC): Franklin County and the North Quabbin

The CTC coalition of Franklin County and the North Quabbin was formed in 2002 to address the problem of youth substance misuse and to improve youth health and well-being in the 30 towns and 10 school districts in rural western Massachusetts. The coalition was trained in the national Communities That Care (CTC) model, and used the CTC Youth Survey to collect the region's first high-quality data on youth health behaviors.

Recruiting key leaders from every sector of the community, the coalition has successfully worked with schools and other partners to integrate a variety of evidence-based policies, programs and practices. The communities have seen decreases in all of the coalition's priority risk factors, and youth substance use rates in the region have fallen to less than half of what they were when the coalition began, as seen in the graphs below.





A recent independent review of the program by researchers at ORS Impact of Seattle and Spark Policy Institute of Denver found compelling evidence that the coalition's efforts undoubtedly contributed to these reductions.

<u>Franklin County CTC coalition accomplished these outcomes with a budget of approximately $300,000 per year. Despite the low cost for these outcomes, the coalition struggles to maintain funding for its small staff each year.</u> While they receive some federal pass-through support from BSAS, the coalition does not receive any funding that originates from the Massachusetts state budget.

Massachusetts Technical Assistance Partnerships for Prevention (MassTAPP)

Like state government, communities can also benefit from technical assistance. Education Development Center's Massachusetts Technical Assistance Partnership for Prevention (MassTAPP) is funded by BSAS and is a key partner in coalition-based prevention in the Commonwealth. As a technical assistance network serving substance use prevention programs across the state, MassTAPP matches expert technical assistance providers who are well-versed in SAMHSA's SPF process with communities in need.

MassTAPP offers support and consultation to state-funded, community-based initiatives, including:

- Organized annual statewide substance misuse prevention conference
- Provided training and technical assistance to 61 substance use prevention grantees doing prevention work in 169 cities and towns in Massachusetts
- Created interactive online tools, including a communications toolkit for prevention workers, to help communities do more effective prevention work
- Curate a collection of online resources related to prevention topics and available to all communities and coalitions seeking to support prevention efforts

Prevention Frameworks: Community-driven Change

Evidence-based prevention frameworks provide local leaders the roadmap, knowledge, and support to build the infrastructure for community-based prevention initiatives. These roadmaps lead communities through forming partnerships and assessing local needs, problems, and assets to selecting and implementing programs and creating and measuring change. At their heart, they help communities build coalitions, often led by coalition coordinators or chairs, that can strengthen community willingness and ability for action, generate resources and funding, and the capacity to target local behavioral health issues based on data.

There are three prominent community prevention systems: Communities That Care; SAMHSA's Strategic Prevention Framework; and PROSPER.

Communities That Care

Communities that Care (CTC) is a coalition-based community prevention framework that empowers communities to prevent youth problem behaviors including underage drinking, tobacco use, violence, delinquency, school dropout, and substance abuse. Recognizing that each community is unique, CTC helps local coalitions develop community-specific prevention plans based on their own levels of behavioral health problems and risk and

protective factors. CTC's 5-phase process (see left) provides communities with a step-by- step guide and tools for building a high functioning community coalition to achieve collective impact. (see full snapshot on page 41)

SAMHSA's Strategic Prevention Framework (SPF)

Similarly, SAMHSA's SPF focuses on understanding community needs and building coalitions of community members. This framework is utilized by Massachusetts coalitions that are funded in different ways, including federal **Drug-Free Community** grantees and BSAS grantees (also federally funded)**.** The SPF also has five key steps:

1. **Assess:** collect data; answer who, what, where, why; determine risk and protective factors; assess resources and preparedness;
2. **Build Capacity:** increase community awareness; collaborate; train and prepare prevention professionals and strategic coalition partners in the science of prevention;
3. **Plan:** prioritize risk and protective factors; select interventions; build a model;
4. **Implement:** action plan; balance fidelity and adaptation; establish support systems;
5. **Evaluate:** What are the results of our work? What is succeeding? Is anything failing?

Throughout the SPF process, communities are encouraged (1) to infuse cultural competency considerations to ensure the coalition and its activities are aware of and responsive to the needs and culture of the population being served and (2) build sustainability that ensures the continuation of positive outcomes.[154]

PROSPER

PROSPER, (**PRO**moting **S**chool-community-university **P**artnerships to **E**nhance **R**esilience) is a *delivery system* through which evidence based programs can be distributed to communities experiencing behavioral health issues. Unlike SPF or CTC, this system pairs communities with university partners to assess local needs, to plan and implement evidence-based programs, and to evaluate outcomes. As detailed in the Results First analysis (see page 97), PROSPER is proven to reduce risky behavior, enhance positive youth development, and strengthen families. PROSPER provides evaluation and technical assistance to help ensure fidelity of the system and program implementation.[155]

Snapshot: Communities that Care (CTC)

Communities That Care (CTC) is a community-based prevention system proven to reduce youth health and behavior problems including drug misuse, crime and violence community wide. Recognizing that each community is unique, CTC helps local coalitions develop community-specific prevention plans based on their own levels of behavioral health problems and risk and protective factors. CTC's web-based training and coaching system helps communities work on the *underlying causes* of behavioral health problems—in order to prevent problems from developing in the first place. Communities using CTC promote the healthy development of *all* their children.

Communities that Care is the premier community change model for prevention that has proven to deliver results. For example, in a panel of 4400 young people followed from 5th through 12th grade, youth in Communities that Care cities were:

- 32% more likely to have abstained from any drug use
- 31% more likely to have abstained from alcohol use
- 13% more likely to have abstained from cigarette use through 12th grade than youth in control communities.
- 18% more likely to have abstained from delinquency
- 14% less likely to have ever been involved in violence than youth in control communities through 12th grade.

A study of CTC in Pennsylvania found that young people in CTC communities had 16% stronger school engagement and 33% higher academic achievement than youth in comparison communities.

CTC's 5-phase process (previous page) provides communities with a step-by- step guide and tools for building a high functioning community coalition to achieve collective impact. In a series of group workshops CTC coalition members learn and apply prevention science principles to guide their assessment, decision making, and implementation process. CTC has been adopted as the statewide prevention system of Colorado and Pennsylvania providing access to CTC workshops and coaching for many communities in those states.

DPH-DMH Results First Analysis on CTC, per person cost-benefit

Expected Case	**Dollars**
Total Benefits	$3,437
Cost (Net)	$451
Benefits - Costs (NPV)	$2,986
Benefits / Costs (Ratio)	$7.62

Primary Care Based Prevention: Integrated Behavioral Health

Pediatricians and their staff are key partners in promoting behavioral health and preventing disorders. A prominent approach for improving access to and the quality of pediatric behavioral health services involves integrating behavioral health services into primary care. Integrated behavioral health expands access to behavioral healthcare, supports early problem identification and timely intervention, and helps pediatric practices provide more complete health and wellness services to their patients.

The Commonwealth has acted boldly to expand primary care behavioral health services, including through the establishment of Massachusetts Child Psychiatry Access Program (MCPAP).[156] MCPAP, overseen by DMH, is staffed by psychiatrists, independently licensed behavioral health clinicians, resource specialists, and referral coordinators. MCPAP provides free consultation services to primary care providers, such as guidance on psychiatric disorders or services and assistance with referring patients to specialists. MCPAP is funded through an assessment on insurance companies based on the proportion of MCPAP services provided directly or indirectly to their insureds.

Recognizing its enormous value, **the embedded behavioral healthcare approach is also being funded and implemented by multiple organizations**, including MetroWest Health Foundation and the Richard and Susan Smith TEAM UP for Children Initiative. The Pediatric Physicians' Organization at Boston Children's Hospital has successfully integrated mental health care throughout its practices. This organization also received a grant from the Blue Cross Blue Shield of Massachusetts Foundation to integrate substance misuse services in pediatric primary care through a partnership with the Adolescent Substance Abuse Program at Boston Children's Hospital.

MyChild: A local model of success

Along with educating primary care providers, another approach involves embedding evidence-based models of integrated mental health services in pediatric primary care. For example, the LAUNCH/MYCHILD model approach, led by a partnership of the MA Executive Office of Health and Human Services (EOHHS), DPH, and the Boston Public Health Commission, includes two unique staff roles embedded in the primary care team:

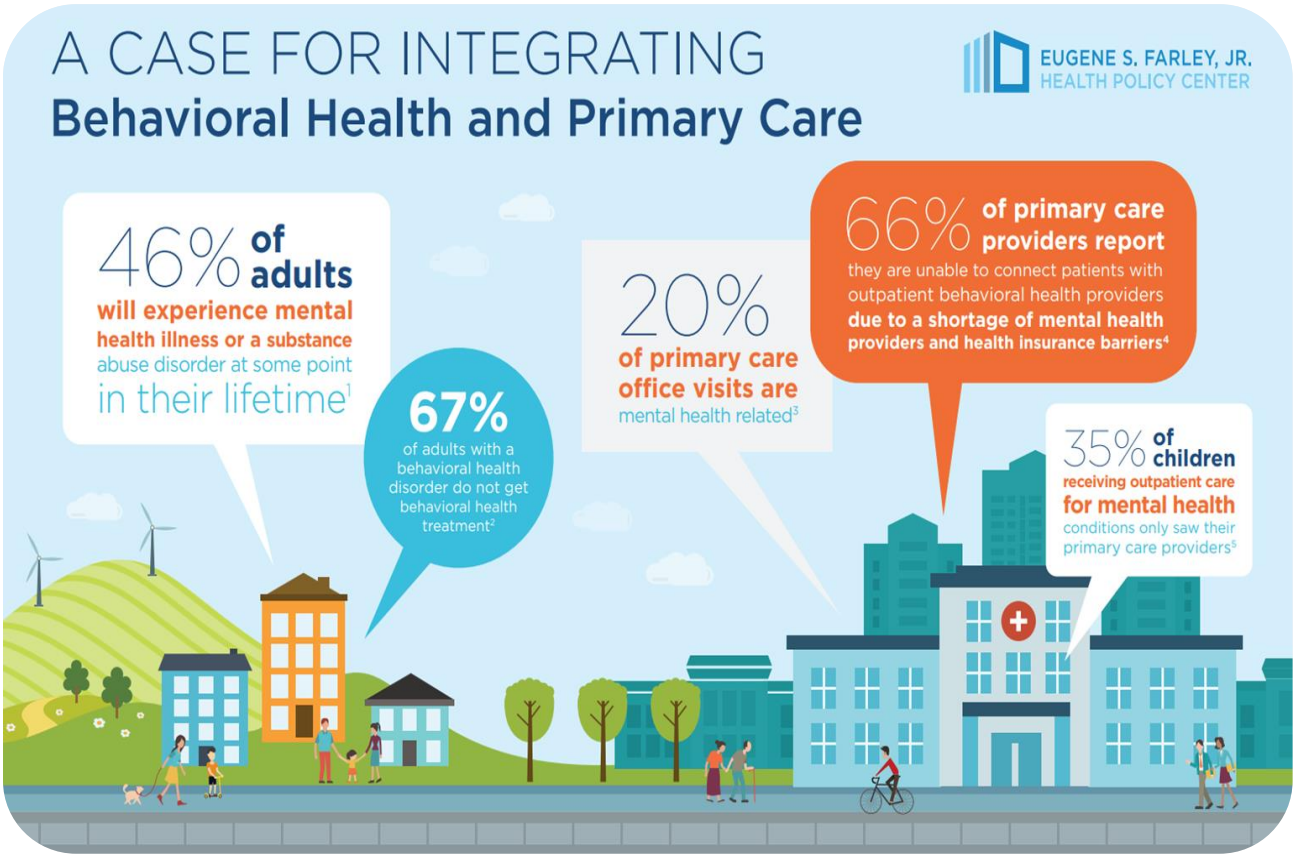
- Early childhood mental health clinician, specially trained to intervene at the earliest signs of mental health problems in infants and very young children,
- Family partner, a highly trained community health worker with "lived experience" raising a child with behavioral challenges.

The early childhood mental health clinician and the family partner attend regular team meetings and case conferences, participate in daily huddles, receive children and families by way of warm hand offs from primary care clinicians, and participate in care planning.

This model was developed in Massachusetts over the last decade with approximately $20 million in support from the U.S. Substance Abuse and Mental Health Services Administration. Identified as a "Promising Practice" by the National Association of Maternal & Child Health Programs, LAUNCH/MYCHILD promotes healthy relationships and nurturing environments; prevents concerning behaviors and impacts of stress on families; and, provides early identification and brief therapeutic intervention in context of primary care.

> "LAUNCH/MYCHILD works because it focuses holistically on the needs of the child and parent in a non-stigmatizing primary care setting. The model recognizes the intrinsic link between the health of the parent and the health of the child," said **Christy Moulin, Director of Early Childhood and Family Mental Health, Boston Public Health Commission**

A study by Abt Associates also demonstrated that enrolled children had a lower cost of care on average per month than a matched group and were more likely to receive appropriate, non-stigmatizing diagnoses. **Along with a positive return on investment for the Commonwealth, evaluation results have shown statistically significant reduced levels of parenting stress and depression; improved child mental health; and improved social emotional wellness outcomes.**[157]



Home & Family-Based Prevention: Engaging Caregivers

> *"The evidence is overwhelming that prevention works, and should be much more widely implemented."* -**Dr. William Beardslee, Harvard University**

Family-based prevention programs are one of the most effective ways to prevent behavioral health disorders and to promote positive child development.[158] [159] [160] These programs can:[161] [162] [163]

- Address family-level risk factors (e.g. family conflict)
- Enhance protective factors, such as parental resilience, social connections, knowledge of parenting and child development, and social and emotional competence of children
- Teach positive parenting skills
- Reduce conflict and improve functioning

By supporting the health and well-being of the family, family-based prevention initiatives, such as family group therapy or parenting skills, promote the behavioral health of the child. Pediatric medical staff, home nurses, social workers and other providers can all implement family-based programs with success.

Some examples of evidence-based family programs include:

- **Home Instruction Program for Preschool Youngsters program (HIPPY):** a 30-week home-visitation program designed to teach parents how to enhance preschool-age children's school readiness. Home visits are conducted by paraprofessionals and are complemented by group meetings for parents. **Results from an experimental evaluation indicate that participation in HIPPY leads to sustained cognitive and academic impacts in children.** This program focuses on families with four and five year old children, and is designed to assist parents to prep their children for school through both at home visits and 15 minute activity sessions between parents and children.[164]
- **HOMEBUILDERS Program:** This program offers intensive, in-home crisis intervention, counseling, and life-skills education for families who have children at imminent risk of placement in state-funded care.[165] Homebuilders has provided services to more than 15,000 families. **The most recent data show that 6 months after termination of services, 86% of children have avoided placement in state-funded foster care, group care or psychiatric institutions, and remained safely in their homes.** Pre-post measures within the family show a substantial reduction in risk across a variety of factors.[166]
- **Nurse-Home Visiting:** The Maternal, Infant, and Early Childhood Home Visiting Program gives pregnant women and families, particularly those considered at-risk,

necessary resources and skills to raise children who are physically, socially, and emotionally healthy and ready to learn. By electing to participate in local home visiting programs, families receive help from health, social service, and child development professionals. Through regular, planned home visits, parents learn how to improve their family's health and provide better opportunities for their children.[167]

- **Strengthening Families For Parents/Caregivers and Youth 10-14**, a parenting and youth skills program that includes separate weekly parent effectiveness training and child skills-building sessions, followed by a joint family session to promote good parenting skills and positive family relationships, proven to reduce aggressive and hostile behavior, substance abuse in adolescence, and improve family relationships.

DPH-DMH Analysis on Strengthening Families, per person cost-benefit

Expected Case	Dollars
Total Benefits	$5,125
Cost (Net)	$2,736
Benefits - Costs (NPV)	$2,389
Benefits / Costs (Ratio)	$1.87

School-based prevention: Promoting Behavioral Health in Schools

With one in five children experiencing mental health issues before 14, undiagnosed and untreated mental health issues can adversely impact a child's ability to learn and thrive in school.[168] **Behavioral health issues, including substance misuse, ADHD, and poor social emotional health, can have dramatic impacts on students' academic success.**

School-based prevention and promotion programs:

- Increase children's academic success;
- Reduce high-risk disruptive behaviors; and,
- Provide school staff necessary skills to support students and manage diverse classrooms.

Schools can offer an ideal setting for promoting the behavioral health of youth, improving access to youth mental health services, and supporting at-risk students.[169] Successful programs can be implemented at district, school, or classroom levels by supporting high-risk groups of students, or through early interventions with individual students who are especially at risk.[170]

Public schools are often the major provider of mental health services for school-aged children and play a critical role across the continuum of care.[171] A recent assessment by SAMHSA found that more than 80 percent of schools already provide mental health assessments, behavior management consultation, crisis intervention, and referrals to specialized behavioral health programs. In some rural areas, schools provide the only mental health services in the community.[172] School-based mental health is often the critical access point for improving access to behavioral health services to underserved populations and areas.

School-based behavioral health services—combining an emphasis on the promotion of behavioral wellness and the prevention of mental illness—contribute to the lifelong behavioral health of students, prevent costly disorders, and can improve school-climate and academic success.

Some examples of evidence-based school programs include:

Universal District Level: Positive Behavioral Interventions and Supports (PBIS) is an evidence-based framework or approach for assisting school personnel in adopting and organizing evidence-based behavioral interventions into an integrated continuum that enhances academic and social behavior outcomes for all students.[173] [174]

Universal School Level: LifeSkills Training (LST) is a school-based classroom intervention to reduce the risks of alcohol, tobacco, drug abuse, and violence by targeting social and psychological factors associated with initiation of risky behaviors. Teachers deliver the program to elementary, middle, and/or junior high school students in 24 to 30 sessions over three years. Students in the program are taught general self-management and social skills and skills related to avoiding substance use.

As shown below, the average net benefit per participant is $1,446 from avoided long-term costs of health care utilization and crime due to SUD, as well as wage loss from disrupted employment.

DPH-DMH Analysis on Life Skills Training, per person cost-benefit

Expected Case	Dollars
Total Benefits	$1,479
Cost (Net)	$33
Benefits - Costs (NPV)	$1446
Benefits / Costs (Ratio)	$44.81

Building Safe and Supportive Schools

The Safe and Supportive Schools Framework Law (G.L. c. 69, § 1P) and Commission and were created by An Act Relative to the Reduction of Gun Violence in 2014.

The Safe and Supportive Schools Commission makes annual recommendations to the Governor and Legislature, works with the Department and Board of Elementary and Secondary Education to make recommendations on updating the Safe and Supportive Schools Framework and Self-Assessment Tool, and advises the Department on the feasibility of statewide implementation of the framework. **The current version of the framework can be found on http://BHPS321.org, and has been used by approximately 160 schools in 80 districts.** The Commission also advises on the Safe and Supportive Schools Grant program, associated professional development, and a grant program evaluation. The Commission is currently conducting focus groups on access to services, and drafting guidance for districts on ways to incorporate safe and supportive school related goals into school and district improvement plans.

Preparing all students for success in school, the workplace, and civic life includes developing students' social emotional competencies and attending to their health and wellbeing in ways that promote protective factors and minimize risk factors. **Moreover, academic skills and social emotional competencies are mutually reinforcing, and are most effectively developed in environments that are safe and supportive**. Safe and supportive environments focus on high expectations for all students; they implement culturally responsive systems of support for all students; they value the social and cultural experiences of their students, staff, families, and partners; and they actively address bias related to race, color, sex, gender identity, religion, national origin, and sexual orientation. A safe and supportive environment and positive school culture are a key factor in the successful implementation of evidence-based prevention and promotion.

The aforementioned law defines Safe and Supportive Schools as those that foster a safe, positive, healthy, and inclusive whole-school learning environment that:

> 1) enables students to develop positive relationships with adults and peers, regulate their emotions and behavior, achieve academic and non-academic success in school and maintain physical and psychological health and well-being
> 2) integrates services and aligns initiatives that promote students' behavioral health, including SEL, bullying prevention, trauma sensitivity, dropout prevention, truancy reduction, children's mental health, foster care and homeless youth education, inclusion of students with disabilities, positive behavioral approaches that reduce suspensions and expulsions and other similar initiatives.

Social and Emotional Learning

One key evidence-based approach for promoting behavioral health is through social and emotional learning (SEL). SEL is the process through which:[175]

> *"children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy to others, establish and maintain positive relationships, and make responsible decisions."*

SEL supports the development of the following behavioral health competencies:[176]

- **Self-awareness**: identify emotions and thoughts and their ability to influence behavior
- **Self-management**: regulate emotions, thoughts, and behavior across situations
- **Social awareness**: empathize with individuals with diverse backgrounds and experiences
- **Relationship skills**: form and maintain healthy and rewarding relationships
- **Responsible decision making**: make constructive and respectful choices about behavioral and social interactions

These skills are critical to academic, social, and professional success across life.[177] SEL focuses on educating and meeting the emotional and social needs of the whole child, focusing on holistic, active learning across all educational content areas.[178]

Extensive research indicates that education promoting SEL can be effectively implemented by teachers and other staff in community settings to achieve immediate improvements in students' social skills, behavior, mental health, and academic achievement.[179]

Compared to their peers, students who are educated with high quality SEL exhibit:[180] [181]

- **Reduced emotional distress**: including fewer reports of depression, anxiety, stress, and social withdrawal.
- **Fewer negative behaviors**: including decreased aggression and delinquent acts; and
- **Improved attitudes and behaviors**: including greater motivation to learn, deeper commitment to school, increased time devoted to schoolwork, and better classroom behavior
- **Better academic performance**: including achievement scores an average of 11 percentile points higher than students who did not receive SEL instruction

The benefits of SEL programs last well beyond childhood. An article in the American Journal for Public Health reported "statistically significant associations between SEL skills

in kindergarten and key outcomes for young adults years later in education, employment, criminal activity, substance use, and mental health."[182]

A large body of evidence clearly links SEL programs to a variety of positive academic, economic, and life outcomes. A cost-benefit analysis of SEL programs suggests that for every $1 invested in SEL programming yields a return of $11.[183]

Adverse Childhood Experience

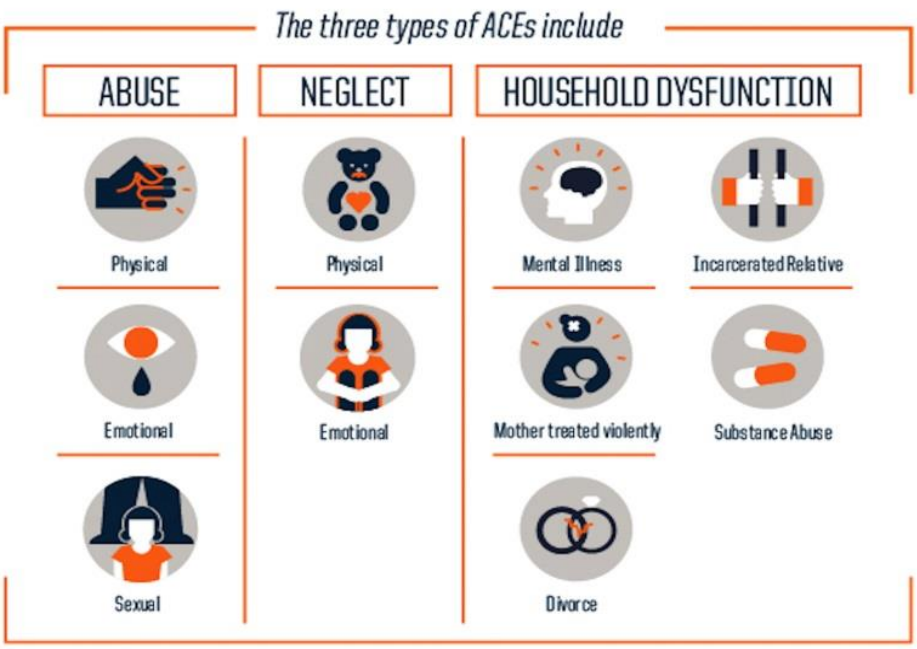
> *"If our children are becoming teenagers who are abusive, have mental health issues, and are committing heinous crime, it only means that we have failed them as a society. We have failed to give them a safe, nurturing environment to ensure that they are well-balanced, useful persons in the society."* **-Dr. Vikram Patel, The Pershing Square Professor of Global Health, Harvard Medical School**

A growing body of scientific study is building upon the commonly held principle that early life experiences, from infancy to adolescence, impact lifelong trajectory.

In particular, significant study has focused on how early negative experiences affect the risk for behavioral health disorders and other issues. In the 90s, the Centers for Disease Control and Prevention and the Kaiser Permanente's San Diego Health Appraisal Clinic surveyed over 17,000 individuals regarding their childhood experiences of abuse and neglect. This landmark Adverse Childhood Experiences (ACEs) study found a strong relationship between these experiences and negative life outcomes.[184] Since then numerous researchers have replicated and expanded on the study of how ACEs affect risk for illness and other negative outcomes.[185]

ACEs are highly stressful or traumatic experiences, such as physical and sexual abuse, domestic violence, and substance misuse in the household.[186] [187] [188] Research strongly suggests that ACEs increase the risk for negative life outcomes and behaviors, including: [189] [190] [191] [192] [193] [194] [195] [196]

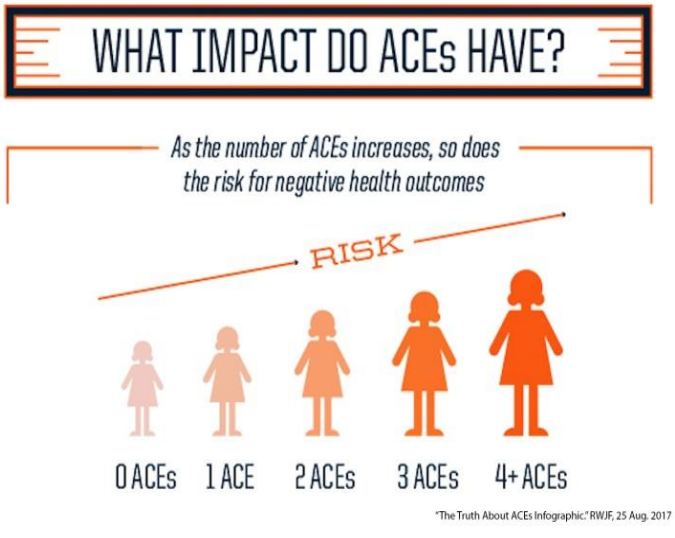
- Mental illness, suicide, substance misuse, and early initiation of substance use
- Aggression, delinquency, involvement in criminal behavior, and violence (both as a victim and an aggressor)
- Risk-taking and unhealthy behaviors like driving under the influence and early and unsafe sex
- Early death and chronic health conditions, such as HIV, diabetes, heart conditions, Alzheimer's, and Chronic Obstructive Pulmonary Disease (COPD)
- Social, academic, and professional difficulties



Surveys suggest that ACEs are very common in the population and that individuals who experience ACEs tend to experience more than one. Adverse experiences also tend to have a cumulative effect on risk: as the number and severity of ACEs a child experiences goes up, so does the likelihood of the child experiencing negative outcomes later in life.

ACEs are only associated with increased *risks*. Therefore, the effects of ACEs are not set in stone and there is much that can be done to mitigate their effects. Behavioral promotion and prevention strategies that can mitigate those effects include:[197]

- Providing mental health and social supports to children following a traumatic event (see CBITS snapshot on next page)
- Fostering individual youth resiliency and other protective factors to buffer all children from ACEs (see page 24)
- Educating key stakeholders (e.g. police, educators, and social workers) about trauma-informed care
- Building the communication systems that enable stakeholders to intervene positively following a traumatic event



Addressing Trauma in Schools: Cognitive Behavioral Intervention for Trauma in Schools (CBITS)

Cognitive Behavioral Intervention for Trauma in Schools (CBITS) is a cognitive-behavioral, group intervention designed for children in grades six to nine who have experienced traumatic events such as domestic violence, community violence, or physical/emotional abuse. The program is designed to reduce symptoms of PTSD, depression, and behavioral problems, and to improve functioning, grades and attendance, peer and parent support, and coping skills. CBITS uses cognitive-behavioral techniques (e.g., psychoeducation, relaxation, social problem solving, cognitive restructuring, and exposure). School-based mental health professionals deliver CBITS. Metro Boston DMH Area is funding CBITS in several Boston Public middle schools.

As shown below, for every one dollar invested per participant, a value of $63.47 is expected from avoided long-term costs of health care utilization, criminal justice system involvement, and wage loss from disrupted employment.

DPH-DMH Analysis on CBITS, per person cost-benefit

Expected Case	Current Dollars
Cost per participant	$374
Total Benefits	$23,737
Benefits to participants	$13,461
Benefits to Taxpayers	$7,789
Other Beneficiaries	$2,473
Cost-Benefit Ratio	$63.47
Chance benefits will exceed costs	100%

Plymouth County Taskforce Applies Trauma-informed Approach

In May 2015, the Offices of the Plymouth County District Attorney and Sheriff established the Plymouth County Drug Abuse Task Force to engage various community partners in tackling substance misuse.

During the task force's strategic planning phase, the group found there was a great need for educational programming on why students were misusing substances and what preventative steps were available to schools. Among other approaches, the partnership has funded Drug Story Theater developed by Dr. Joseph Shrand, founder of High Point Treatment Center's CASTLE (Clean and Sober Teens Living Empowered) program. DST teaches improvisational theater to teenagers to facilitate their own recovery from drugs and alcohol. Enrolled patients craft their own shows about the seduction of, addiction to, and recovery; and then perform these shows in middle schools and high schools to educate students about substance misuse and brain science.

The Task Force also found that existing strategies were often not identifying and supporting the children most at-risk for using substances, especially those with trauma from Adverse Childhood Experiences (ACEs). In response, the Task Force partnered with the Trauma and Learning Policy Initiative (led by Harvard Law School & Mass Advocates for Children) (TLPI) and the Massachusetts Teachers Association to offer training on the "Helping Traumatized Children Learn" model to educate educators and law enforcement on the connection between ACEs and behavioral health issues like substance misuse.

> *"Exposure to trauma from ACEs disrupts neurological development, in a way that can actually "rewire" the brain and cause social, emotional, and cognitive impairment. Without trauma-sensitive care, the traditional prevention framework often misses the students most at-risk for addiction; those with ACEs,"* said **Edward Jacoubs, M.S.W., Director of Grants and Sponsored Projects, Plymouth County District Attorney**

The Task Force now also works with schools and police departments to develop proper communication protocols to identify and support children experiencing ACEs. Through the "Handle with Care" Program, a trained officer will alert a child's school following an ACE. The officer will simply advise the school to "handle with care." The limited information sharing enables the school to provide the student with the appropriate understanding and support during the school day.

Grit: Develop Mentally and Emotionally Resilient Youth

> *"It is easier to build strong children than to repair broken men."*
> **-Frederick Douglass**

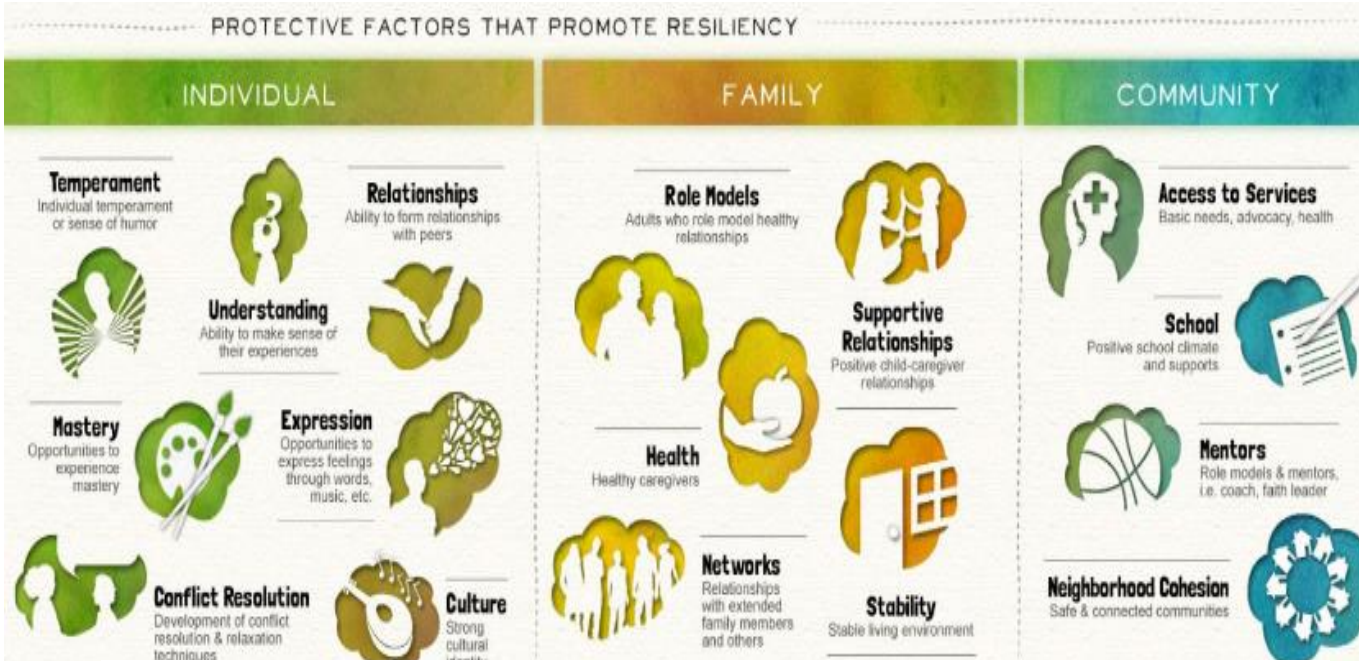
Mental and emotional resiliency, or *grit*, enables youth to adapt to, overcome, and excel when faced with traumatic or stressful circumstances, including ACEs. Resilient youth are able to:[198]

- Use inner mental strength to overcome challenges
- Manage adversities and stressors
- Process and heal from traumatic events more easily
- Work with purpose and optimism towards goals

Three main factors determine a child's resilience level:[199]

- Individual traits, e.g. a child's personality, temperament, or intelligence level
- Family characteristics, e.g. family stability and positive parent-child relationships and attachment
- External supports e.g. positive school environment, relationships with another caring adult, and supports for the family

Resilient young people are more likely to achieve healthy, favorable outcomes and avoid negative mental, emotional, physical or behavioral health issues related to trauma and adversity.[200] Promotion and prevention programs foster resiliency by developing individual skills, strengthening the family, and building community supports. **Developing resilient youth will help the Commonwealth overcome, and indeed prevent, future behavioral health crises.**



Graphic excerpted from Promising Futures, Promoting Resiliency among Children and Youth experiencing domestic violence. Futures without Violence.

Executive agency staff abstained from votes on recommendations; however they were instrumental in informing deliberations and discussions. Excluding abstentions from executive agency staff, all recommendations were unanimously approved by all other Commissioners.

INFUSING PREVENTION, PROMOTION, & RESULTS FIRST SCIENCE INTO STATE GOVERMENT

1. **Recommend that the Legislature, Health and Human Services, the Center for Health Information and Analysis, and other state agencies employ and expand the use of a data-driven approach, like the Pew-MacArthur Results First Initiative, to:**
   - **Inventory currently funded programs;**
   - **Review evidence supporting the effectiveness of currently funded programs or newly proposed programs, while incorporating, as appropriate, considerations for health equity and cultural competency;**
   - **Conduct benefit-cost analyses to estimate the return on investment for evidence-based and promising programming;**
   - **Apply the evidence from those analyses to inform budget and other policy decisions while incorporating, as appropriate, health equity and cultural competency considerations;**
   - **Share findings and collaborate with any permanent Commission on Behavioral Health Promotion and Upstream Prevention to inform the Commission's recommendations;**
   - **Create a platform, including a program list, to share the findings on evidence and cost-benefit with the public, especially local decision-makers such as prevention coalition coordinators, to inform local program selection and implementation.**

RATIONALE: As described on page 34, the Commonwealth, as well as over half the states across the country, have partnered with the Pew-MacArthur Results First Initiative to:

1. Create an inventory of currently funded programs
2. Review which programs are effective
3. Conduct benefit-cost analysis to compare programs' likely return on investment
4. Use evidence to inform spending and policy decisions

Under the invitation of Executive, Judicial, and Legislative leadership, Results First has partnered with the Massachusetts Trial Courts, the Executive Office of Public Safety and Security, and agencies within the Executive Office of Health and Human Services among others, to implement the Results First process.

Most recently, the Promote Prevent Commission, in collaboration with the Departments of Public Health and Mental Health, partnered with Results First to implement a comprehensive cost-benefit analysis of programs in inform this report and both the Legislature and HHS. This Massachusetts specific cost-benefit model, developed by the agencies with support from Results First, includes state specific input cost and prevalence data. Through this model, the agencies were able to provide the analyses included on page 89 and summarized on page 35 which help to illustrate the enormous potential value of investing in evidence-based promotion and prevention programs.

The Commission believes this process can be successfully expanded in the Commonwealth and can provide invaluable information for policymakers and agency leaders. State officials and legislative leaders have deeply important duties: to faithfully steward tax dollars; to ensure those dollars are invested in what works; and to ensure investments are bettering the health and well-being of residents. Without advanced data and information, these duties are very difficult to fulfill. Although cost-benefit analyses cannot be the only factor in policy and budgetary decisions, careful, evidence-based results-oriented analyses, like the Results-First approach, can support state leaders fulfilling these duties.

2. **Recommend that the Legislature establish a permanent Commission on Behavioral Health Promotion and Upstream Prevention within the Executive Office of Health and Human Services, but not subject to the control of HHS or any other executive agency. Said Commission shall seek to advance state and local policies, programs, and systems to promote mental, emotional, and behavioral health and to prevent behavioral health issues, including but not limited to mental illness, substance misuse, youth violence, and other high risk behaviors. Said Commission shall:**
    I. **Consider and advance the recommendations of the report of the Special Commission on Behavioral Health Promotion and Upstream Prevention, established pursuant to section 193 of the chapter 133 of the acts of 2016.**

II. **Employ the science of prevention; population health; risk and protective factors; social determinants of health; evidence-based programming and policymaking; healthy equity; and trauma-informed care;**

III. **Consider state and local prevalence and cost data to ensure Commission recommendations are data-driven; address risks at the universal, selective and indicated levels of prevention; and consider health equity;**

IV. **Employ result-oriented cost-benefit approach, such as the Pew-MacArthur Results First Initiative Process, to make recommendations to the Governor and the Legislature for enacting new policies and funding evidence-based prevention and promotion programs and systems;**

V. **Collaborate, as appropriate, with other active state commissions, including but not limited to the Safe and Supportive Schools Commission; the Ellen Story Commission on Postpartum Depression; and the Commission on Autism;**

VI. **Make legal or policy recommendations to the Governor and Legislature, as needed, concerning (a) promoting behavioral health and preventing behavioral health issues at the universal, selective, and indicated levels of prevention; (b) strengthening community- or state-level promotion and prevention systems; (c) advancing the identification, selection and funding of evidence-based data-driven promotion and prevention programs, practices, or systems; (d) reducing healthcare and other public expenditures through prevention; (e) the regulation of controlled substances including nicotine, opioids, alcohol, and marijuana; and (f) advancing sustainable funding sources for behavioral health promotion and prevention;**

VII. **Provide community coalitions with referrals and guidance, in consultation with state technical assistance providers, on financially partnering with businesses, philanthropic institutions, and other anchor organizations to generate funding for evidence-based prevention and promotion initiatives;**

VIII. Provide guidance to the Legislature and the Governor on approaches and opportunities to advance public-private partnerships to fund, plan, and implement prevention and promotion initiatives;

IX. Serve, in consultation with state technical assistance providers, as a clearinghouse for the collection and dissemination of local bylaws or policies to promote behavioral health and to prevent behavioral health issues and other risk taking behaviors;

X. Hold public hearings and meetings to accept comment from the general public and to seek the advice of experts, including, but not limited to, those in the fields of neuroscience, public health, education, and prevention science; and,

XI. Submit an annual report to the Governor and Legislature on the state of preventing behavioral health disorders and promoting behavioral health in the Commonwealth.

The Commission shall be comprised of an interdisciplinary group of leaders including:

1) **leaders from the secretariats of Health and Human Services and Education; Departments of Public Health, Mental Health, Elementary and Secondary Education, Early Education and Care, Youth Services, and Children and Families; Trial Courts; MassHealth; Health Policy Commission; Mental Health Legal Advisors Committee; and Center for Health Information and Analysis;**
2) **representatives from Massachusetts Public Health Association; Association for Behavioral Healthcare; Massachusetts Organization for Addiction Recovery; Massachusetts Association for Mental Health; Massachusetts Association of Community Health Workers; Massachusetts Association of Health Plans; Massachusetts Society for the Prevention of Cruelty to Children; and the Massachusetts Chapter of the National Association of Social Workers;**
3) **12 individuals appointed by the Governor, including: 3 experienced local prevention coalition coordinators**

representing communities in geographically diverse sections of the state; and 9 experts: prevention science; environmental design; school-based prevention; family-based prevention; behavioral health promotion; epidemiology; integrated primary healthcare; neuroscience; and social-emotional learning;

4) **4 citizens, appointed by the Governor: 2 of whom identify as persons with lived experience with behavioral health challenges; 1 whom is a K-12 teacher; and 1 of whom is a public school superintendent;**
5) **2 members of the House of Representatives appointed by the Speaker of the House and the House Minority Leader; and,**
6) **2 member of the Senate appointed by the Senate President and the Senate Minority Leader.**

RATIONALE: This will maintain the work of the Commission beyond the Special Commission. A permanent Commission create the infrastructure for long term prevention and promotion policy development. As detailed on page 87, illustrated in these recommendations, and highlighted throughout the background sections, the Commission has been extremely active over the last year. However, the scope of the Promote Prevent mission is wide. Many other relevant topics warrant further attention, including, for example, promoting the behavioral health of elders and addressing social determinants of behavioral health. Sustaining this work through a permanent Commission stands to benefit the behavioral health of the Commonwealth.

3. Recommend that the Legislature, Health and Human Services, and other state agencies:

- **Review and establish common definitions for key concepts relating to program evidence and effectiveness, including but not limited to "evidence-based", "evidence-informed", "theory-based" and "promising practices"; and,**
- **Develop guidance for officials and staff to inform and direct policy and budgetary decisions based on said concepts.**

RATIONALE: As described on page 32, prevention and promotion programs are not equal in their supporting evidence and level of effectiveness. The Commission believes adopting Commonwealth-specific evidence-based concepts can:

- Establish a common language or standards that public officials can rely on, share across agencies, and use to compare programs for funding and implementation
- Enable decision makers to account for the complexity in what it means to be "evidence-based," reducing confusion and clarifying the differences between programs
- Help infuse the science and practice of evidence-base into decision-making
- Emphasize the importance of rigorous evaluations and proven outcomes, while also providing needed space for investments in promising or theory-based initiatives

INNOVATIVE FUNDING FOR PROMOTION AND PREVENTION: Public-Private Partnerships, BeHaPPE Trust Fund, & Preventing Externalities

4. **Recommend that the Executive Office of Administration and Finance, in consultation with the Executive Office of Health and Human Services, release requests for information (RFIs) for a pay for success multi-year contract with the goal of preventing substance misuse, mental illness, or other behavioral health issues and their associated risk and protective factors. Said RFIs shall be directed to:**
   a. **<u>Service providers</u> who can implement evidence-based programming solutions to achieve the following goals:**
      - **Preventing substance misuse, mental illness or other behavioral health issues among school-aged youth and addressing associated risk and protective factors;**
      - **Improving positive intermediary outcomes or protective factors for these youth, including but not limited to behavioral health, academic and professional attainment and family stress and stability; and,**
      - **Produce costs savings for the Commonwealth over the short, medium, and long term at least equal to the Commonwealth's expenditures on the program.**

b. <u>Intermediaries</u>—who wish to initiate a pay for success contract with the Commonwealth and services providers to achieve the goals listed in subsection (a)—equipped to:

- **Coordinate service providers;**
- **Lead and assist with program development; and**
- **Conduct ongoing administration, management, and evaluation of outcomes.**

RATIONALE: "Pay for Success" (PFS) financing, authorized in 2012 under MGL Chapter 10, Section 35VV, has enabled the Commonwealth to partner with investors and service providers to address critical social issues. PFS contracts often involve partnerships between private investors (e.g. banks or philanthropic organizations), service providers (often non-profit organizations), and payors (government entity). With funding and oversight from investors, service providers provide evidence-based programming designed to address a critical social problem, e.g. homelessness, criminal recidivism, or literacy. Government only pays the providers when the programming achieves measureable target outcomes as measured through an independent evaluator.

There are three active Massachusetts PFS contracts:

- **<u>Chronic Homelessness PFS Initiative</u>**: Provide 500 units of stable supportive housing to 800 chronically homeless individuals through evidence-based practices to build long-term housing and support services. The Massachusetts Housing and Shelter Alliance is providing the services funded through $3.5 million invested by Santander Bank, United Way of Massachusetts Bay and Merrimack Valley. The Commonwealth will repay the investors only if the program achieves measurable outcomes in improved housing stability.
- **<u>Pathways to Economic Advancement</u>**: serves 2,500 adult learners from Greater Boston with a combination of vocational training, English language instruction, and job search assistance. Jewish Vocational Services is providing the services funded through $12.43 million. The Commonwealth will repay the investors only if the program achieves measurable outcomes relating to the participants earnings, transition into college, and program engagement.
- **<u>Juvenile Justice PFS Initiative</u>**: serves 929 men aged 17 – 23 who are at high risk for criminal reoffending through intensive outreach and cognitive-behavioral, educational, and professional programming.

Along with Massachusetts, many other states, localities, and countries are using pay for success contracts to generate funding for evidence-based programming to address critical

social issues. You can learn more at http://www.payforsuccess.com which is administered by Nonprofit Finance Fund.

To help close the gap in prevention funding and also fund model approaches to address behavioral health issues, the Commission strongly recommends that the Commonwealth take the first step to identify partners and solutions to critical behavioral health problems.

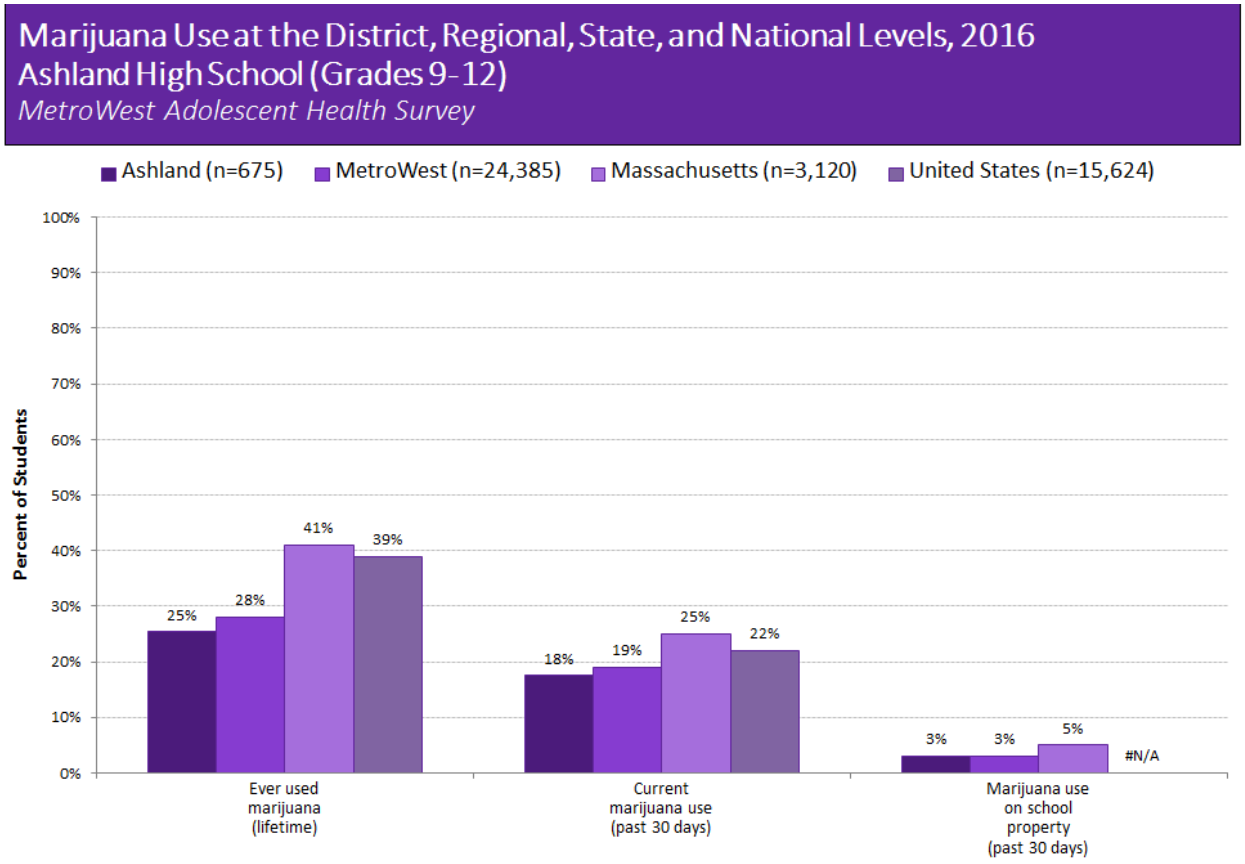
5. **Recommend that the Legislature appropriate no less than 33% or $10,000,000, whichever is greater, of surplus cannabis tax revenues (i.e. total cannabis revenues less the operational and administrative costs of the Cannabis Control Commission) to establish and fund a competitive grant program, regulated and administered by the Department of Public Health, to offer grants, training, and technical assistance to support multisector prevention coalitions with the:**
    1. **Implementation, monitoring, and evaluation of:**
        a. **Communities That Care Prevention System; OR,**
        b. **Strategic Prevention Framework (SPF) when established multisector coalitions are already successfully using the SPF;**
    2. **Collection, analysis, and reporting of data on behavioral health outcomes and associated risk and protective factors to drive local prevention and promotion decision-making, consistent with recommendation 10.**

RATIONALE: Parents, educators, behavioral health specialists, and public health leaders raised significant concerns to the Commission about the effects on youth from legal recreational marijuana. Youth marijuana use is linked to significant long-term harmful consequences: [201] [202]

- Early initiation of cannabis use is associated with increased risks for addiction and substance abuse
- Cannabis use is linked to increased risks for psychoses and anxiety disorders, decreased academic achievement, and impaired social relationships.
- UC Davis and Columbia University analysis suggests that following legalization marijuana use is up 2-4% among younger adolescents in Washington
- Perception of harm among youth (a major risk factor for substance misuse) is down in both Colorado and Washington

Decades of practice prove community-based prevention programs can prevent substance misuse while providing invaluable secondary benefits, like improved social-emotional

health and academic achievement. For example, see graph below highlighting marijuana use rates in Ashland, where the coalition has been using the Strategic Prevention Framework since 2011.



Recognizing the externalities from recreational marijuana and the power of prevention to reduce those externalities, **Colorado invested $16,125,000 of FY16-18 marijuana tax revenues in the Communities That Care (CTC) approach. CTC helps communities prevent problems through citizen-led coalitions comprised of key community stakeholders and experts.**

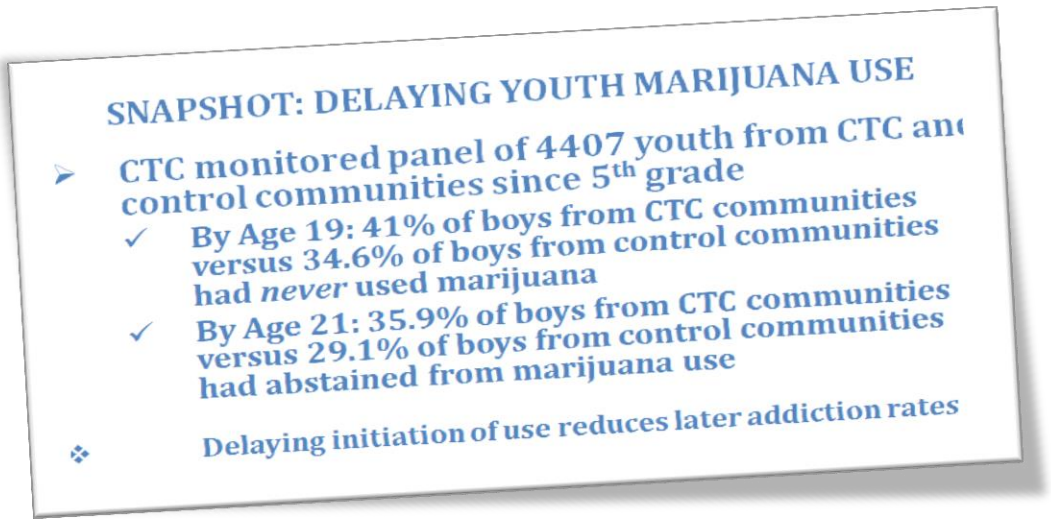
CTC coalitions use a five-phase process to address community-specific risk and protective factors linked to the development of various behavioral health issues, including marijuana use. For example, since Franklin County began implementing the CTC approach in 2003, the County has experienced reductions in marijuana, alcohol, cigarette, and prescription drug use (see page 38).

The Commission recognizes and commends the long history of community-based promotion and prevention efforts in the Commonwealth. Some existing established coalitions use the Strategic Prevention Framework (SPF). The Commission has learned

from both Colorado officials and directly from CTC experts that the SPF is not in conflict with CTC, but a complementary approach.

Nevertheless, the Commission recognizes that it would be important to support these established coalitions who have chosen to use an alternative evidence-based framework locally. Thus, the Commission believes that supporting established, successful coalitions through their alternative evidence-based framework is beneficial.

Evidence-based community coalitions (driven by local data) are the key infrastructure through which communities and the Commonwealth can implement promotion, prevention, and early intervention programming. Supporting and expanding this infrastructure using evidence-based models (like CTC or SPF) will empower Massachusetts communities to reduce the externalities from recreational marijuana (see below) and address any number of behavioral and physical health issues affecting both youth and adults.



6. **Recommend that the Legislature establish a "partnerships for prevention" program, regulated and administered by the Department of Public Health and the Department of Revenue, to coordinate community coalitions—implementing evidence-based locally data-driven initiatives—with generating funding from local sponsors by:**
   I. **Offering sponsor organizations or individuals advertisements (e.g. signs entering the community) recognizing their pledge of support accepted at the discretion of the community coalition; and,**

II. Establishing tax credits for pledges of support, accepted at the discretion of coalition, from organizations or individuals equal to up to 30% of any monetary contribution but limiting any tax credit to $30,000 and the total annual program tax credits to $10,000,000.

- **Recommends that corporations be excluded from participating in the program and receiving said tax credits if their primary business purpose is the manufacture, distribution, or sale of alcohol, marijuana, or nicotine.**

RATIONALE: Commissioners and testifiers have emphasized the importance and value of public-private partnerships as a strategy to increase funding for prevention and promotion initiatives.

The state's network of interdisciplinary community coalitions is the infrastructure for sustaining and expanding prevention efforts locally. Although not a major source of coalition funding, many coalitions partner with local organizations and professionals to build capacity and generate resources or funding. Through evidence-based local data-driven approaches, coalitions reduce local problems like addiction, violence, and criminality and increase the factors that define community strength, like academic success, social connectedness, environmental health, and family well-being. These benefits are accrued by individuals, families, state and local government, as well as private organizations operating and doing business in our communities.

The "public-private prevention partnerships" program—offering tax credits and local signs with the sponsors' names—will enhance coalitions' capacity to forge public-private partnership and incentivize contributions. In return, these partnerships will share the fiscal responsibility for prevention and promotion with government. Expanded prevention programming can reduce government cost burdens resulting from behavioral health issues (see Results First analyses on page 35 and 89).

There is a long history of private institutions supporting municipal initiatives outside of the field of behavioral health. For example, the MA Department of Transportation administers the "Sponsor a Highway" program, which enables companies to sponsor sections of highway in exchange for a nominal fee that funds the clean-up on a 2-mile section of road. Where well-maintained roads are essential for a business's employees (and customers) arriving at the business, behavioral health is the key to productivity when they arrive.

7. **Recommend that the Legislature establish a Behavioral Health Promotion, Prevention, and Early Intervention (BeHaPPE) Trust Fund, administered by the Secretary of Health and Human Services in consultation with the Secretaries of Education and Public Safety and Security, to support a statewide vision for promoting behavioral health and preventing behavioral health issues at the universal, selective, and indicated levels of prevention.**

   The Commission recommends that the trust fund:

   - **Apply an integrated behavioral health approach to:**
     - **Promote positive mental, emotional, and behavioral health; and,**
     - **Strengthen protective factors and reduce risk factors connected to behavioral health issues, including but not limited to substance misuse, mental illness, suicide, youth violence, and other risk taking behavior;**
   - **Support evidence-based prevention and promotion strategies, programs, or systems implemented in various settings, including communities, schools, or homes, and selected based on a cost-benefit approach;**
   - **Support training and technical assistance to guide the selection, implementation, and evaluation of data-driven, evidence-based and results-oriented programs;**
   - **Address statewide or local outcomes and consider state and local data on risk and protective factors, social determinants of behavioral health, and health equity to promote behavioral health and intervene at the universal, selective, and indicated levels of prevention;**
   - **Align and coordinate with evidence-based behavioral health promotion and prevention initiatives prioritized by the Commonwealth, including but not limited to those efforts pursuant to the Safe and Supportive Schools Framework Law, MGL ch. 16, § 1P.**

RATIONALE: Numerous commission testifiers, including those from the Institute of Medicine, advised there is a mountain of evidence illustrating that prevention and promotion programming can prevent behavioral health disorders and promote positive mental health that helps people thrive. This programming can:

- improve academic success and school climate;
- reduce conduct issues and behavioral health issues in adulthood; and,
- decrease downstream healthcare, criminal justice, and social service costs

However, there is severely limited funding through local, state, or federal government to enable the state, schools, or communities to build the infrastructure for and implement evidence-based data-driven programming (see page 9).

Establishing and appropriately funding a Behavioral Health Promotion, Prevention, and Early Intervention Trust Fund—applying an integrated behavioral health approach recognizing common risk and protective factors—will provide a vehicle for:

- Substantially expanding state and local capacity to address the numerous detrimental effects of behavioral health issues, including opiate addiction, suicide, and violence;
- Promote the mental, emotional, and behavioral health;
- Help fill upstream gaps in the continuum of care: Promotion, Prevention, Treatment, and Recovery; and,
- Foster collaboration between key state agencies who are working tirelessly to address associated problems connected to common root causes or underlying risk and protective factors.

8. Recommend that the Legislature (1) establish an assessment on opiate manufacturers OR wholesalers who are responsible for the legally authorized sale or transfer of pharmaceuticals containing active opioid ingredients within the Commonwealth; (2) direct the revenue from said assessment to evidence-based substance misuse prevention, treatment, recovery, and harm reduction services; (3) and, further, that no less than 33% of said revenues be directed to the Behavioral Health Promotion, Prevention, and Early Intervention (BeHaPPE) Trust Fund to support an integrated approach to preventing opiate addiction and associated behavioral health issues (see Recommendation 7).

RATIONALE: The human and financial toll of the opiate epidemic is unprecedented.

As part of the Chapter 55 passed in 2015, the Commonwealth conducted a comprehensive analysis of data relating to the opioid epidemic. Over 16,000 Massachusettsians have died from opiate overdoses since 2000. Fifty-two percent of those deaths occurred in just four years between 2013 and 2017. The rate of deaths increased from under 6 per 100,000 people in 1999 to over 22 per 100,000 in 2015.[203]

Massachusetts social service, criminal justice, and healthcare systems are experiencing enormous costs from the opiate epidemic. Opiate addiction accounted for nearly 60% of all admissions to substance misuse treatment in 2015, compared to approximately one-third in 2000.[204] The Health Policy Commission found that opioid-related hospital discharges increased 201% between 2007 and 2014.[205] Public payers, i.e. Medicare and Medicaid, covered 66% of these costs.[206]

Those suffering and dying from opiate addiction often transition from using prescribed opiates to illegal opiates like heroin or prescription opiates without a prescription. For example, 83% of the people who died in 2013-2014 from a prescription opioid had a legal prescription at some point from 2011-2014. However, less than 40% had a prescription one month before death. Alternatively, of those with a positive toxicology screen for heroin, 65% had a legal opioid prescription in 2011-2014.[207]

Although the factors contributing to addiction are complex, the business practices of opiate manufacturers and wholesalers are a major factor in the opiate epidemic and associated costs and human suffering. Opiate manufactures have profited while their highly addictive products led to an historic epidemic.

Recognizing their responsibility, several states like New York, Ohio, New Hampshire, Missouri, Oklahoma, Mississippi and West Virginia have filed suits against both opioid manufacturers and distributors for their blatant disregard for the individuals affected. One of the nation's largest opioid makers, Mallinckrodt Pharmaceuticals, reported $3.4 billion in revenue during the 2016 fiscal year. While under investigation by the Department of Justice, Mallinckrodt agreed to pay $35 million without any admission of wrongdoing. The McKesson Corporation was also investigated by the Department of Justice in 2017, and agreed to pay $150 million to the Department of Justice for failing to report suspicious orders of opioids, and agreed to stop sales at some distribution centers in multiple states.

Similar to the legal damages and excise taxes placed on the tobacco industry beginning in the 1990's, pharmaceutical companies are responsible for the damage connected to their products, especially when those damages contribute substantially to an epidemic. In 1998, forty-six states, four U.S. territories, the Commonwealth of Puerto Rico, the District of

Columbia, and the four largest tobacco manufacturers agreed to gradually increase annual payments, beginning at $4.5 billion in 2000, $6.5 billion from 2002, $8.14 billion from 2008–2017, and $9 billion in 2018 and each subsequent year in perpetuity. Outside of the courts, Massachusetts currently assesses an excise tax of $3.51 per pack on cigarettes. On March 2, 2018, Kentucky became the first state to state opioid prescriptions; however legislation is also moving through several other states.

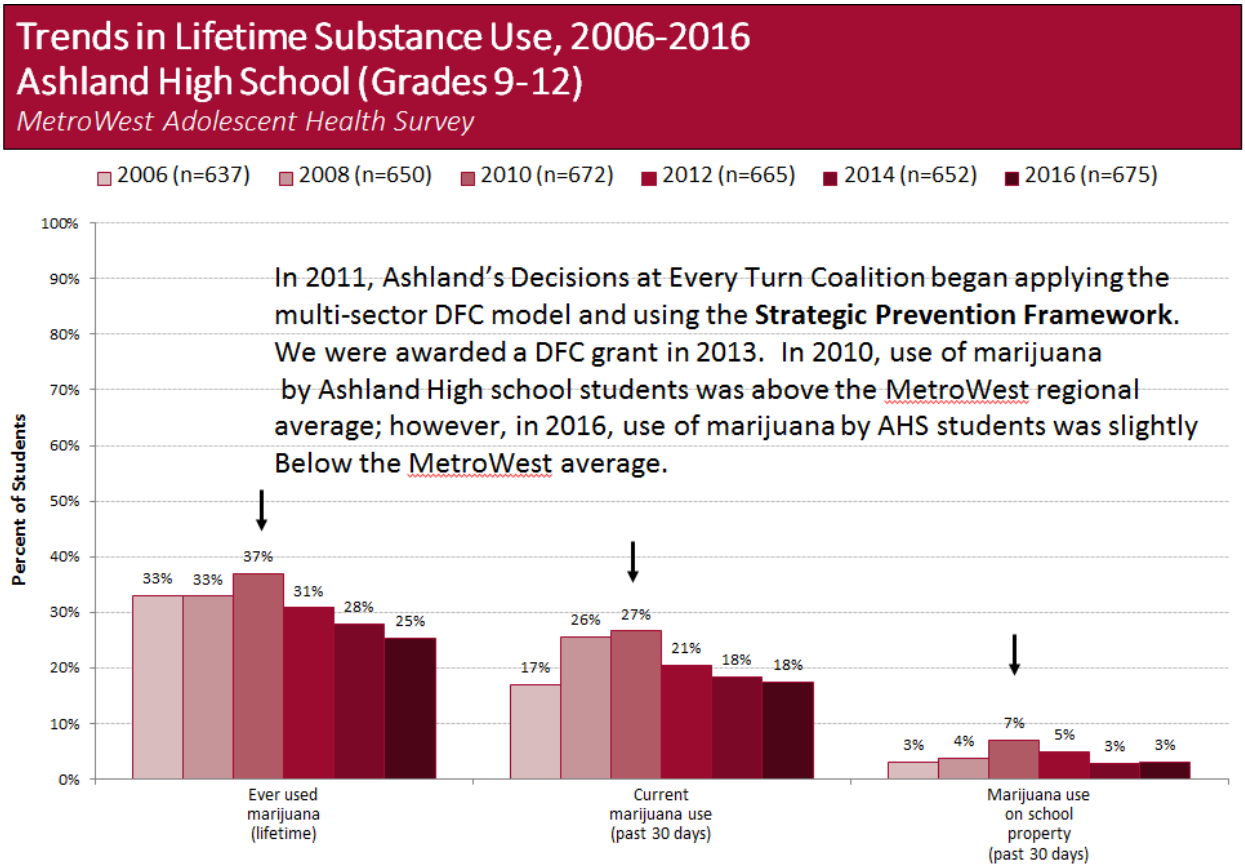
By holding opioid manufacturers accountable for the past and *continued* externalities through both the courts and the Legislature, the Commonwealth can recoup costs, protect future generations, and fund evidenced-based approaches across the continuum of care.

BUILDING PREVENTION INFRASTRUCTURE: Supporting Community Coalitions and Local Prevention Leaders

9. **Recommend expanded investments in funding for grants and technical assistance for communities to apply an evidence-based community prevention system (such as Communities that Care or the Strategic Prevention Framework) enabling grantees to:**
   a. **Establish partnerships of community stakeholders, including citizens, educators, law enforcement, mental health, and civic, faith, and business leaders;**
   b. **Assess data on local outcomes, risk and protective factors, and social determinants of health to support community planning and program implementation at the universal, selective, and indicated levels of prevention;**
   c. **Develop a local vision for promoting behavioral health and preventing disorders, like youth substance misuse, mental illness, suicide, and delinquency; and;**
   d. **Build capacity for selecting, implementing, monitoring, and evaluating evidence-based initiatives at the local level;**
   e. **Funding evidence-based programs at the universal, selective, and indicated levels of prevention.**

RATIONALE: As described on pages 39, prevention frameworks help communities build the capacity for evidence-based prevention and promotion initiatives at the local level. Systems, like Communities that Care and the Strategic Prevention Framework, provide communities with the roadmap for achieving outcomes, including reductions in behavioral health issues like youth substance misuse. From assessments, building partnerships and funding, to implementation, these systems can form the prevention infrastructure.

Prevention systems have a long successful history in creating positive change in cities and towns across the Commonwealth (for example, see below for reductions in youth marijuana use in Ashland after the coalition begin using the Strategic Prevention Framework).



Unfortunately, investing in prevention through these systems is not provided to every community, thus many communities are falling behind while others achieve success protecting youth and families from behavioral health issues. Investing in communities so more can implement these systems will address inequalities and unleash the power of prevention in more cities and towns (see page 36 for more information).

10. **Recommend that the Commonwealth strengthen state and local prevention efforts through improved collection and analysis of data relating to youth behavioral health outcomes and risk and protective factors by:**
    I. **Directing the Department of Public Health, in partnership with the Departments of Elementary and Secondary Education and Mental Health, to supplement, in consultation with experts and stakeholders, the existing Massachusetts Youth Health Survey to incorporate key risk and protective factors for behavioral health issues;**
    II. **Directing the Departments of Public Health and Elementary and Secondary Education to develop guidance to encourage all Massachusetts public school districts, as a matter of best practice, to voluntarily survey their 6-12 graders on a biennial basis using said modified Massachusetts Youth Health Survey or a satisfactorily similar local equivalent survey measuring both behavioral health outcomes and key risk and protective factors;**
    III. **Establishing a statewide center of excellence within a public university or college, or another public or private non-profit institution, to provide technical assistance to said school districts (or existing organizations who support those districts) to strengthen local and regional data collection and analysis of youth health surveys, results communication, and data-driven decision making;**
    IV. **Appropriating necessary cannabis tax revenues, or other sources of funding, to fund biennial youth health surveys of 6-12 graders in those school districts who (1) opt-in to conduct the modified youth health survey; OR (2) conduct a satisfactorily similar local equivalent measuring key outcomes and risk and protective factors; and,**
    V. **Connecting the award of prevention and promotion competitive grants for communities to the collection and**

analysis of data on behavioral health outcomes and risk and protective factors.

RATIONALE: Local and statewide data collection and analysis can address many important goals:

- Determining the overall prevalence of disorders and healthy behaviors;
- Assessing how those issues increase, decrease, or stay the same over time;
- Examining the co-occurrence of health behaviors, for example, associations of substance misuse and mental health problems;
- Exploring patterns of data among subpopulations, such as by gender, age, or race/ethnicity; and,
- Monitoring progress toward achieving state and national objectives.

While all of these goals are extremely important, communities may be most motivated to act if they have local data in addition to national and statewide survey results. Having national, state, and local data allows for helpful points of comparison, and can help drive local change.

Local data stimulates change by empowering communities to make a difference, going from a denial or lack of awareness to recognition of problems, a better understanding of the scope of the problem, and examination of populations at elevated risk of harmful behaviors – that may be LGBTQ youth at greater risk of harassment, or girls at greater risk of depression, self-harm, or other behavioral health related concerns. Once a community can look at their data and the patterns that exist, they can see the relative scope of various issues and make data-informed decisions about what their priorities are. Having local data also helps to bring together stakeholders that can come up with effective, creative, and science-based solutions to address health concerns. And as steps are taken to move forward, data can also help to determine whether efforts are making a difference.

Unfortunately, many communities do not have access to local behavioral health data and/or the data does not provide sufficient information about key issues, including youth risk and protective factors, which inform local needs and prevention decisions. Expanding data collection in the Commonwealth will be instrumental in building prevention infrastructure.

11. Recommend that the Legislature fund and expand existing statewide technical assistance, training, and guidance—administered by the Department of Public Health—to support all Massachusetts

communities with engaging in local prevention and promotion activities such as:

i. **Establishing and developing local coalitions that partner key stakeholders including citizens, parents, schools, municipal and community leaders, public safety, courts, behavioral health, and public health;**
ii. **Collecting data and assessing local needs, risks and protective factors, capacities, strengths, and cultural competency factors;**
iii. **Selecting, implementing, and evaluating evidence-based promotion and prevention initiatives; and,**
iv. **Providing comprehensive supports to foster youth social and emotional health, academic success, and physical well-being.**

RATIONALE: There is decades of scientific study and local practice informing how to implement effective evidence-based promotion and prevention initiatives that work.

For newcomers to the work of prevention and promotion, the task of understanding this science and practice and applying those lessons at the local-level is daunting. Moreover, where a person or community lacks the knowledge of "what works", they may instead try to reinvent the wheel at a significant expense and/or choose to implement initiatives that have questionable, or, even worse, negative outcomes. This can hinder the implementation of effective programs, practices, and systems for years, risking the health and well-being of the population and expending limited resources. Technical assistance from trained practitioners can help newcomers overcome these challenges and get up to speed.

For veterans to the work of prevention and promotion, other challenges arise that may exceed their capacity and expertise. This can include sustaining funding for work, building relationships with stakeholders, staying informed about emerging science and practice, and connecting and collaborating with prevention leaders in other communities. Similarly, technical assistance can help veterans overcome these challenges.

Investing in technical assistance can build the capacity prevention newcomers and veterans, helping to vastly expand the effectiveness of state and local initiatives. Specific to substance use prevention grants, the state already invests in technical assistance through DPH's BSAS and a partnership of private organizations: Massachusetts Technical Assistance Partnership for Prevention (see page 39). Unfortunately, this technical assistance is limited to those grantee communities that have received federally-funded substance use prevention grants (see page 36). Expanding outside these grantees and beyond substance

use prevention can help build the infrastructure for behavioral health promotion and prevention in every community of the Commonwealth.

12. **Recommend that the Legislature establish a formula grant to support the establishment and ongoing funding of Municipal Youth Commissions, established pursuant to M.G.L. Chapter 40, section 8E. Said formula grants shall be based on the number of youth in the community and directed to evidence-based data-driven activities that:**
    - I. **promote social, emotional, and mental health;**
    - II. **prevent mental illness, substance misuse, and other behavioral health issues and risk taking behaviors based on locally data-determined needs; or,**
    - III. **provide supports to at-risk youth and their families.**

RATIONALE: As defined in Massachusetts General Law, local Youth Commissions are tasked with serving "the opportunities, challenges and problems of youth in the community." Youth Commissions provide mental health services, promotion and prevention programming, and other youth development activities. Youth Commissions are town departments, overseen by a citizen board, and run by program administrators, clinicians, and social workers. While nearly every Massachusetts community has a council on aging focused on the health and well-being of elders, less than 60 have a Youth Commission.

A specific formula grant to generate dollars for Youth Commissions will incentivize more communities to establish a Commission. The Council on Aging (COA) Formula Grant provides $10 per senior in each community to support COA activities. There is not an equivalent formula grant to support the general health and well-being of young people.

INVESTING IN WHAT WORKS: Evidence-Based Prevention and Promotion Programming & Systems

13. Recommend continued investments to implement evidence-based cost-beneficial behavioral health promotion and prevention programs and practices including those listed in the Blueprints for Healthy Development, the Pew-MacArthur Results First Clearinghouse Database, the U.S. Surgeon General's 2016 Report on Alcohol, Drugs, and Health in America, and the Collaborative for Academic, Social, and Emotional Learning (CASEL) Guides to Effective Social and Emotional Learning Programs.

RATIONALE: Behavioral health promotion and upstream prevention works. Decades of rigorous scientific study and community-level practice prove evidence-based programs, policies, and practices can prevent addiction, substance misuse, depression, anxiety, suicide, violence, risky behaviors, and many other behavioral health issues. However some programs have proven outcomes and have been rigorously evaluated, while others have not been evaluated or have neutral or even negative outcomes. Investing in what is proven to work will ensure limited dollars actually help the people they are intended to serve.

14. Recommend investments in family-based programs that promote the social and emotional well-being of children, support and educate caregivers, and strengthen the economic and housing security of the family.

RATIONALE: Children's behavioral health is tied deeply to family stability, economic security, and adequate housing.[208] [209]

For example, positive infant-parent relationships increase childhood cognitive scores, caregiver mental health and reduce childhood conduct and behavioral issues, and caregiver depression.[210] Through the Massachusetts Home Visiting Initiative (MHVI), DPH is already providing eligible families expecting a child or those with young children with a trained family support specialist. The MHVI implements a variety of evidence-based programs,

including Strengthening Families, Health Families, and Parents as Teachers.[211] Specialists provide various services, including:

- Referrals to economic resources and services
- Services and training relating to positive parenting, child development, and injury prevention
- Links to parent education and employment opportunities.

Programs that would increase economic security include family self-sufficiency programs and asset building programs, like the Compass program currently used in the Lynn and Cambridge Housing Authorities.[212] Programs that provide or facilitate housing placements are a promising, cost-effective approach to help children and families head avoid negative outcomes.[213] The Boston Foundation's Health Starts at Home is testing several different housing programs to improve child health.[214] Additionally, these programs give caregivers the tools needed to become self-sufficient and financially secure as they raise their children in the community.

Further investments in programs that promote family stability and economic security will help reduce negative behavioral health outcomes among both children and caregivers.

15. The Commission recommends investments in the following:

a) Safe and Supportive Schools Commission activities and community grants including assessment, planning and implementation of the Framework, pursuant to MGL ch. 16, § 1P

b) Evidence-based suicide awareness and prevention training for all licensed school personnel, pursuant to MGL ch. 71, § 95

c) Recreational Marijuana Public Awareness Campaign administered by the Cannabis Control Commission

- **Launched prior to the onset of commercial sales;**
- **Developed in consultation with the Department of Public Health and prevention scientists to ensure the campaign is evidence-informed; and,**
- **Designed to promote safe and responsible adult use, to educate the public about potential harms from unsafe or chronic marijuana use, and to prevent youth substance misuse.**

RATIONALE:

a) The mission of the Safe and Supportive Schools Commission, Framework, and Law (as described on page 47) represent an instrumental approach for promoting the behavioral health of young people. Continued investments in the Safe and Supportive Schools activities can promote positive school environments and foster the culture and practice of social-emotional learning and positive school discipline among educators and other school staff. The Safe and Supportive Schools goals and activities provide the infrastructure on which the Commonwealth can overlay school-based evidence-based prevention and promotion programs. Positive school climates—led by well-informed school staff—promote the effectiveness of school-based prevention programming, foster student success, and help ensure at-risk students are not excluded from school and that they receive the supports and resources they need.

b) Chapter 284 of the Acts of 2014, *An Act relative to the reduction of gun violence*, included landmark provisions to promote school safety, to enhance school-based mental health services, and to prevent suicide. Section 12 of Chapter 284 required, subject to appropriation, that all public school districts and charter schools provide "at least 2 hours of suicide awareness and prevention training every 3 years to all licensed school personnel." Currently, the Legislature has not appropriated the necessary funding to fulfill this provision. The Commission believes investments to fulfill this provision can help prepare school staff to identify, support, and appropriately refer students in mental health in-crisis and prevent suicide.

c) The potential public health consequences from the sale of recreational marijuana are significant. An evidence-based public education campaign, funded and initiated prior to the start of commercial sales, can help prevent these consequence, reducing unsafe use and youth use.

16. Recommend that the Legislature (1) reauthorize the Massachusetts Prevention and Wellness Trust Fund (PWTF); (2) add substance misuse and mental illness as priority conditions in the PWTF section of Chapter 224; and (3) amend the PWTF advisory board to include a member organization and a consumer with behavioral health expertise.

RATIONALE: Established by the legislature in 2012 as part of Chapter 224, the Prevention and Wellness Trust Fund (PWTF) is a national model for funding prevention, administered

by the Department of Public Health and comprised of the Prevention and Wellness Trust Fund Grantee Program and Massachusetts Working on Wellness program.[215]

The PWTF grantee program supports 9 partnerships across the Commonwealth. The partnerships include clinical organizations, community-based organizations, and at least one municipality. As established in Chapter 224, the PWTF addressed four priority conditions (pediatric asthma, older adult falls, hypertension, and tobacco use) and three optional areas (diabetes, obesity, and substance misuse).

Since 2012, these two programs have expanded disease prevention and wellness efforts across the state, reaching over 372,000 people in the Commonwealth. An independent evaluation of the PWTF's work identified significant positive results across the priority conditions, including:

- Reduced prevalence of conditions / problems
- Averted healthcare costs, estimated at up to $16 million in cost savings for hypertension and up to $5.6 million in savings related to tobacco illnesses
- Improved systems, including collaboration between clinical and community organizations, new prevention infrastructure for elder falls, and housing environments for those with asthma[216]

The PWTF was funded through a one-time assessment on hospitals and health insurers and generated approximately $60 million in revenue.[1] In 2017, the PWTF ended in accordance with the sunset provision in Chapter 224. PWTF advisory board—which includes insurers, hospitals, and consumers—recommended continued funding.

Reauthorizing the Trust Fund and adding substance misuse and mental illness as priority outcomes will provide an important source of prevention and behavioral health promotion funding.

PREVENTION WORKFORCE: INTEGRATING BEHAVIORAL HEALTH PROMOTION AND PREVENTION SCIENCE AND PRACTICE

17. Recommend that the Legislature advance embedded behavioral services in primary pediatric care by:

I. **Supporting and expanding the work of the Executive Office of Health and Human Services, including the Departments of Mental Health and MassHealth, and the Health Policy Commission to provide outreach and technical assistance to pediatricians and their staff on (a) why and how to integrate behavioral health services e.g. embedded clinicians, community-health workers, family partners, and qualified peer supports ; (b) administrative steps to obtain insurance reimbursement for medically-necessary services; and (c) integrating behavioral health services without compromising physical health care due to behavioral health stigma;**

II. **Expanding training and technical assistance for pediatric primary care offices in (1) substance misuse disorder services; (2) identification and supports for behavioral health issues in children under age 5; (3) how to serve children and families with behavioral health needs; and (4) guidance and supports in social-emotional health;**

RATIONALE: Integrated behavioral health within primary care settings is a key evidence-based strategy for early intervention children and adolescents.[217] Family supports include child-focused prevention and early intervention services that can break intergenerational transmission of mental health and substance misuse disorders. Programs like My Child/Launch[218], the Smith Family Foundation's TEAM UP for Children[219] and the Pediatric Physicians Organization at Children's Integrated Behavioral Health Program[220] are examples of models that can be used across different health care settings.

Supporting integration of behavioral health care into primary care is a major priority for the Massachusetts Legislature, and state and federal agencies like the U.S. Substance Abuse Mental Health Services Administration, private institutions like Boston Children's Hospital, and even other Legislative Commissions like the Behavioral Health Integration Taskforce.[221] Significant work and advancements have been made in recent years, e.g. requiring behavioral health screenings in primary care and funding the Massachusetts Child Psychiatry Access Program (which provides behavioral health technical assistance and knowledge to pediatricians).[222]

Population or condition-specific training and support are required in order for integrated pediatric practices to provide the best opportunity for prevention and early intervention.

Expanding the capacity of primary care to provide behavioral health services, including wellness education, vastly improves access to behavioral health services for children, overcomes the stigma surrounding behavioral health illnesses, and affords an important opportunity for patients and their caregivers to receive key information about behavioral health. However, pediatricians and their existing staff do not have the clinical and administrative capacity to provide behavioral health services and education on their own.

Pediatric offices lack the training, support, and administrative infrastructure to achieve full integration. For example, primary care physicians receive minimal training and education in behavioral healthcare. Likewise, integration also requires educating and supporting other key staff, including frontline administrative and billing staff. Expanding training and technical assistance for practices in both the administrative and clinical areas and allowing for expanded reimbursement can provide the additional incentives and supports to achieve integration.

Despite a policy-level mandate to integrate SUD services for adolescents into primary care settings, SUD is not effectively managed in pediatric primary care due to a lack of expertise, even in practices that have embedded behavioral health specialists. With support and training, pediatricians and integrated behavioral health clinicians can deliver early screening and intervention for substance misuse. Having trained professionals within adolescent primary care practices is essential to stem the tide of acute adult disorders, since the majority of adults with substance misuse disorders begin using in their teens.

18. **Recommend that the Commonwealth advance prevention and promotion initiatives within the healthcare system by:**
    a. **Prioritizing support and investing funding for ACOs, or other healthcare organizations, to incorporate behavioral health promotion and prevention science and initiatives, including mechanisms to fund evidence-based programs and practices.**
    b. **Creating a partnership between MassHealth, the Health Policy Commission, Division of Insurance, and prevention experts from within the Promote Prevent Commission, and the Departments of Public Health, Mental Health, and Elementary and Secondary Education to develop guidance and support for ACOs, and other healthcare organizations, to:**
        - **Support evidence-based promotion and prevention initiatives and practices to address social determinants of behavioral**

health, including mechanisms to fund evidence-based programs and practices; and,

- **Encourage collaboration with community-based prevention coalitions.**

c. Incorporate measurements of risk and protective factors and social determinants of health into community needs assessments by hospitals.

RATIONALE: Behavioral health services represent a significant share of public and private healthcare expenditures, including, for example:[223]

- an estimated 10.3% of total FY2015 MassHealth on behavioral health services (or an estimated $1,414,123,546)
- an estimated $282,197,536 in total hospital costs for serious mental illness in Massachusetts

Likewise, those suffering from behavioral health disorders are also at significantly increased risk for any number of chronic physical conditions, including diabetes and heart disease. This further increases the healthcare costs associated with behavioral health disorders.

By reducing the incidence of behavioral health disorders and issues, evidence-based prevention and promotion can generate savings, including reducing healthcare costs (see page 9 for more information). This savings offers significant potential long term benefits for payers, including MassHealth.

As evidenced by the MassHealth ACOs, healthcare organizations will increasingly be accountable for the long-term health outcomes for the populations they serve. As these responsibilities increase, prevention and behavioral health promotion initiatives can be a valuable tool for those organizations to achieve long term health outcomes.

Considering potential cost reductions and improved healthcare outcomes, the Commission affirms that healthcare payers (like MassHealth) and providers (like MassHealth ACOs) are key stakeholders in behavioral healthcare cost savings and potential partners who can support the implementation of evidence-based initiatives.

19. Invest in training to prepare caregivers, educators, first responders, students, and the general public on how to identify and support individuals in emotional crises.

RATIONALE: Training in programs like Mental Health First Aid and Question Persuade and Refer enable loved ones, caregivers, and bystanders to help children or adults who are in crisis or even considering suicide. First responders, school staff, and medical professionals have benefitted from these trainings worldwide.

20. Recommend continued investments in Crisis Intervention Team Training (CIT) and other behavioral health training for law enforcement officers statewide.

RATIONALE: As Middlesex Sheriff Peter J. Koutoujian puts it, "Our jails and houses of correction have become de facto mental health and addiction treatment facilities."[224] The jailing of young people for conduct that is related to mental illness and substance misuse is often the beginning of a long downward slide. Early intervention to redirect persons whose offenses are mental health or substance abuse based and do not pose a threat to public safety will save both lives otherwise wasted and allow the Commonwealth to better use precious resources.

Incarceration typically begins with arrest and jailing. Street incidents involving persons whose actions can be attributed to early mental health crises or substance misuse can escalate into arrests and prosecutions.

So-called Crisis Intervention Teams (CIT) brings together law enforcement, mental health providers, hospital emergency departments and individuals with mental illness and their families to better address such circumstances and support individuals with mental health issues. Specially trained teams deescalate situations and institute more appropriate responses, including referral to mental health services. This approach has measured success in the Commonwealth and other jurisdictions.

The CIT training curriculum encompasses upstream concerns. It features training on issues related to kids and families, including: how to work with children and families, responding to youth, and adolescent brain development.

Recently 182 Massachusetts police chiefs signed onto the "One Mind Pledge" of the International Association of Chiefs of Police, committing to train all of their officers in Mental Health First Aid and 20% of them in Crisis Intervention Team Training. The Department of Mental Health (DMH) is heavily involved in this effort. DMH established four regional Crisis Intervention Team Training and Technical Assistance Centers. Even with

these successful efforts, a statewide strategy for bringing these critical programs to all 351 cities and towns throughout the Commonwealth is in its earliest stages.

21. **Recommend that the Legislature and Governor convene a time-limited taskforce—including the Office of Medicaid, Division of Insurance, all appropriate behavioral health trade associations, and other key stakeholders—to investigate how to improve access to pediatric behavioral health services by studying approaches to increase the number of providers who take public and private insurance. Said investigation shall develop recommendations relating to:**
    a. **adequacy and availability of reimbursement including through new payment models for behavioral health screening, education, treatment and wellness services provided by pediatricians or other qualified staff;**
    b. **administrative burdens for providers;**
    c. **service shortage areas of the state; and,**
    d. **minimum licensure requirements or professional standards on providers to accept insurance as payment from those patients who are unable to pay out of pocket.**

RATIONALE: We have heard from testifiers that although the Commonwealth enjoys a strong population of health practitioners, those practitioners often do not accept insurance as a result of administrative burdens with billing for services and inadequate reimbursement rates. We understand this limits access to early behavioral health services for MassHealth patients. This recommendation will address this access issue by studying how to reduce administrative burdens, improve reimbursement, and recommend professional standards for serving low-income pediatric patient populations.

PROMOTING BEHAVIORAL HEALTH IN SCHOOLS

22. Recommend that the Legislature or Governor advance social-emotional learning in schools by:

I. Forming a partnership between the Departments of Higher Education, Elementary and Secondary Education, and Early Education and Care, and Massachusetts Public and Private Colleges and Universities of Education to advance pre-service educator training and continuing education in the components of social-emotional learning;

II. Direct the Department of Elementary and Secondary Education to revise (1) the guidelines for MA Professional Standards for Teachers to move the Social and Emotional Learning Indicator (2e) from the "practice" level to the "demonstrate" level, and (2) the Candidate Assessment of Performance to include a Social and Emotional Learning Indicator at the Demonstrate Level; and,

III. Continue investments in training and education for school and district staff, such as principals and superintendents, through work with relevant initiatives, including but not limited to the Safe and Supportive Schools Commission.

RATIONALE: Multiple testifiers discussed the value of infusing social-emotional learning (SEL) into schools at every grade level beginning in preschool. SEL is already a major priority of EOE, DESE, and EEC which have advanced SEL through multiple approaches.

- Developed preK-K standards on SEL; resources and guidance on implementing SEL curricula K-12, and professional standards for educators in SEL (EEC, DESE)
- Established language on SEL competencies for all students using a tiered approach to SEL (DESE)
- Adopted SEL as a guiding principle in revised Mathematics and English Language Arts Literacy Curriculum Frameworks (DESE)

- Helped lead the Safe and Supportive Schools Commission and associated work on safe and supportive schools framework and self-assessment tool for schools, as required by the Legislature (DESE)
- Required opportunities for pre-service teachers to practice SEL (DESE)
- Supporting "Social-Emotional Learning, Health, and Safety" as one of its five core strategies to accelerate the pace of school improvement towards the goal of preparing all students for success after high school (DESE)
- Supporting the capacity of the early education workforce to meet the needs of children with behavioral health needs (EEC)

Ultimately, educators—our education system's leaders—will fulfill the mission and goals of expanding SEL. Unfortunately, a significant SEL knowledge gap exists within the educator workforce because educator preparation curriculums within colleges of education do not include sufficient SEL training and coursework.[225] As a result, many teachers are not sufficiently aware of SEL's purpose, methodology, and benefits and consequently are not prepared to integrate the SEL dimensions of learning and teaching and foster development of SEL skills. Expanding SEL in pre-service and continuing teacher education will develop educators' capacity to scale up SEL, align with ongoing state-level work, and place our state's colleges of education at the forefront of this work nationally.

The current Professional Standards for Teachers and Candidate Assessment of Performance include standards to promote the learning and growth of all students in a range of important areas, such as the use of effective strategies and techniques for making content available to English language learners. But despite the importance of the teacher's role in effective behavioral health promotion through social and emotional learning (SEL), 2e is currently the only Teaching All Students standard (#2) that is not at "demonstrate" level, which requires pre-service candidates to "consistently demonstrate competency through coursework and in field-based experience as measured by the teacher performance assessment." At the "practice level", candidates merely have to "have opportunities to practice, to be observed, and to receive feedback through coursework and/or in field-based experiences". This recommendation builds on what was already put in place by the establishment of this indicator; moving 2e to the "demonstrate" level would reflect the priority of behavioral health promotion in the Commonwealth.

23. Recommend that the legislature insert a section in M.G.L. Chapter 71 to explicitly encourage and allow public schools to incorporate mental health promotion education into their comprehensive health education curricula, and other applicable curricula areas, and to enable supplemental instruction in key topics including mental

health, social-emotional learning competencies, coping skills, mental illness, brain development, stress and anxiety management, depression, and violence prevention.

24. **Recommend that the Department of Elementary and Secondary Education include behavioral health promotion and prevention topics in the revision of the Comprehensive Health Education Curriculum Framework and associated guidelines, including but not limited to social-emotional learning, coping skills, mental illness, brain development, depression, and stress and anxiety management.**

RATIONALE: The current statewide Massachusetts Comprehensive Health Education Curriculum Framework has not been updated since 1999. The Framework lists basic components in social and emotional health, mental health, and stress; however, additional mental health promotion components would be helpful to include. This will enable but not require school districts to advance mental health promotion as part of their health education curricula.

Education about mental health promotion will increase student awareness about mental health and illness, coping skills and stress management, and how to seek help for mental health issues as needed.

A number of mental health curriculums exist for public schools that could be implemented for free or limited cost. For example, Boston Children's Hospital developed a Break Free from Depression curriculum to increase awareness about adolescent depression among high school students. Boston Public Schools has been piloting the program with positive outcomes for teachers and students. The Hospital provides a 4-part online video series that teaches educators about how to implement the program.

25. **Recommend that the Legislature:**
    I. **Insert a section in Chapter 69 directing the Department of Elementary and Secondary Education to (a) conduct a survey of district policies on time, frequency, and structure of recess offered to K-5 students, (b) develop guidance for districts to use when developing recess policies, including limiting restrictions on recess as a penalty for student conduct issues; and**

II. Establish minimum recess standards in Chapter 69 based on the district survey (Ia).

RATIONALE: Play is the work of childhood. The Centers for Disease Control and Prevention and the American Academy of Pediatrics advise that recess offers significant benefits for students, such as:[226] [227] [228]

- Increased physical activity
- Improved memory, attention, concentration, and on-task behaviors in the classroom
- Reduced disruptive behavior
- Promoted social-emotional development

Despite the evidence, not all schools are providing K-5 students at least 20 minutes of recess time per day. In 2017, Boston required all K-8 graders to receive at least 20 minutes of recess time.

SUMMARY OF SPECIAL COMMISSION ACTIVITIES

- ✓ **Held 7 meetings and 3 public hearings** since February featuring over 75 local, statewide, and national testifiers, including special presentations from US Senator Edward Markey; HHS Secretary Sudders; Michael Botticelli, frm. National Drug Control Policy Director; Kathryn Power, US Substance Abuse Mental Health Services Administrator; Thomas Abt, frm. DOJ Chief of Staff and director of President Obama's National Forum on Youth Violence Prevention
- ✓ **Established 5 working groups** which met over 25 times, engaged numerous outside experts, and developed recommendations on systems changes, policy, programs, and funding
- ✓ **Engaged numerous local, statewide, and national experts in countless meetings,** including state leaders from Colorado and Pennsylvania and experts from the U.S. Institute of Medicine and the Substance Abuse and Mental Health Services Administration
- ✓ **Developed PROMOTEPREVENT.COM**, which includes legislative language, mission, research resources, meeting notes and videos, calendar, commissioner bios, and other background info
- ✓ **Formed a science panel of key experts and coalition leaders** to review Commission recommendations, assist with report development, and allow for vetting outside
- ✓ Conducted an online survey of over 150 members of the public and completed a focus group with students from a local recovery high school

PARTNERSHIP: PEW-MACARTHUR RESULTS FIRST INITIATIVE

- ✓ The Results First Initiative, a project of The Pew Charitable Trusts and the John D. and Catherine T. MacArthur Foundation, works with states to implement an innovative cost-benefit analysis approach that helps them invest in policies and programs that are proven to work
- ✓ The Commission partnered with Results FIRST to collaborate with DPH and DMH to 1) conduct a comprehensive review of preventions programs and 2) develop a nation leading state-specific cost-benefit analysis of programming

FULL COMMISSION MEETINGS & HEARINGS

1. **State of the State on Behavioral Health, April 3, 2017**
   Presentations from:
   - U.S. Senator Ed Markey
   - Marylou Sudders, Secretary of Health and Human Services
   - Paula Carey, Chief Justice, Massachusetts Trial Courts
   - Monica Bharel, Commissioner, Department of Public Health
   - Joan Mikula, Commissioner, Department of Mental Health
2. **The Promise of Prevention, May 9th**
   Presentations from:
   - Dr. Dennis Embry, Founder of the PAXIS Institute, Renowned Prevention Scientist

- Select Authors of National Academy of Medicine Report, Unleashing the Power of Prevention:
  - J. David Hawkins, PhD, Endowed Professor in Prevention, University of WA
  - William Beardslee, MD, Harvard University's Judge Barker Children's Center
  - Jeff Jenson, PhD, Philip D. and Eleanor G. Winn Endowed Professor for Children and Youth, University of Denver
  - Laurel Leslie, MD, MPH, Vice President, Research, American Board of Pediatrics; Pediatrics Professor, Tufts University
- Ben Fulton and Steve Lize, Pew-MacArthur Results First Initiative

3. **Financing Prevention, June 6th**
   - Presentation from Health Policy Commission Executive Director David Seltz

4. **Public Hearing-Boston, Massachusetts State House, July 19th**
   - Featuring 15 esteemed expert testifiers, including Rep. Malia, Massachusetts School Psychologist Association, Boston Children's Hospital, & BPHC

5. **Mental Health & Substance Use, September 25th**
   - **Speakers:** Mass Association for Mental Health, Boston Children's Hospital & Boston Public Schools

6. **Violence Prevention, October 12th**
   - Scarlett Lewis, Founder, Jesse Lewis Choose Love Movement (Jessie Lewis was among the children murdered at Sandy Hook Elementary School)
   - Thomas Abt, Senior Research Fellow, Center for International Development, Harvard Kennedy School; Frm. Deputy Secretary for Public Safety, New York; National Forum on Youth Violence Prevention, Frm. Chief of Staff, Office of Justice Programs, U.S. Dept. of Justice
   - Molly Baldwin, Founder, ROCA, a pay-for-success provider of recidivism prevention services

7. **Public Hearing, BID-Plymouth Hospital, November 2nd**
   - Featuring leaders from BID-Plymouth, Mass Hospital Association, and 15+ testifiers from the public including school leaders, local prevention coordinators, & Plymouth County DA Tim Cruz

8. **Full Commission Working Group Meeting and Report Out, November 14th**

9. **Public Hearing, Education Development Center Inc., December 15th**
   - Featuring EDC, MAHP, SAMHSA, Michael Botticelli, MA Psychological Association and 20+ testifiers from the public including school leaders and local prevention coordinators

10. **Accountable Care Organizations & Results First, January 23rd**
    - Featuring presentations from the Office of Medicaid and Results First

Results First Analysis Reports from the Departments of Public Health and Mental Health

INTERVENTION SPECTRUM: UNIVERSAL PREVENTION

Prepared by: Department of Public Health, Bureau of Substance Addiction Services

This report summarizes the findings of a benefit-cost analysis of the Massachusetts Department of Public Health (DPH), Bureau of Substance Addiction Services (BSAS) prevention programs based on an approach supported by the Pew-MacArthur Results First Initiative. Massachusetts is one of a growing number of states and counties that are customizing this approach and using its results to inform policy and budget decisions.

The Results First Approach

The Pew-MacArthur Results First Initiative, a project of The Pew Charitable Trusts and the John D. and Catherine T. MacArthur Foundation, works with states and localities to develop the tools policymakers need to identify and fund effective programs that yield high returns on investment. Using innovative and customizable methods, Results First partners learn to:

- Create an inventory of currently funded programs;
- Review which programs work;
- Conduct benefit-cost analysis to compare programs' likely return on investment; and
- Use evidence to inform spending and policy decisions.

Taken together, these efforts have helped leaders make more informed decisions, ensuring that resources are directed toward effective, cost-beneficial approaches.

DPH BSAS Involvement

Working with the Pew McArthur-Results First team has allowed for a broader exploration of *evidence-based* programs that show effectiveness in addressing and mitigating the risks associated with youth substance use.

The process that was employed through the Results First initiative, including the use of the benefit-cost analysis tool and cross-agency collaboration, has the potential to enhance the Commonwealth's ability to proactively and effectively identify and assess initiatives that impact and prevent risk factors and address the root causes that put our youth at greatest risk.

This document includes a summary of currently funded prevention programs and systems (I) and promising prevention programs and systems which are not currently funded (II). Each program summary includes a review of the evidence base and effectiveness rating(s), as well as the results of the cost-benefit tool analysis.

I. CURRENTLY FUNDED PREVENTION PROGRAMS/SYSTEMS:

1. LifeSkills Training (LST) | Program

Life Skills Training (LST) is a school-based classroom intervention to reduce the risks of alcohol, tobacco, drug abuse, and violence by targeting social and psychological factors associated with initiation of risky behaviors. Teachers deliver the program to elementary, middle, and/or junior high school students in 24 to 30 sessions over three years. Students in the program are taught general self-management and social skills and skills related to avoiding substance use.

Evidence-Based: **Yes**

Effectiveness Rating(s):

- Blueprints Rating: **Highest Rated/ Model Plus**
- Coalition Rating: **Highest Rated/Top Tier**
- Crime Solutions Rating: **Highest Rated /Effective**
- NREPP Rating: **Highest Rated/4 out of 4**
- PPN Rating: **Highest Rated/ Proven**

Benefit-Cost:

Expected Case	Dollars
Benefits to Participants	$713
Benefits to Taxpayers	$469
Other Beneficiaries	$262
Other Indirect Benefits	$35
Total Benefits	$1,479
Cost (Net)	$33
Benefits - Costs (NPV)	$1,446
Benefits / Costs (Ratio)	$44.81

Benefits from Primary Participant

Source of Benefits	To Participant	To Taxpayers	To Others	Other Indirect Benefits	Total Benefits
Crime	$0	$37	$94	$0	$131
Earnings: DSM Alcohol Disorder	($423)	($192)	$0	($2)	($616)
Earnings: Tobacco, Regular Use	$1,089	$495	$0	$36	$1,620
Health Care Costs: Alcohol	($6)	($32)	($32)	$0	($70)
Health Care Costs: Alcohol	$52	$160	$199	$0	$411
Property Loss: Alcohol	$0	$0	$1	$0	$1

Social Emotional Learning (SEL)* Support: **Yes**

** Under the federal education law, Every Student Succeeds Act, schools can expand their SEL programs that teach children self-control, to resolve conflicts, and to make responsible decisions and avoid risky behaviors. Research shows that these "soft skills" benefit children for their entire lives and can have a positive impact on schools.*

2. **PAX Good Behavior Game | Program**

A classroom game providing a strategy to help elementary teachers reduce aggressive, disruptive behavior and other behavioral problems in children, particularly highly aggressive children, while creating a positive and effective learning environment. The Good Behavior Game is a two-year classroom management strategy designed to improve aggressive/disruptive classroom behavior and prevent later criminality. The program is universal and can be applied to general populations of early elementary school children (grades 1 and 2).

Evidence-Based: **Yes**

Effectiveness Rating(s):

- NREPP Rating: **Highest Rated/3.5 out of 4**

Benefit-Cost:

Expected Case	Dollars
Benefits to Participants	$6,122
Benefits to Taxpayers	$3,996
Other Beneficiaries	$1,218
Other Indirect Benefits	$20
Total Benefits	$11,356
Cost (Net)	$325
Benefits - Costs (NPV)	$11,031
Benefits / Costs (Ratio)	$34.94

Benefits from Primary Participant

Source of Benefits	To Participant	To Taxpayers	To Others	Other Indirect Benefits	Total Benefits
Crime	$0	$277	$667	$0	$944
Earnings: DSM Alcohol Disorder	$5,968	$2,710	$0	$20	$8,698
Health Care Costs via High School Graduation	($84)	$308	($335)	$0	($111)
Health Care Costs: Tobacco	$228	$700	$867	$0	$1,796
Property Loss: Alcohol	$10	$0	$19	$0	$29

** Under the federal education law, Every Student Succeeds Act (ESSA), schools can expand their SEL programs that teach children self-control, to resolve conflicts, and to make responsible decisions and avoid risky behaviors. Research shows that these "soft skills" benefit children for their entire lives and can have a positive impact on schools.*

3. SAMHSA Strategic Prevention Framework (SPF) | Planning/Prevention System

SAMHSA's Strategic Prevention Framework (SPF) is a planning process for preventing substance use and misuse.

The five steps and two guiding principles of the SPF offer prevention professionals a comprehensive process for addressing the substance misuse and related behavioral health problems facing their communities. The effectiveness of the SPF begins with a clear understanding of community needs and involves community members in all stages of the planning process.

The SPF planning process has five distinctive features. The SPF is:

- Data driven
- Dynamic
- Focused on population-level change
- Intended to guide prevention efforts for people of all ages
- Reliant on a team approach

Evidence-Based: **N/A**

Effectiveness Rating(s): **N/A**

Benefit-Cost: **N/A**

Social Emotional Learning (SEL)* Support: **N/A**

Notes: *This is a required framework for all BSAS-funded prevention programs/grantees is the foundation of their long-term substance use prevention strategic planning.*

All 63+ BSAS prevention program grantees (MA cities/towns) and 110+ partner communities have, or are currently building their capacity, to use the Strategic Prevention Framework to guide their local and regional prevention efforts.

II. PROMISING PREVENTION PROGRAMS/SYSTEMS (NOT CURRENTLY FUNDED):

1. Communities That Care (CTC) | Planning/Prevention System

Communities that Care (CTC) is a coalition-based community prevention program that aims to prevent youth problem behaviors including underage drinking, tobacco use, violence, delinquency, school dropout, and substance abuse. CTC works through a community board to assess risk and protective factors among the youth in their community. The board works to implement tested and effective programs to address the issues and needs that are identified.

Evidence-Based: **Yes**

Effectiveness Rating(s):

- Blueprints Rating: **Second-highest Rated/Promising**
- Crime Solutions Rating: **Second-highest Rated/Promising**
- NREPP Rating: **Highest Rated/3.6 out of 4**

Benefit-Cost:

Expected Case	Dollars
Benefits to Participants	$1,059
Benefits to Taxpayers	$1,126
Other Beneficiaries	$1,249
Other Indirect Benefits	$4
Total Benefits	$3,437
Cost (Net)	$451
Benefits - Costs (NPV)	$2,986
Benefits / Costs (Ratio)	$7.62

Benefits from Primary Participant

Source of Benefits	To Participant	To Taxpayers	To Others	Other Indirect Benefits	Total Benefits
Crime	$0	$459	$1,183	$0	$1,642
Earnings: DSM Alcohol Disorder	$1,044	$474	$0	$4	$1,523
Health Care Costs via High School Graduation	($18)	$67	($74)	$0	($25)
Health Care Costs: Illicit Drugs	$31	$126	$135	$0	$292
Property Loss: Alcohol	$2	$0	$4	$0	$6

Social Emotional Learning (SEL)* Support: **N/A**

2. **Strengthening Families Program: For Parents and Youth 10–14 | Program**

The Strengthening Families Program: For Parents and Youth 10-14 (SFP 10-14) is a family skills training intervention designed to enhance school success and reduce youth substance use and aggression among 10- to 14-year-olds. It is theoretically based on several etiological and intervention models including the biopsychosocial vulnerability, resiliency, and family process models. The program includes seven 2-hour sessions and four optional booster sessions in which parents and youth meet separately for instruction during the first hour and together for family activities during the second hour. The sessions provide

instruction for parents on understanding the risk factors for substance use, enhancing parent-child bonding, monitoring compliance with parental guidelines and imposing appropriate consequences, managing anger and family conflict, and fostering positive child involvement in family tasks. Children receive instruction on resisting peer influences to use substances. Sessions, which are typically held once a week, can be taught effectively by a wide variety of staff.

Evidence-Based: **Yes**

Effectiveness Rating(s):

- Blueprints Rating: **Second-highest Rated/Promising**
- Crime Solutions Rating: **Highest Rated/Effective**
- NREPP Rating: **Highest Rated/3.3 out of 4**

Benefit-Cost:

Expected Case	Dollars
Benefits to Participants	$2,714
Benefits to Taxpayers	$1,543
Other Beneficiaries	$782
Other Indirect Benefits	$87
Total Benefits	$5,125
Cost (Net)	$2,736
Benefits - Costs (NPV)	$2,389
Benefits / Costs (Ratio)	$1.87

Benefits from Primary Participant

Source of Benefits	To Participant	To Taxpayers	To Others	Other Indirect Benefits	Total Benefits
Crime	$0	$310	$774	$0	$1,084
Earnings: Tobacco, Regular Use	$2,711	$1,231	$0	$87	$4,028
Health Care Costs: Disruptive Behavior	$1	$2	$2	$0	$5
Property Loss: Alcohol	$3	$0	$5	$0	$8

Social Emotional Learning (SEL)* Support: **Yes**

** Under the federal education law, Every Student Succeeds Act (ESSA), schools can expand their SEL programs that teach children self-control, to resolve conflicts, and to make responsible decisions and avoid risky behaviors. Research shows that these "soft skills" benefit children for their entire lives and can have a positive impact on schools.*

3. **All Stars™ | Program**

All Stars is a school-based program for adolescents age 11-14. The program is designed to prevent substance abuse and other high risk behaviors as well as promote healthy and positive behaviors. All Stars "Core" includes thirteen 45-minute class sessions delivered on a weekly basis by teachers. All Stars "Plus" includes twelve 45-minute lessons designed to expand instruction on "Core" on decision-making, goal setting, and peer pressure resistance skills training.. The program evaluation found no statistical significance between the control and experiment group for violence, substance abuse or sexual activity unless combined with Strengthening Families 10-14.

Evidence-Based: **Yes**

Effectiveness Rating(s):

- Crime Solutions Rating: **No Effects* (*Effectiveness if combined with Strengthening Families For Parents and Youth 10-14)**
- NREPP Rating: **Second-highest Rated/Promising**

Benefit-Cost:

Expected Case	Dollars
Benefits to Participants	$1,203
Benefits to Taxpayers	$851
Other Beneficiaries	$330
Other Indirect Benefits	$4
Total Benefits	$2,388
Cost (Net)	$173
Benefits - Costs (NPV)	$2,215
Benefits / Costs (Ratio)	$13.80

Benefits from Primary Participant

Source of Benefits	To Participant	To Taxpayers	To Others	Other Indirect Benefits	Total Benefits
Crime	$0	$96	$242	$0	$339
Earnings: DSM Alcohol Disorder	$1,177	$535	$0	$4	$1,716
Health Care Costs via High School Graduation	($22)	$82	($90)	$0	($30)
Health Care Costs: Tobacco	$45	$138	$171	$0	$354
Property Loss: Alcohol	$3	$0	$6	$0	$9

Social Emotional Learning (SEL)* Support: **Yes**

** Under the federal education law, Every Student Succeeds Act (ESSA), schools can expand their SEL programs that teach children self-control, to resolve conflicts, and to make responsible decisions and avoid risky behaviors. Research shows that these "soft skills" benefit children for their entire lives and can have a positive impact on schools.*

4. **Family Check-Up (also known as Positive Family Support) | Program**

Positive Family Support/Family Check-Up (formerly Adolescent Transitions Program) is a three-tiered intervention implemented in middle schools. The first level is a universal component that involves the establishment of a family resource center and the implementation of a six-week prevention curriculum. The second tier is Family Check-Up, an assessment and brief motivational interview component for students identified as at-risk. The third tier is the Family Intervention Menu, which directs parents of substance-using adolescents to treatment options, parenting groups, and family therapy sessions. Our review is of the entire Positive Family Support model and not solely the second tier Family Check-Up component..

Evidence-Based: **Yes**

Effectiveness Rating(s):

- Blueprints Rating: **Second-highest Rated/Promising**
- CEBC Rating: **Highest Rated/Well Supported**
- Crime Solutions Rating: **Second-highest Rated/Promising**
- NREPP Rating: **Highest Rated/3.1 out of 4**

Benefit-Cost:

Expected Case	Dollars
Benefits to Participants	$15
Benefits to Taxpayers	$124
Other Beneficiaries	$305
Other Indirect Benefits	$0
Total Benefits	$444
Cost (Net)	$317
Benefits - Costs (NPV)	$127
Benefits / Costs (Ratio)	$1.40

Benefits from Primary Participant

Source of Benefits	To Participant	To Taxpayers	To Others	Other Indirect Benefits	Total Benefits
Crime	$0	$116	$297	$0	$413
Earnings: DSM Depression	$11	$5	$0	$0	$17
Health Care Costs: DSM Depression	$1	$3	$4	$0	$8
Property Loss: Alcohol	$2	$0	$4	$0	$6

Social Emotional Learning (SEL)* Support: **Yes**

** Under the federal education law, Every Student Succeeds Act (ESSA), schools can expand their SEL programs that teach children self-control, to resolve conflicts, and to make responsible decisions and avoid risky behaviors. Research shows that these "soft skills" benefit children for their entire lives and can have a positive impact on schools.*

5. **Prosper | Planning/Prevention System**

As a delivery system rather than substantive program, PROSPER attempts to foster implementation of evidence-based youth and family interventions, complete with ongoing needs assessments, monitoring of implementation quality and partnership functions, and evaluation of intervention outcomes to prevent onset and reduce use of alcohol, tobacco, and other drugs and problem behaviors.

Evidence-Based: **Yes**

Effectiveness Rating(s):

- Blueprints Rating: **Second-highest Rated/Promising**
- Coalition Rating: **Second-highest Rated/Near Top Tier**
- Crime Solutions Rating: **Second-highest Rated/Promising**

Benefit-Cost:

Expected Case	Dollars
Benefits to Participants	$329
Benefits to Taxpayers	$603
Other Beneficiaries	$645
Other Indirect Benefits	$0
Total Benefits	$1,576
Cost (Net)	$529
Benefits - Costs (NPV)	$1,047
Benefits / Costs (Ratio)	$2.98

Benefits from Primary Participant

Source of Benefits	To Participant	To Taxpayers	To Others	Other Indirect Benefits	Total Benefits
Crime	$0	$37	$93	$0	$130
Earnings via high school graduation	$228	$104	$105	$0	$437
Health Care Costs via High School Graduation	($6)	$23	($25)	$0	($8)
Health Care Costs: Illicit Drugs	$107	$439	$472	$0	$1,017
Property Loss: Alcohol	$0	$0	$0	$0	$0

Social Emotional Learning (SEL)* Support: **N/A**

INTERVENTION SPECTRUM: INDICATED PREVENTION

Prepared by: Department of Public Health, Bureau of Substance Addiction Services

This report summarizes the findings of a benefit-cost analysis of the Massachusetts Department of Public Health (DPH), Bureau of Substance Addiction Services (BSAS) prevention programs based on an approach supported by the Pew-MacArthur Results First Initiative. Massachusetts is one of a growing number of states and counties that are customizing this approach and using its results to inform policy and budget decisions.

The Results First Approach

The Pew-MacArthur Results First Initiative, a project of The Pew Charitable Trusts and the John D. and Catherine T. MacArthur Foundation, works with states and localities to develop tools which policymakers can employ to identify and fund effective programs that yield high returns on investment. Using innovative and customizable methods, Results First partners learn to:

- Create an inventory of currently funded programs;
- Review which programs work;
- Conduct benefit-cost analysis to compare programs' likely return on investment; and
- Use evidence to inform spending and policy decisions.

Taken together, these efforts have helped leaders make more informed decisions, ensuring that resources are directed toward effective, cost-beneficial approaches.

DPH BSAS Involvement

Working with the Pew McArthur-Results First team has allowed for a broader exploration of *evidence-based* programs that show effectiveness in addressing and mitigating the risks associated with youth substance use.

Through this process, **DPH BSAS has reviewed Indicated Prevention** strategies in an effort to identify youth who are experiencing early signs of substance abuse and other related problem behaviors associated with substance abuse. The individuals identified at this stage, though potentially experimenting with substance use, have not reached the point where clinical diagnosis of substance abuse can be made. **Indicated Prevention** approaches are used for individuals who may or may not be abusing substances but who exhibit risk factors such as school failure, interpersonal social problems, delinquency, and other antisocial behaviors, and psychological problems such as depression and suicidal behavior, which increases their chances of developing a drug abuse problem.

The process that was employed through the Results First initiative, including the use of the benefit-cost analysis tool and cross-agency collaboration, has the potential to enhance the Commonwealth's ability to proactively and effectively identify and assess initiatives that

impact and prevent risk factors and address the root causes that put our youth at greatest risk.

This document includes a summary of currently funded prevention programs and systems (I) and promising prevention programs and systems which are not currently funded (II). Each program summary includes a review of the evidence base and effectiveness rating(s), as well as the results of the cost-benefit tool analysis.

III. INDICATED PREVENTION PROGRAMS/SYSTEMS (CURRENTLY FUNDED):

4. CASASTART (MassSTART) | Program

CASASTART (MassSTART) is an early intervention program targeting youth ages 8-13 who have demonstrated at-risk behaviors. These behaviors can include but are not limited to poor academic performance, poor attendance, aggressive acts/violence, or substance use. Other criteria can include identified substance use by a parent or sibling within the home, witness to violence within the home, or experiencing a traumatic event. The program looks to reduce and/or eliminate high risk behaviors by providing intensive case management, family services such as counseling, parent education, after school activities, tutoring, mentoring, and creating links to other supports and services providers within the community.

Evidence-Based: **Yes**

Effectiveness Rating(s):
- Crime Solutions Rating: **No Effect**
- Clearinghouse for Military Family Readiness Rating: **Ineffective**
- OJJDP Rating: **No Effect**

Benefit-Cost:

Expected Case	Dollars
Benefits to Participants	($528)
Benefits to Taxpayers	($307)
Other Beneficiaries	($2,177)
Other Indirect Benefits	$3
Total Benefits	($3,010)
Cost (Net)	$10,708
Benefits - Costs (NPV)	($13,718)
Benefits / Costs (Ratio)	($0.28)

Benefits from Primary Participant

Source of Benefits	To Participant	To Taxpayers	To Others	Other Indirect Benefits	Total Benefits
Crime	$0	($640)	($2,114)	$0	($2,754)
Earnings via high school graduation	($1,563)	($710)	($724)	$0	($2,997)
Earnings: DSM Alcohol Disorder	$885	$402	$0	$3	$1,290
Health Care Costs via High School Graduation	($4)	$16	($18)	$0	($6)
Health Care Costs: Illicit Drugs	$152	$625	$674	$0	$1,451
Property Loss: Alcohol	$3	$0	$5	$0	$7

Social Emotional Learning (SEL)* Support: **Yes**

Notes: CASASTART is currently operating in two school districts within the Commonwealth.

5. **Adolescent Community Reinforcement Approach (A-CRA) | Therapy Model**

The Adolescent – Community Resource Approach (A-CRA) is a behavioral intervention that seeks to increase family, social and educational/vocational reinforcement strategies of an adolescent to support recovery from substance abuse and dependence. It is a community based outpatient treatment that targets youth ages 12-18 year old with a diagnosis of a substance use and/or co-occurring disorder.

Evidence-Based: **Yes**

Effectiveness Rating(s):
- NREPP Rating: **Effective**
- OJJDP Rating: **Effective**
- Criminal Solutions Rating: **Effective**

Benefit-Cost: Data not available.

Social Emotional Learning (SEL)* Support: **Yes**

Notes: There are ten BSAS/OYYAS licensed and funded agencies across the Commonwealth utilizing this intervention model.

IV. INDICATED PREVENTION PROGRAMS/SYSTEMS (NOT CURRENTLY FUNDED):

6. **Multidimensional Family Therapy | Therapy Model**

Multidimensional Family Therapy is a comprehensive and multisystemic family-based outpatient or partial hospitalization program for substance abusing

adolescents, adolescents with co-occurring substance use and mental disorders, and those at high risk for continued substance abuse and other problem behaviors such as conduct disorder and delinquency. Working with the individual youth and his or her family, this program helps the youth develop more effective coping and problem solving skills for better decision making and helps the family improve interpersonal functioning as a protective factor against substance abuse and related problems.

Evidence-Based: **Yes**
Effectiveness Rating(s):
- NREPP Rating: **Rated/3.6 out of 4**
- Crime Solutions Rating: **Effective**
- OJJDP Rating: **Effective**

Benefit-Cost:

Expected Case	Dollars
Benefits to Participants	$128
Benefits to Taxpayers	$1,993
Other Beneficiaries	$4,803
Other Indirect Benefits	$0
Total Benefits	$6,924
Cost (Net)	$3,263
Benefits - Costs (NPV)	$3,661
Benefits / Costs (Ratio)	$2.12

Benefits from Primary Participant

Source of Benefits	To Participant	To Taxpayers	To Others	Other Indirect Benefits	Total Benefits
Crime	$0	$1,902	$4,757	$0	$6,659
Earnings: DSM Cannabis Disorder	$116	$53	$0	$0	$169
Health Care Costs: Cannabis	$12	$38	$46	$0	$96

Social Emotional Learning (SEL)* Support: **Yes**

7. Motivational Enhancement Therapy/Cognitive Behavioral Therapy (MET/CBT5) | Therapy Model

Motivational Enhancement Therapy/Cognitive Behavioral Therapy (MET/CBT5) for Adolescent Cannabis Use is designed for the treatment of adolescents between the ages of 12-18, who have problems related to marijuana use as indicated by one of the following: 1. meeting criteria for cannabis use or dependence; 2. experiencing problems (emotional,

physical, legal, social, or academic) associated with marijuana use; 3. using marijuana at least weekly for 3 months.

Evidence-Based: **Yes**

Effectiveness Rating(s):
- NREPP Rating: **Effective**
- CEBC Rating: **Medium (3 of 5)**

Social Emotional Learning (SEL)* Support: **N/A**

8. **Multisystemic Therapy (MST) | Therapy Model**

Multisystemic Therapy (MST) is an intensive family- and community-based treatment that addresses the multiple causes of serious antisocial behavior in juvenile offenders. The MST program seeks to improve the real-world functioning of youth by changing their natural settings - home, school, and neighborhood - in ways that promote prosocial behavior while decreasing antisocial behavior. Therapists work with youth and their families to address the known causes of delinquency on an individualized, yet comprehensive basis. By using the strengths in each system (family, peers, school, and neighborhood) to facilitate change, MST addresses the multiple factors known to be related to delinquency across the key systems within which youth are embedded. The extent of treatment varies by family according to clinical need. Therapists generally spend more time with families in the initial weeks (daily if needed) and gradually taper their time (to as infrequently as once a week) over the 3- to 5-month course of treatment.

Evidence-Based: **Yes**

Effectiveness Rating(s):
- Blueprints Rating: **Model-Plus**
- Crime Solutions Rating: **Effective**
- OJJDP Rating: **Effective**

Benefit-Cost:

Expected Case	Dollars
Benefits to Participants	$861
Benefits to Taxpayers	$2,456
Other Beneficiaries	$3,375
Other Indirect Benefits	$1,643
Total Benefits	$8,335
Cost (Net)	$7,074
Benefits - Costs (NPV)	$1,261
Benefits / Costs (Ratio)	$1.18

Benefits from Primary Participant

Source of Benefits	To Participant	To Taxpayers	To Others	Other Indirect Benefits	Total Benefits
Crime	$0	$743	$1,767	$0	$2,509
Earnings: DSM Illicit Drug Disorder	$497	$226	$0	$1,643	$2,365
Health Care Costs: Illicit Drugs	$364	$1,488	$1,608	$0	$3,460

Social Emotional Learning (SEL)* Support: **Yes**

9. **Families and Schools Together (FAST) | Program**

Families and Schools Together (FAST) is a 2-year, multifamily group intervention based on social ecological theory, family systems theory and family stress theory. FAST is designed to build relationships between and within families, schools and communities to increase all children's' well-being, especially as they transition into elementary school.

Evidence-Based: **Yes**

Effectiveness Rating(s):
- Crime Solutions Rating: **Effective**
- OJJDP Rating: **Effective**
- UNODC Rating: **Recognized**

Benefit-Cost:

Expected Case	Dollars
Benefits to Participants	$1,829
Benefits to Taxpayers	$998
Other Beneficiaries	$1,078
Other Indirect Benefits	$0
Total Benefits	$3,904
Cost (Net)	$5,995
Benefits - Costs (NPV)	($2,091)
Benefits / Costs (Ratio)	$0.65

Benefits from Primary Participant

Source of Benefits	To Participant	To Taxpayers	To Others	Other Indirect Benefits	Total Benefits
Crime	$0	$34	$92	$0	$126
Earnings via test scores	$1,778	$807	$792	$0	$3,377
Health Care Costs: Disruptive Behavior	$51	$157	$194	$0	$402

Social Emotional Learning (SEL)* Support: **Yes**

10. **The 4 Rs and 2 Ss for Strengthening Families | Program**

The 4 Rs and 2 Ss for Strengthening Families is a manualized, multiple family group therapy program designed for families who have a child between 7-11 years old diagnosed with a disruptive behavior disorder.

Evidence-Based: **Yes**

Effectiveness Rating(s):
▪ NREPP Rating: **Effective**

Benefit-Cost: Data not available

Social Emotional Learning (SEL)* Support: **Yes**

11. **Early Risers – Skills for Success | Program**

Early Risers – Skills for Success is a multi-component, high intensity, competency-enhanced intervention that targets elementary school/middle school aged children (ages 6-12) who are at high risk for early development of conduct problems (i.e. who display early aggressive, disruptive, or nonconformist behaviors). The Early Risers program aims to prevent high-risk children's further development of problem behaviors by improving their social and academic skills and intervening in their family environment.

Evidence-Based: **Yes**

Effectiveness Rating(s):
▪ Crime Solutions Rating: **Promising**
▪ OJJDP Rating: **Promising**
▪ NREPP Rating: **3.0 of 4.0**

Benefit-Cost: Data not available

Emotional Learning (SEL)* Support: **Yes**

INTERVENTION SPECTRUM: Indicated Prevention/Early Intervention

Prepared by: Department of Mental Health | Children, Youth, and Families Division

This brief report presented to the Promote Prevent Commission summarizes the findings of a benefit-cost analysis of two evidence-based mental health programs that the Massachusetts Department of Mental Health currently funds. The first is an indicated prevention program that aims to prevent or reduce PTSD and depression symptoms in

youth who have experienced traumatic events. The second is an early intervention program designed to promote mental health and recovery for youth and young adults who experience a first episode of psychosis. See program details below.

Our analysis was based on an evidence-based policymaking approach developed by the Pew-MacArthur Results First Initiative. A key component of their approach is an econometric model that analyzes the costs and benefits of potential investments in evidence-based programs. The model relies on the best available research on program effectiveness to predict the outcomes of a program, based on a jurisdiction's unique population characteristics and program costs. The model calculates the likely return on investment that a jurisdiction would achieve if it funded the program.

In addition to presenting the benefit-cost analysis findings, it is important the Commonwealth consider the following factors when investing in any behavioral health evidence-based programs:

- **Invest in implementation success**: It is important to recognize that program fidelity, i.e., how well a program is implemented, is critical to achieving predicted outcomes from an evidenced-based program. Implementation science provides a framework and best practices for achieving the full and effective use of EBPs. See National Implementation Research Network for helpful resources (nirn.fpg.unc.edu)
- **Promote universal prevention programs focused on behavioral health**: While the primary focus of DMH's analysis was on more downstream mental health programs, DMH enthusiastically supports DPH's efforts to implement the Good Behavior Game, which promotes protective factors such as self-regulation and social skills that are known to prevent both mental health and substance abuse conditions.
- **Allow for innovation**: Invest in rigorous evaluations of promising programs that do not yet have a robust research base.
- **Continue to apply evidence-based decision making:** DMH and DPH have enhanced their capacity for evidence-based decision making using the Results First approach. Future opportunities to apply this methodology will be explored.
- **Recognize limitations of benefit-cost analysis:** The Results First benefit-cost analysis examines benefits that can be monetized such as health care utilization, criminal justice involvement, and earnings to calculate return on investment. It does not account for quality of life benefits from behavioral health programs, which are also critically important for individuals with behavioral health conditions.

1. **Cognitive Behavioral Intervention for Trauma in Schools (CBITS)**

CBITS is a school-based, cognitive-behavioral, group intervention designed for children in grades six to nine who have experienced traumatic events such as domestic violence, community violence, or physical/emotional abuse. The program aims to relieve symptoms of PTSD, depression, and anxiety and improve a child's functioning in school, family, and the community. Consisting of 10 group sessions, children learn skills in relaxation, challenging upsetting thoughts, and social problem solving. CBITS is designed to be

delivered by a school-based mental health professionals. **Metro Boston DMH Area is funding CBITS in several Boston Public middle schools.**

Evidence-Based: Yes. CBITS has been evaluated using a randomized controlled study with children from Los Angeles Unified School District.

- NREPP Rating: **Highest Rating**
- Crime Solutions Rating: **Highest Rating**
- Blueprints Rating: **Second Highest Rating**

Outcomes:

- Decreased PTSD and depressive symptoms (Child PTSD Symptom Scale and Child Depression Inventory)
- Improved psychosocial functioning (parent report via Pediatric Symptom Checklist)

Predicted Impact in Massachusetts (Return on Investment [ROI]):
The results of the benefit-cost analysis conducted on CBITS revealed a high return on investment if implemented effectively. For every dollar invested per participant, the program is expected to yield an average of $63.47 from avoiding health care costs for PTSD and lost wages due to PTSD comorbidities over the course of their lifetime.

Expected Case	**Dollars**
Cost per Participant (CBITS)*	$374
Total Benefits	$23,737
Benefits to Participants	$13,461
Benefits to Taxpayers	$7,789
Other Beneficiaries	$2,473
Net Present Value (Benefits-Cost)	$23,363
Benefit-Cost Ratio	**$63.47**
Chance Benefits will Exceed Costs	***100%***

*Cost per participant assumes 10, 1-hr sessions times DMH service provider rate for group therapy (2018). Average of 5 kids per group in Boston Public Schools. Estimate includes training costs.

2. **Integrated Treatment for First-Episode Psychosis/NAVIGATE**

The NAVIGATE program is a team-based, multicomponent treatment program designed to be implemented in routine mental health treatment settings and aimed at guiding adolescents and young adults (ages 15-40) with a first episode of psychosis (and their families) toward psychological and functional health. Its core services include individual resiliency training, family education program, supported employment and education, and medication treatment. **The Department of Mental Health funds several first-episode psychosis programs that replicate the NAVIGATE model. These include the PREP (Prevention and Recovery in Early Psychosis) programs and four recently funded community-based FEP programs. Additionally, DMH funds a NAVIGATE-like program**

targeted at youth at high clinical risk for psychosis-the Center for Early Detection, Assessment, and Response to Risk program.

Evidence-Based: Yes. NIMH conducted a nationwide randomized controlled study of the NAVIGATE program. In addition, several other evaluations of integrated treatment programs for FEP have demonstrated positive outcomes.
▪ NREPP Rating: **Second Highest Rating, Promising**

Outcomes:
▪ Decrease in psychotic symptoms
▪ Decrease in depressive symptoms
▪ Improved functioning and quality of life
▪ Decrease in psychiatric hospitalization

Predicted Impact in Massachusetts (ROI):
The results of the benefit-cost analysis conducted on NAVIGATE/FEP programs are positive. For every dollar invested per participant, the program is expected to yield an average of $9.44 from avoiding psychiatric hospitalization costs over the course of their lifetime. (Note: This ROI calculation is limited to avoided hospitalization costs only and does not quantify impact on tax revenue from employment earnings or costs avoided to local, state and federal governments.)

Expected Case	**Dollars**
Net Cost per Participant (PREP)*	$2,444
Total Benefits	$23,071
Benefits to Participants	$254
Benefits to Taxpayers	$18,623
Other Beneficiaries	$4,195
Net Present Value (Benefits-Cost)	$20,627
Benefit-Cost Ratio	**$9.44**
Chance Benefits will Exceed Cost	**82%**

* Total FY2017 budget for PREP (a NAVIGATE-based program in MA) $558,000 divided by the average number of patients who can be treated, 62.5, with (50 min, 75 max). Net cost per participant accounts for costs associated with treatment as usual which were assumed to be $6,500 per participant per year based on a cost-effectiveness study on NAVIGATE by Rosenheck et al (Schizophrenia Bulletin, 2016).

Legal Authority: Section 193, Chapter 133 of the Acts of 2016

Special Commission on Behavioral Health Promotion and Upstream Prevention

Purpose: There is hereby established a special commission on behavioral health promotion and upstream prevention to investigate evidence-based practices, programs and systems to prevent behavioral health disorders and promote behavioral health across the commonwealth. The commission shall: (1) consider recommendations from state and federal reports, guides and action plans to promote behavioral health; (2) identify sustainable, cost-beneficial and evidence-based privately or publicly funded programs or practices, implemented inside or outside of the commonwealth, which are designed to promote behavioral health, prevent disorders, and support early detection and intervention of behavioral health disorders; (3) assess approaches to improve the commonwealth's system of behavioral health promotion and prevention, including, but not limited to: (i) programs and practices that could be implemented over the next decade to promote behavioral health, (ii) the creation of a single state behavioral health agency, and (iii) ways to increase collaboration at the state and local levels between community coalitions and public health, mental health, healthcare, education, social services and public safety organizations; (4) assess innovative approaches for funding promotion and prevention programs; (5) recommend strategies, including legislative action, to shift healthcare spending over the long term from acute and inpatient behavioral health care to promotion and upstream prevention, without diminishing treatment or recovery services for those in need; (6) recommend evidence-based, primary and secondary-level programs or practices that are community, family or school-based, including whole school approaches, that reduce risk factors and increase protective factors for behavioral health disorders and foster social and emotional health; and (7) recommend measurable statewide behavioral health goals consistent with the goals identified in clauses (1) to (6), inclusive, for preventing behavioral health disorders over the next decade.

24 members or their designees:

- 2 members of the house of representatives, 1 of whom shall be appointed by the speaker of the house and shall serve as co-chair, and 1 of whom shall be appointed by the minority leader of the house of representatives;
- 2 members of the senate, 1 of whom shall be appointed by the senate president and shall serve as co-chair, and 1 of whom shall be appointed by the minority leader of the senate;
- the chief justice of Massachusetts trial court;
- the commissioner of mental health;
- the commissioner of public health;
- the commissioner of elementary and secondary education;
- the commissioner of the division of insurance;
- the secretary of public safety and security;
- the executive director of the health policy commission;
- the executive director of the center for health information and analysis;
- the executive director of the Massachusetts community health information profile;
- the executive director of the mental health legal advisors committee;

- the executive director of the Massachusetts public health association;
- the executive director of the Massachusetts organization for addiction recovery;
- the president of the Massachusetts association for behavioral healthcare;
- the president of the Massachusetts chapter of the national association for social workers;
- 6 members who shall be appointed by the governor
    - 1 of whom shall be a representative from the health insurance industry,
    - 1 of whom shall be an expert in mental and behavioral health promotion,
    - 1 of whom shall be an expert in school-based public health,
    - 1 of whom shall be an expert in community-based public health,
    - 1 of whom shall be an expert in planning and environmental health,
    - 1 of whom shall be a representative from the social and emotional learning alliance for Massachusetts.

The commission may hold public meetings and fact-finding hearings as it considers necessary; provided, however, that the commission shall conduct at least 3 public hearings to receive testimony from members of the public. The commission shall file the report of its investigation and study with the clerks for the house of representatives and the senate, no later than 24 months after the date of the first meeting of the commission; provided, however, that the commission may, at the discretion of the chairs, make a draft report available to the public for comment before filing the final version.

[1] Health Policy Commission. Spending Levels and Trends: Technical Appendix A. (2014) Retrieved from: http://archives.lib.state.ma.us/bitstream/handle/2452/208478/ocn880353399-2013-supplement-TechnicalAppendixA.pdf?sequence=16&isAllowed=y

[2] Sparks, PhD, A., Berninger, A., Hunt, M., Sirkin, J., Witgert, K., & Whitter, M. (2017). Access to Behavioral Health Care in Massachusetts: The Basics. Blue Cross Blue Shield of Massachusetts Foundation by Abt Associates. Retrieved from https://bluecrossmafoundation.org/sites/default/files/download/publication/BH_basics_Final.pdf

[3] Departments of Mental Health and Public Health. Email Communications to Office of Representative James Cantwell (2018)

[4] Departments of Early Education and Care and Elementary and Secondary Education. Email Communications to Office of Representative James Cantwell (2018)

[5] Kobau, R., Seligman, M. E. P., Peterson, C., Diener, E., Zack, M. M., Chapman, D., & Thompson, W. (2011). Mental Health Promotion in Public Health: Perspectives and Strategies From Positive Psychology. *American Journal of Public Health*, *101*(8), e1–e9.https://doi.org/10.2105/AJPH.2010.300083

[6] Prevention and Promotion in Mental Health. Department of Mental Health and Substance Dependence | WHO. Retrieved from http://www.who.int/mental_health/media/en/545.pdf

[7]Finding Evidence-Based Programs | SAMHSA. Retrieved from https://www.samhsa.gov/capt/tools-learning-resources/finding-evidence-based-programs

[8] National Research Council (US) and Institute of Medicine (US) Committee on the Prevention of Mental Disorders and Substance Abuse Among Children, Y., O'Connell, M. E., Boat, T., & Warner, K. E. (2009). Defining the Scope of Prevention. National Academies Press (US). Retrieved from https://www.ncbi.nlm.nih.gov/books/NBK32789/

[9] Prevention of Substance Abuse and Mental Illness | SAMHSA - Substance Abuse and Mental Health Services Administration. Retrieved from https://www.samhsa.gov/prevention

[10] State Spending Addiction | The National Center on Addiction and Substance Abuse. Retrieved from https://www.centeronaddiction.org/addiction/state-spending-addiction-risk-use

[11] Department of Mental Health. Email Communications to Office of Representative James Cantwell (2018)

[12] Department of Public Health. Email Communications to Office of Representative James Cantwell (2018)

[13] Department of Elementary and Secondary Education. Email Communications to Office of Representative James Cantwell (2018)Department of Early Education and Care. Email Communications to Office of Representative James Cantwell (2018)

[14] Department of Early Education and Care. Email Communications to Office of Representative James Cantwell (2018)

[15] Harik, V., Ayadi, A., & Kossow, S. (2015). Analysis of Substance Abuse on Cape Cod: A Baseline Assessment. Barnstable County Department of Human Services. Retrieved from http://www.bchumanservices.net/library/2015/03/RSAC-Baseline-Report-FULL-REPORT-3-11-15-Final.pdf

[16] Health Policy Commission. Spending Levels and Trends: Technical Appendix A. (2014) Retrieved from: http://archives.lib.state.ma.us/bitstream/handle/2452/208478/ocn880353399-2013-supplement-TechnicalAppendixA.pdf?sequence=16&isAllowed=y

[17] Sparks, PhD, A., Berninger, A., Hunt, M., Sirkin, J., Witgert, K., & Whitter, M. (2017). Access to Behavioral Health Care in Massachusetts: The Basics. Blue Cross Blue Shield of Massachusetts Foundation by Abt Associates. Retrieved from https://bluecrossmafoundation.org/sites/default/files/download/publication/BH_basics_Final.pdf

[18] Center on the Developing Child, Harvard University. Early Childhood Mental. Retrieved from https://developingchild.harvard.edu/science/deep-dives/mental-health/

[19] Association for Children's Mental Health. Common Mental Health Diagnosis in Children. Retrieved from http://www.acmh-mi.org/get-information/childrens-mental-health-101/common-diagnosis/

[20] O'Neil, A., Quirk, S. E., Housden, S., Brennan, S. L., Williams, L. J., Pasco, J. A., … Jacka, F. N. (2014). Relationship Between Diet and Mental Health in Children and Adolescents: A Systematic Review. American Journal of Public Health, 104(10), e31–e42. https://doi.org/10.2105/AJPH.2014.302110

[21] American Psychological Association. Children's Mental Health. Retrieved from http://www.apa.org/pi/families/children-mental-health.aspx

[22] NIMH » Treatment of Children with Mental Illness. Retrieved from https://www.nimh.nih.gov/health/publications/treatment-of-children-with-mental-illness-fact-sheet/index.shtml

[23] Mental Health By the Numbers | NAMI: National Alliance on Mental Illness. Retrieved from https://www.nami.org/learn-more/mental-health-by-the-numbers

[24] Skowyra, K. R., & Cocozza, J. J. Blueprint for Change, 140.

[25] Child Mind Institute. Children's Mental Health Report. Retrieved from: https://27c2s3mdcxk2qzutg1z8oa91-wpengine.netdna-ssl.com/wp-content/uploads/Child-Mind-Institute-2016-Childrens-Mental-Health-Report.pdf

[26] National Institute of Drug Abuse. Common Physical and Mental Health Comorbidities with Substance Use Disorders. References. Retrieved from https://www.drugabuse.gov/publications/research-reports/comorbidity-addiction-other-mental-illnesses/references

[27] National Institute of Drug Abuse. Common Physical and Mental Health Comorbidities with Substance Use Disorders. References. Retrieved from https://www.drugabuse.gov/publications/research-reports/comorbidity-addiction-other-mental-illnesses/references

[28] Santucci, K. (2012). Psychiatric disease and drug abuse. *Current Opinion in Pediatrics*, *24*(2), 233–237. https://doi.org/10.1097/MOP.0b013e3283504fbf

[29] Ross, S., & Peselow, E. (2012). Co-occurring psychotic and addictive disorders: neurobiology and diagnosis. *Clinical Neuropharmacology*, *35*(5), 235–243. https://doi.org/10.1097/WNF.0b013e318261e193

[30] Hartz, S. M., Pato, C. N., Medeiros, H., Cavazos-Rehg, P., Sobell, J. L., Knowles, J. A., … Pato, M. T. (2014). Comorbidity of severe psychotic disorders with measures of substance use. *JAMA Psychiatry*, *71*(3), 248–254. https://doi.org/10.1001/jamapsychiatry.2013.3726

[31] Kelly, T. M., & Daley, D. C. (2013). Integrated Treatment of Substance Use and Psychiatric Disorders. *Social Work in Public Health*, *28*(0), 388–406. https://doi.org/10.1080/19371918.2013.774673

[32] National Institute of Drug Abuse. Common Physical and Mental Health Comorbidities with Susbtance Use Disorders.Retrieved from https://www.drugabuse.gov/publications/research-reports/common-physical-mental-health-comorbidities-substance-use-disorders/introduction

[33] Kelly, T. M., & Daley, D. C. (2013). Integrated Treatment of Substance Use and Psychiatric Disorders. *Social Work in Public Health*, *28*(0), 388–406. https://doi.org/10.1080/19371918.2013.774673

[34] Kelly, T. M., & Daley, D. C. (2013). Integrated Treatment of Substance Use and Psychiatric Disorders. *Social Work in Public Health*, *28*(0), 388–406. https://doi.org/10.1080/19371918.2013.774673

[35] Reddy, L. F., Lee, J., Davis, M. C., Altshuler, L., Glahn, D. C., Miklowitz, D. J., & Green, M. F. (2014). Impulsivity and Risk Taking in Bipolar Disorder and Schizophrenia. *Neuropsychopharmacology*, *39*(2), 456–463. https://doi.org/10.1038/npp.2013.218

[36] Centers for Disease Control and Prevention. (2018, January 23). ADHD often occurs with other disorders. Retrieved from https://www.cdc.gov/ncbddd/adhd/conditions.html

[37] Bennett, D. L., & Bauman, A. (2000). Adolescent mental health and risky sexual behaviour. BMJ : British Medical Journal, 321(7256), 251–252.

[38] American Academy of Child and Adolescent Psychiatry. (2013). Conduct Disorder. Retrieved from https://www.aacap.org/aacap/Families_and_Youth/Facts_for_Families/FFF-Guide/Conduct-Disorder-033.aspx

[39] Brown, L. K., Hadley, W., Stewart, A., Lescano, C., Whiteley, L., Donenberg, G., & DiClemente, R. (2010). Psychiatric Disorders and Sexual Risk among Adolescents in Mental Health Treatment. *Journal of Consulting and Clinical Psychology*, *78*(4), 590–597. https://doi.org/10.1037/a0019632

[40] Young Minds Matter: Mental disorders and risk-taking behaviour among 13-17 year-olds in Australia. [Text]. Retrieved from https://aifs.gov.au/cfca/2017/09/05/young-minds-matter-mental-disorders-and-risk-taking-behaviour-among-13-17-year-olds

[41] Wan, J. J., Morabito, D. J., Khaw, L., Knudson, M. M., & Dicker, R. A. (2006). Mental illness as an independent risk factor for unintentional injury and injury recidivism. *The Journal of Trauma*, *61*(6), 1299–1304. https://doi.org/10.1097/01.ta.0000240460.35245.1a

[42] Centers for Disease Control and Prevention. (2012) Mental Health and Chronic Diseases. https://www.cdc.gov/workplacehealthpromotion/tools-resources/pdfs/issue-brief-no-2-mental-health-and-chronic-disease.pdf

[43] Rueve, M. E., & Welton, R. S. (2008). Violence and Mental Illness. *Psychiatry (Edgmont)*, *5*(5), 34–48.

[44] Health, C., et al. (2018, March 7). Smoking and Tobacco Use; Tobacco-Related Disparities; Tobacco Use Among Adults with Mental Illness and Substance Use Disorders. Retrieved from http://www.cdc.gov/tobacco/basic_information/health_disparities/mental-illness-substance-use/

[45] Health, C. O. on S. and. (2018, March 7). Smoking and Tobacco Use; Tobacco-Related Disparities; Tobacco Use Among Adults with Mental Illness and Substance Use Disorders. Retrieved from http://www.cdc.gov/tobacco/basic_information/health_disparities/mental-illness-substance-use/

[46] *Putukian, Margot.* (2014, November 5). Mind, Body and Sport: How being injured affects mental health [Text]. Retrieved from http://www.ncaa.org/sport-science-institute/mind-body-and-sport-how-being-injured-affects-mental-health

[47] Schwarzbold, M., Diaz, A., Martins, E. T., Rufino, A., Amante, L. N., Thais, M. E., … Walz, R. (2008). Psychiatric disorders and traumatic brain injury. *Neuropsychiatric Disease and Treatment*, *4*(4), 797–816.

[48] Phineas Gage: Neuroscience's Most Famous Patient | History | Smithsonian. Retrieved from https://www.smithsonianmag.com/history/phineas-gage-neurosciences-most-famous-patient-11390067/

[49] U.S. Surgeon General. Department of Health and Human Services. *Chapter 4 -- Risk Factors for Youth Violence*. Office of the Surgeon General (US). Retrieved from https://www.ncbi.nlm.nih.gov/books/NBK44293/

[50] What is SEL? Collaborative for Academic,Social, and Emotional Learning. Retrieved from https://casel.org/what-is-sel/

[51] Sachs-Ericsson, N., Medley, A. N., Kendall – Tackett, K., & Taylor, J. (2011). Childhood Abuse and Current Health Problems among Older Adults: The Mediating Role of Self-Efficacy. Psychology of Violence, 1(2), 106–120. https://doi.org/10.1037/a0023139

[52] Stats of the State - Suicide Mortality. Retrieved from https://www.cdc.gov/nchs/pressroom/sosmap/suicide-mortality/suicide.htm

[53] Costs of Suicide | Suicide Prevention Resource Center. Retrieved from https://www.sprc.org/about-suicide/costs

[54] Massachusetts Coalition for Suicide Prevention. (2018, January 11).

[55] A Comprehensive Approach to Suicide Prevention | Suicide Prevention Resource Center. Retrieved from https://www.sprc.org/effective-prevention/comprehensive-approach

[56] Adolescent Mental Health, Behavior Problems, and Academic Achievement. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3752654/

[57] Baskin, T. W., Slaten, C. D., Sorenson, C., Glover-Russell, J., & Merson, D. N. (2010). Does youth psychotherapy improve academically related outcomes? A meta-analysis. *Journal of Counseling Psychology*, *57*(3), 290–296. https://doi.org/10.1037/a0019652

[58] Thapar, A., Collishaw, S., Pine, D. S., & Thapar, A. K. (2012). Depression in adolescence. Lancet, 379(9820), 1056–1067. https://doi.org/10.1016/S0140-6736(11)60871-4

[59] Thapar, A., Collishaw, S., Pine, D. S., & Thapar, A. K. (2012). Depression in adolescence. Lancet, 379(9820), 1056–1067. https://doi.org/10.1016/S0140-6736(11)60871-4

[60] Humensky, J. et al. (2010). Adolescents with depressive symptoms and their challenges with learning in school. The Journal of School Nursing 26(5):377-392.

[61] Rushton, J. et al. (2002). Epidemiology of depressive symptoms in the national longitudinal study of adolescent health. Journal of the American Academy of Child and Adolescent Psychiatry 41(2):199-205.

[62] Dupéré, V., Dion, E., Nault-Brière, F., Archambault, I., Leventhal, T., & Lesage, A. (2018). Revisiting the Link Between Depression Symptoms and High School Dropout: Timing of Exposure Matters. *Journal of Adolescent Health*, *62*(2), 205–211. https://doi.org/10.1016/j.jadohealth.2017.09.024

[63] Hawkins, J., Jenson, J., Beardslee, W., Leslie, L., et al. Unleashing the Power of Prevention. American Academy of Social Work and Social Welfare. Retrieved from: http://aaswsw.org/wp-content/uploads/2013/10/Unleashing-the-Power-of-Prevention-formatted-4.29.15.pdf

[64] United States Department of Health and Human Services Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, & Division of Adolescent and School Health. Alcohol and Other Drug Use and Academic Achievement, 2.

[65] United States Department of Health and Human Services Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, & Division of Adolescent and School Health. Alcohol and Other Drug Use and Academic Achievement, 2.

[66] Breslau, J. et al. (2008). Mental disorders and subsequent educational attainment in a US national sample. Journal of Psychiatric Research 42(9):708-716.

[67] Crosnoe, R. (2006). The Connection Between Academic Failure and Adolescent Drinking in Secondary School. *Sociology of Education*, *79*(1), 44–60.

[68] Childhood Behavior Problems and Academic Outcomes in Adolescence: Longitudinal Population-Based Study - ScienceDirect. Retrieved from https://www.sciencedirect.com/science/article/pii/S0890856715001069

[69] Breslau, J. et al. (2009). The impact of early behavior disturbances on academic achievement in high school. Pediatrics 123:1472-1476.

[70] Hawkins, J., Jenson, J., Beardslee, W., Leslie, L., et al. Unleashing the Power of Prevention. American Academy of Social Work and Social Welfare. Retrieved from: http://aaswsw.org/wp-content/uploads/2013/10/Unleashing-the-Power-of-Prevention-formatted-4.29.15.pdf

[71] The Center for Health and Health Care in Schools. The Impact of School-Connected Behavioral and Emotional Health Interventions and Student Academic Performance. Retrieved from: http://www.healthinschools.org/wp-content/uploads/2016/10/CHHCS_2014-Annotated-Bibliography-FINAL1.pdf

[72] Research Summaries. National Association of School Psychologists. Retrieved from https://www.nasponline.org/research-and-policy/nasp-research-center/research-summaries

[73] The Center for Health and Health Care in Schools. The Impact of School-Connected Behavioral and Emotional Health Interventions and Student Academic Performance. Retrieved from: http://www.healthinschools.org/wp-content/uploads/2016/10/CHHCS_2014-Annotated-Bibliography-FINAL1.pdf

[74] Most Prisoners Are Mentally Ill - The Atlantic. Retrieved from https://www.theatlantic.com/health/archive/2015/04/more-than-half-of-prisoners-are-mentally-ill/389682/

[75] FORMAN, B., JONES, J., & HILLER, A. Mounting an Evidence-Based Criminal Justice Response to Substance Abuse and Drug Offending in Massachusetts, 20.

[76] Gilman, M. Jail Diversion & Behavioral Health, 12.

[77] Martha Lyman. "Descriptive Overview of the 2015 Release Cohort." (Ludlow, MA: Hampden County Sheriff's Department, 2016.)

[78] "Sheriff Peter J. Koutoujian speaks to NAACP's Mystic Valley Area Branch" The Patriot Ledger (June 12, 2015).

[79] Executive Office of Public Safety and Security. Email Communication to Office of Rep. Jim Cantwell. (2018)

[80] Executive Office of Public Safety and Security. Email Communication to Office of Rep. Jim Cantwell. (2018)

[81] National Alliance on Mental Illness. Mental Health Facts in America. Retrieved from: https://www.nami.org/NAMI/media/NAMI-Media/Infographics/GeneralMHFacts.pdf

[82] STUART, H. (2003). Violence and mental illness: an overview. *World Psychiatry*, *2*(2), 121–124.

[83] Centers for Disease Control and Prevention. Child Abuse and Neglect. Retrieved from https://www.cdc.gov/violenceprevention/childmaltreatment/consequences.html

[84] Wolff, N., & Shi, J. (2012). Childhood and Adult Trauma Experiences of Incarcerated Persons and Their Relationship to Adult Behavioral Health Problems and Treatment. *International Journal of Environmental Research and Public Health*, *9*(5), 1908–1926. https://doi.org/10.3390/ijerph9051908

[85] Reavis, J. A., Looman, J., Franco, K. A., & Rojas, B. (2013). Adverse Childhood Experiences and Adult Criminality: How Long Must We Live before We Possess Our Own Lives? *The Permanente Journal*, *17*(2), 44–48. https://doi.org/10.7812/TPP/12-072

[86] Widom, C., & Maxfield, M. (2001). An Update on the "Cycle of Violence." National Institute of Justice. Retrieved from https://www.ncjrs.gov/pdffiles1/nij/184894.pdf

[87] Centers for Disease Control and Prevention. Vaccines for Children. Program. Retrieved from https://www.cdc.gov/features/vfcprogram/index.html

[88] Benefits from Immunization During the Vaccines for Children Program Era — United States, 1994–2013. Retrieved from https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6316a4.htm

[89] Hawkins, J., Jenson, J., Beardslee, W., Leslie, L., et al. Unleashing the Power of Prevention. American Academy of Social Work and Social Welfare. Retrieved from: http://aaswsw.org/wp-content/uploads/2013/10/Unleashing-the-Power-of-Prevention-formatted-4.29.15.pdf

[90] U.S. Department of Health and Human Services, Office of the Surgeon General. Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health. Retrieved from https://addiction.surgeongeneral.gov/sites/default/files/surgeon-general-report.pdf

[91] Embry, D. D. (2011). Behavioral Vaccines and Evidence Based Kernels: Non-Pharmaceutical Approaches for the Prevention of Mental, Emotional and Behavioral Disorders. *The Psychiatric Clinics of North America*, *34*(1), 1–34. https://doi.org/10.1016/j.psc.2010.11.003

[92] Beardslee, W. R., & Consor, G. Evidence-Based Strategies to Promote Mental Health and Prevent Mental Illness in Families – Implications for the Prevention of Depression, 21.

[93] The Good Behavior Game at PAXIS Institute | PAXIS Institute. Retrieved from https://paxis.org/products/view/pax-good-behavior-game

[94] Blueprints for Healthy Youth Development - Center for the Study and Prevention of Violence - Institute of Behavioral Science. Retrieved from https://www.colorado.edu/cspv/blueprints/

[95] History - About - MassBiologics | UMass Medical School - Worcester. (2013, November 2). Retrieved from https://umassmed.edu/massbiologics/about/history/

[96] Jiang D, Santos R, Josephson W, Mayer T, Boyd L: A Comparison of Variable- and Person-Oriented Approaches in Evaluating a Universal Preventive Intervention. *Prev Sci* 2018.

[97] Weis R, Osborne KJ, Dean EL: **Effectiveness of a universal, interdependent group contingency program on children's academic achievement: A countywide evaluation**. *Journal of Applied School Psychology* 2015, **31**(3):199-218.

[98] O'Donnell M, Morgan M, Embry DD, O'Kelly N, Owens C: **Supporting the development of pupils' self-regulation skills: Evaluation of the PAX GBG Programme in Ireland**. *Irish Teachers' Journal* 2016, **4** (1):9-29.

[99] Smith EP, Osgood DW, Oh Y, Caldwell LC: **Promoting Afterschool Quality and Positive Youth Development: Cluster Randomized Trial of the Pax Good Behavior Game**. *Prev Sci* 2017.

[100] Risk and Protective Factors | SAMHSA. Retrieved from https://www.samhsa.gov/capt/practicing-effective-prevention/prevention-behavioral-health/risk-protective-factors

[101] U.S. Department of Health and Human Services, Office of the Surgeon General. *Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health*. Retrieved from https://addiction.surgeongeneral.gov/sites/default/files/surgeon-generals-report.pdf

[102] Risk & Protective Factors | Youth.gov. Retrieved from https://youth.gov/youth-topics/substance-abuse/risk-and-protective-factors-substance-use-abuse-and-dependence

[103] Department of Public Health. Risk & Protective Factors. Retrieved from http://www.mass.gov/eohhs/gov/departments/dph/programs/substance-abuse/providers/prevention/risk-and-protective-factors.html

[104] U.S. Department of Health and Human Services, Office of the Surgeon General. *Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health*. Retrieved from https://addiction.surgeongeneral.gov/sites/default/files/surgeon-generals-report.pdf

[105] Department of Public Health. Risk & Protective Factors. Retrieved from http://www.mass.gov/eohhs/gov/departments/dph/programs/substance-abuse/providers/prevention/risk-and-protective-factors.html

[106] U.S. Department of Health and Human Services, Office of the Surgeon General. *Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health*. Retrieved from https://addiction.surgeongeneral.gov/sites/default/files/surgeon-generals-report.pdf

[107] National Research Council (US) and Institute of Medicine (US) Committee on the Prevention of Mental Disorders and Substance Abuse Among Children, Y., O'Connell, M. E., Boat, T., & Warner, K. E. (2009). *Tables of Risk Factors*. National Academies Press (US). Retrieved from https://www.ncbi.nlm.nih.gov/books/NBK32787/

[108] O'Connell, M. E., Boat, T., & Warner, K. E.. (2009). *Preventing mental, emotional, and behavioral disorders among young people: Progress and possibilities*. Washington, DC: The National Academies Press; and U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration

[109] National Research Council (US) and Institute of Medicine (US) Committee on the Prevention of Mental Disorders and Substance Abuse Among Children, Y., O'Connell, M. E., Boat, T., & Warner, K. E. (2009). *Preventing Mental, Emotional, and Behavioral Disorders Among Young People: Progress and Possibilities*. National Academies Press (US). Retrieved from https://www.ncbi.nlm.nih.gov/books/NBK32773/

[110] Kobau, R., Seligman, M. E. P., Peterson, C., Diener, E., Zack, M. M., Chapman, D., & Thompson, W. (2011). Mental Health Promotion in Public Health: Perspectives and Strategies From Positive Psychology. *American Journal of Public Health*, *101*(8), e1–e9.https://doi.org/10.2105 /AJPH.2010.300083

[111] Prevention and Promotion in Mental Health. Department of Mental Health and Substance Dependence | WHO. Retrieved from http://www.who.int/mental_health/media/en/545.pdf

[112] Kobau, R., Seligman, M. E. P., Peterson, C., Diener, E., Zack, M. M., Chapman, D., & Thompson, W. (2011). Mental Health Promotion in Public Health: Perspectives and Strategies From Positive Psychology. *American Journal of Public Health*, *101*(8), e1–e9. https://doi.org/10.2105/AJPH.2010.300083

[113] Promotion & Prevention | Youth.gov. Retrieved from https://youth.gov/youth-topics/youth-mental-health/mental-health-promotion-prevention

[114] National Research Council (US) and Institute of Medicine (US) Committee on the Prevention of Mental Disorders and Substance Abuse Among Children, Y., O'Connell, M. E., Boat, T., & Warner, K. E. (2009). *Defining the Scope of Prevention*. National Academies Press (US). Retrieved from https://www.ncbi.nlm.nih.gov/books/NBK32789/

[115] Seligman, M. E., & Csikszentmihalyi, M. (2000). Positive psychology. An introduction. *The American Psychologist*, *55*(1), 5–14.

[116] World Health Organization. Prevention and Promotion in Mental Health. Retrieved from: http://www.who.int/mental_health/media/en/545.pdf

[117] Collaborative for Academic, Social, and Emotional Learning, *Core SEL Competencies,* retrieved from https://casel.org/core-competencies/

[118] National Research Council (US) and Institute of Medicine (US) Committee on the Prevention of Mental Disorders and Substance Abuse Among Children, Y., O'Connell, M. E., Boat, T., & Warner, K. E. (2009). *Defining the Scope of Prevention*. National Academies Press (US). Retrieved from https://www.ncbi.nlm.nih.gov/books/NBK32789/

[119] Prevention and Promotion in Mental Health. Department of Mental Health and Substance Dependence | WHO. Retrieved from http://www.who.int/mental_health/media/en/545.pdf

[120] Kobau, R., Seligman, M. E. P., Peterson, C., Diener, E., Zack, M. M., Chapman, D., & Thompson, W. (2011). Mental Health Promotion in Public Health: Perspectives and Strategies From Positive Psychology. *American Journal of Public Health*, *101*(8), e1–e9.https://doi.org /10.2105/AJPH.2010.300083

[121] Promotion & Prevention | Youth.gov. Retrieved from https://youth.gov/youth-topics/youth-mental-health/mental-health-promotion-prevention

[122] Office of Disease Prevention and Health Promotion. Social Determinants of Health. Retrieved from: https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health

[123] Heiman, H., and Artiga, S. Beyond Health Care: The Role of Social Determinants in Promoting Health and Health Equity. Henry J. Kaiser Family Foundation. Retrieved from: https://www.kff.org/disparities-policy/issue-brief/beyond-health-care-the-role-of-social-determinants-in-promoting-health-and-health-equity/

[124] World Health Organization. About Social Determinants of Health. Retrieved from: http://www.who.int/social_determinants/sdh_definition/en/

[125] Office of Disease Prevention and Health Promotion. Social Determinants of Health. Retrieved from: https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health

[126] Introduction of a National Minimum Wage Reduced Depressive Symptoms in Low-Wage Workers: A Quasi-Natural Experiment in the UK - Reeves - 2017 - Health Economics - Wiley Online Library. Retrieved from https://onlinelibrary.wiley.com/doi/full/10.1002/hec.3336

[127] Meltzer, D. O., & Chen, Z. (2011). The Impact of Minimum Wage Rates on Body Weight in the United States. *Economic Aspects of Obesity*, 17–34.

[128] Komro, K. A., Livingston, M. D., Markowitz, S., & Wagenaar, A. C. (2016). The Effect of an Increased Minimum Wage on Infant Mortality and Birth Weight. *American Journal of Public Health*, *106*(8), 1514–1516. https://doi.org/10.2105/AJPH.2016.303268

[129] Leigh, J. P. (2016). Could Raising the Minimum Wage Improve the Public's Health? *American Journal of Public Health*, *106*(8), 1355–1356. https://doi.org/10.2105/AJPH.2016.303288

[130] Ryan, B. (2015, October 15). It's Science: Raising the Minimum Wage Would Make America a Happier Place. *The Nation*. Retrieved from https://www.thenation.com/article/its-science-raising-minimum-wage-would-make-america-a-happier-place/

[131] Gault, B., Hartmann, H., Hegewisch, A., Milli, J., & Reichlin, L. (2014). Paid Parental Leave in the United States: What the Data tells us about access, usage, and economic and health benefits. Retrieved from https://iwpr.org/wp-content/uploads/wpallimport/filesiwpr-export/publications /B334-Paid% 20Parental%20Leave%20in%20the%20United%20States.pdf

[132] The long-run effect of maternity leave benefits on mental health: Evidence from European countries - ScienceDirect. (2015) Retrieved from https://www.sciencedirect.com/science/article/pii/ S027795361500129X

[133] Burtle, A., & Bezruchka, S. (2016). Population Health and Paid Parental Leave: What the United States Can Learn from Two Decades of Research. MDPI. Retrieved from www.mdpi.com/2227-9032/4/2/30/pdf

[134] Housing and Mental Health. (2011). Mental Health Network | NHSConfederation. Retrieved from http://www.nhsconfed.org/~/media/Confederation/Files/Publications/Documents/Housing_MH_021211.pdf

[135] Chambers, E., Fuster, D., Suglia, S., & Rosenbaum, E. The Link between Housing, Neighborhood, and Mental Health. MacArthur Foundation. Retrieved from https://www.macfound.org/media/files/HHM_ Brief_-_Reverse_Mortgages.pdf

[136] National Research Council (US) and Institute of Medicine (US) Committee on the Prevention of Mental Disorders and Substance Abuse Among Children, Y., O'Connell, M. E., Boat, T., & Warner, K. E. (2009). *Defining the Scope of Prevention*. National Academies Press (US). Retrieved from https://www.ncbi.nlm.nih.gov/books/NBK32789/

[137] U.S. Substance Abuse and Mental Health Services Administration. Risk and Protective Factors. Retrieved from https://www.samhsa.gov/capt/practicing-effective-prevention/prevention-behavioral-health/risk-protective-factors

[138] Bradshaw, C. (2008). Using Positive Behavioral Interventions and Supports (PBIS) to Enhance the School Environment and Reduce Children's Disruptive Behavior Problems. Johns Hopkins Center for the Prevention of Youth Violence. Retrieved from https://www.jhsph.edu/research/centers-and-institutes /johns-hopkins-center-for-prevention-and-early intervention/Publications/Bradshaw_PBIS_prevention_talk.7.2.08.pdf

[139] *"Parenting Matters: Supporting Parents of Children Ages 0-8" at NAP.edu*. Retrieved from https://www.nap.edu/read/21868/chapter/13

[140] Abt, T. P. (2017). Towards a framework for preventing community violence among youth. *Psychology, Health & Medicine*. Retrieved from https://www.tandfonline.com/doi/pdf/10.1080/13548506.2016.1257815

[141] Evidence Based, Evidence Informed, Promising Practice and Emerging Program and Practices. Ohio Children's Trust Fund. Retrieved from https://jfs.ohio.gov/OCTF/Evidence_Based_Evidence_ Informed_ Promising_Practice_and_Emer.pdf

[142] Officer, C. A. A Common Language for Evidence-Based Programming. Retrieved from http://pew.org/2j581UB

[143] Mattox, T. (2013) Promising Practices Network | PPN Issue Briefs | What is an Evidence-Based Practice? Retrieved from http://www.promisingpractices.net/briefs/briefs_evidence_based_practices.asp

[144] O'Garro, M. A., & McDonald, S. (2009). "Evidence-Based" and "Promoting Practices" and Other Important Terms Defined. Thurston County WA. Retrieved from https://www.jhsph.edu/research/centers-and-institutes /johns- hopkins-center-for-prevention-and-early-intervention/Publications/Bradshaw_PBIS_prevention_talk.7.2.08.pdf

[145] Pew-MacArthur Results First Initiative. (2017, November 30). A Common Language for Evidence-Based Programming. Retrieved from http://www.pewtrusts.org/en/research-and-analysis/fact-sheets/2017/11/a-common-language-for-evidence-based-programming

[146] Finding Evidence-Based Programs | SAMHSA. Retrieved from https://www.samhsa.gov/capt/tools-learning-resources/finding-evidence-based-programs

[147] Hawkins, J., Jenson, J., Beardslee, W., Leslie, L., et al. Unleashing the Power of Prevention. American Academy of Social Work and Social Welfare. Retrieved from: http://aaswsw.org/wp-content/uploads/2013/10/Unleashing-the-Power-of-Prevention-formatted-4.29.15.pdf

[148] About the Knowledge Network | SAMHSA Knowledge Network. Retrieved from https:// knowledge.samhsa.gov/about

[149] Blueprints for Healthy Youth Development | Blueprints Programs. Retrieved from http://www.blueprints programs.com/

[150] Model Programs Guide | OJJDP. Retrieved from https://www.ojjdp.gov/mpg

[151] The California Evidence-Based Clearinghouse for Child Welfare. Retrieved from http://www.cebc4cw.org/

[152] WWC | Find What Works! Retrieved from https://ies.ed.gov/ncee/wwc/

[153] Results First Clearinghouse Database. Pew-MacArthur Foundation Results First Initiative. Retrieved from http://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2014/09/results-first-clearinghouse-database

[154] Applying the Strategic Prevention Framework (SPF) | SAMHSA. Retrieved from https://www.samhsa.gov/capt/applying-strategic-prevention-framework

[155] PROSPER - PROmoting School-community-university Partnerships to Enhance Resilience | Alabama Cooperative Extension System - ACES.edu. Retrieved from http://www. aces.edu/prosper/

[156] Massachusetts Child Psychiatry Access Program. About MCPAP. Retrieved from https://www.mcpap.com/About/OverviewVisionHistory.aspx

[157] MYCHILD-Project LAUNCH - Home. Retrieved from http://www.ecmhmatters.org/Pages/ECMHMatters.aspx

[158] Kumpfer, K. L. (2014). Family-Based Interventions for the Prevention of Substance Abuse and Other Impulse Control Disorders in Girls. *ISRN Addiction*, *2014*. https://doi.org/10.1155/2014/308789

[159] National Research Council (US) and Institute of Medicine (US) Committee on the Prevention of Mental Disorders and Substance Abuse Among Children, Y., O'Connell, M. E., Boat, T., & Warner, K. E. (2009). *Introduction*. National Academies Press (US). Retrieved from https://www.ncbi.Nlm.nih.gov/books/NBK32773/

[160] National Academies of Sciences, E. (2016). *Parenting Matters: Supporting Parents of Children Ages 0-8*. Retrieved from https://www.nap.edu/catalog/21868/parenting-matters-supporting-parents-of-children-ages-0-8

[161] Strengthening Families: A Protective Factors Framework. *Center for the Study of Social Policy*. Retrieved from https://www.cssp.org/reform/strengthening-families/basic-one-pagers/Strengthening-Families-Protective-Factors.pdf

[162] Small, S., & Huser, M. (2011). Family-Based Prevention Programs. In *Encyclopedia of Adolescence* (pp. 967–976). Springer, New York, NY. Retrieved from https://link.springer.com/referenceworkentry/10.1007/978-1-4419-1695-2_161

[163] Kumpfer, K. L., & Alvarado, R. (2003). Family-strengthening approaches for the prevention of youth problem behaviors. *The American Psychologist*, *58*(6–7), 457–465.

[164] Home Instruction Program for Preschool Youngsters (HIPPY). Retrieved from https://www.childtrends.org/programs/home-instruction-program-for-preschool-youngsters-hippy/

[165] Programs for Intensive Family Preservation and Intensive Family Reunification - Institute for Family Development. Retrieved from http://www.institutefamily.org/programs_ifps.asp

[166] Programs for Intensive Family Preservation and Intensive Family Reunification - Institute for Family

Development. Retrieved from http://www.institutefamily.org/programs_ifps.asp

[167] Home Visiting | Maternal and Child Health Bureau. Retrieved from https://mchb.hrsa.gov/maternal-child-health-initiatives/home-visiting-overview

[168] School-Based Mental Health Services: Improving Student Learning and Well-Being. Retrieved from https://www.nasponline.org/resources-and-publications/resources/mental-health /school-psychology -and-mental-health/school-based-mental-health-services

[169] Werner-Seidler, A., Perry, Y., Calear, A. L., Newby, J. M., & Christensen, H. (2017). School-based depression and anxiety prevention programs for young people: A systematic review and meta-analysis.
Clinical Psychology Review, 51, 30–47. https://doi.org/10.1016/j.cpr.2016.10.005

[170] Mental health interventions in schools 1. Retrieved from https://www.ncbi.Nlm.nih.gov /pmc/ articles/PMC4477835/

[171] Foster, S., Rollefson, M., Doksum, T., Noonan, D., Robinson, G., & Teich, J. School Mental Health Services in the United States 2002-2003. Retrieved from https://files.eric.ed.gov/fulltext/ ED499056.pdf

[172] School-Based Mental Health Services: Improving Student Learning and Well-Being. Retrieved from https://www.nasponline.org/ resources-and-publications/ resources/mental- health/school-psychology-and-mental-health/school-based-mental-health-services

[173] PBIS FAQs. Positive Behavioral Intervention Supports. Retrieved from https://www.pbis.org/school/ swpbis-for-beginners/pbis-faqs

[174] Programs and Practices - What Works in Criminal Justice - CrimeSolutions.gov. Retrieved from https://www.crimesolutions.gov/default.aspx

[175] What is SEL? Retrieved from https://casel.org/what-is-sel

[176] Social and Emotional Learning in Massachusetts - Massachusetts Department of Elementary and Secondary Education. Retrieved from http://www.doe.mass.edu/candi/SEL/

[177] McCormick, M. P., Cappella, E., O'Connor, E. E., & McClowry, S. G. (2015). Social-Emotional Learning and Academic Achievement: Using Causal Methods to Explore Classroom-Level Mechanisms. *AERA Open*, *1*(3), 2332858415603959. https://doi.org/10.1177/2332858415603959

[178] Schonert-Reichl, K., et al. To Reach the students, teach the teachers. A National Scan of Teacher Preparation and Social & Emotional Learning. Retrieved from: http://www.casel.org/wp-content/uploads/2017/02/SEL-TEd-Full-Report-for-CASEL-2017-02-14-R1.pdf

[179] SEL Impact. Retrieved from https://casel.org/impact/

[180] Durlak, J.A., Weissberg, R.P., Dymnicki, A.B., Taylor, R.D., & Schellinger, K. (2011) The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development:* 82 (1), 405-432.

[181] Payton, J. (2008). The Positive Impact of Social and Emotional Learning for Kindergarten to Eighth-Grade Students: Findings from Three Scientific Reviews, 50.

[182] Jones, D. E., Greenberg, M., & Crowley, M. (2015). Early social-emotional functioning and public health: The relationship between kindergarten social competence and future wellness. *American journal of public health*, *105*(11), 2283-2290.

[183] Belfield, C., Bowden, A. B., Klapp, A., Levin, H., Shand, R., & Zander, S. (2015). The Economic Value of Social and Emotional Learning. *Journal of Benefit-Cost Analysis*, *6*(03), 508–544. https://doi.org/10.1017/bca.2015.55

[184] About the CDC-Kaiser ACE Study <B>Error processing SSI file</B>
. Retrieved from https://www.cdc.gov/violenceprevention/acestudy/about.html

[185] Hughes, K., Bellis, M. A., Hardcastle, K. A., Sethi, D., Butchart, A., Mikton, C., … Dunne, M. P. (2017). The effect of multiple adverse childhood experiences on health: a systematic review and meta-analysis. *The Lancet Public Health*, *2*(8), e356–e366. https://doi.org/10.1016/S2468-2667(17)30118-4

[186] Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., … Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine*, *14*(4), 245–258.

[187] Definitions|Child Abuse and Neglect|Violence Prevention|Injury Center|CDC. Retrieved from https://www.cdc.gov/violenceprevention/childmaltreatment/definitions.html

[188] Adverse Childhood Experiences | SAMHSA. Retrieved from https://www.samhsa.gov/capt/practicing-effective-prevention/prevention-behavioral-health/adverse-childhood-experiences

[189] Adverse Childhood Experiences | SAMHSA. Retrieved from https://www.samhsa.gov/capt/practicing-effective-prevention/prevention-behavioral-health/adverse-childhood-experiences

[190] Adverse Childhood Experiences and Sexual Risk Behaviors in Women: A Retrospective Cohort Study. (2005, February 9). Retrieved from https://www.guttmacher.org/journals/psrh/2001/09/adverse-childhood-experiences-and-sexual-risk-behaviors-women-retrospective

[191] Reavis, J. A., Looman, J., Franco, K. A., & Rojas, B. (2013). Adverse Childhood Experiences and Adult Criminality: How Long Must We Live before We Possess Our Own Lives? *The Permanente Journal*, *17*(2), 44–48. http://doi.org/10.7812/TPP/12-072

[192] Huffhines, L., Noser, A., & Patton, S. R. (2016). The Link Between Adverse Childhood Experiences and Diabetes. *Current Diabetes Reports*, *16*(6), 54. https://doi.org/10.1007/s11892-016-0740-8

[193] Jimenez, M. E., Wade, R., Lin, Y., Morrow, L. M., & Reichman, N. E. (2016). Adverse Experiences in Early Childhood and Kindergarten Outcomes. *Pediatrics*, *137*(2). https://doi.org/10.1542/peds.2015-1839

[194] How ACEs Affect Health. Retrieved from https://centerforyouthwellness.org/health-impacts/

[195] Ramiro, L. S., Madrid, B. J., & Brown, D. W. (2010). Adverse childhood experiences (ACE) and health-risk behaviors among adults in a developing country setting. *Child Abuse & Neglect*, *34*(11), 842–855. https://doi.org/10.1016/j.chiabu.2010.02.012

[196] Adverse Childhood Experiences | SAMHSA. Retrieved from https://www.samhsa.gov/capt/practicing-effective-prevention/prevention-behavioral-health/adverse-childhood-experiences

[197] Kahn, P. Understanding and Responding to Adverse Childhood Experiences in the School Setting, 62.

[198] Center for the Study of Social Policy. Youth Resilience. Retrieved from https://www.cssp.org/reform/strengtheningfamilies/practice/body/HO-3.1e-YT_Youth-Resilience.pdf

[199] National Center for Mental Health Promotion and Youth Violence Prevention. Childhood Trauma and its effect on Healthy Development. (2012, July). Retrieved from http://www.promoteprevent.org/content/childhood-trauma-and-its-effect-healthy-development

[200] National Center for Mental Health Promotion and Youth Violence Prevention. Childhood Trauma and its effect on Healthy Development. (2012, July). Retrieved from http://www.promoteprevent.org/content/childhood-trauma-and-its-effect-healthy-development

[201] Health Effects of Marijuana and Cannabis-Derived Products Presented in New Report. Retrieved from http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=24625

[202] Reed, J. Marijuana Legalization in Colorado: Early Findings: A Report Pursuant to Senate Bill 13-283 (March 2016), 147.

[203] Massachusetts Department of Public Health. Addiction and Substance Use Disorder. Retrieved from http://www.mass.gov/chapter55/#prescriptions

[204] Massachusetts Department of Public Health. Addiction and Substance Use Disorder. Retrieved from http://www.mass.gov/chapter55/#prescriptions

[205] Health Policy Commission. Opioid Use Disorder Report. Retried from: http://www.mass.gov/anf/budget-taxes-and-procurement/oversight-agencies/health-policy-commission/public-meetings/board-meetings/20160907-commission-opioid-presentation.pdf#page=11

[206] Health Policy Commission. Opioid Use Disorder Report. Retried from: http://www.mass.gov/anf/budget-taxes-and-procurement/oversight-agencies/health-policy-commission/public-meetings/board-meetings/20160907-commission-opioid-presentation.pdf#page=11

[207] Massachusetts Department of Public Health. Data Brief: Opioid Related Overdose Deaths Among Massachusetts Residents. (2018, February). Retrieved from: https://www.mass.gov/files/documents/2018/02/14/data-brief-overdose-deaths-february-2018.pdf

[208] The Boston Foundation. Health Starts at Home. Retrieved from: https://www.tbf.org/nonprofits/grant-making-initiatives/health-starts-at-home. http://www.bostonhousing.org/en/BHA-Blog/December-2014/Healthy-Start-in-Housing-provides-housing-and-serv.aspx

[209] Boston Housing Authority - Boston Housing Authority. Retrieved from http://www.bostonhousing.org/en/BHA-Blog/December-2014/Healthy-Start-in-Housing-provides-housing-and-serv.aspx

[210] National Center for Children in Poverty. Paid Family Medical Leave. Retrieved from: http://www.nccp.org/publications/pdf/text_1059.pdf

[211] Massachusetts Home Visiting Initiative (MHVI). Retrieved from:https://www.mass.gov/service-details/massachusetts-home-visiting-initiative-mhvi

[212] Abt Associates. Evaluation of Compass Family Self-Sufficiency (FSS) Program. (2017). Asset Building program. Retrieved from: http://abtassociates.com/AbtAssociates/files/7f/7fc01ba7-24af-47fb-91e1-5ea255c4ad72.pdf

[213] The Boston Public Health Commission. Housing First Initiative. Retrieved from: http://www.bphc.org/whatwedo/homelessness/homeless-services/Pages/Housing-First-Initiative.aspx

[214] The Boston Foundation. Health Starts at Home. Retrieved from https://www.tbf.org:443/nonprofits/grant-making-initiatives/health-starts-at-hom

[215] Aguilera-Steinert, J. Massachusetts Partnership for Health Promotion and Chronic Disease | Massachusetts Partnership for Health Promotion and Chronic Disease. Retrieved from http://www.mass.gov/eohhs/docs/dph/com-health/chronic-disease/pavlos-fall-summit.pdf

[216] The Department of Public Health. PWTF Grantee Program Results. (2017, July 14). Retrieved March 23, 2018, from http://www.mass.gov/eohhs/gov/departments/dph/programs/community-health/prevention-and-wellness-fund/program-results.html

[217] Asarnow JR, Rozenman M, Wiblin J, Zeltzer L. Integrated Medical-Behavioral Care Compared With Usual Primary Care for Child and Adolescent Behavioral HealthA Meta-analysis. *JAMA Pediatr.* 2015;169(10):929–937.

[218] MYCHILD-Project LAUNCH Retrieved from http://www.ecmhmatters.org/Pages/ECMHMatters.aspx

[219] Smith Family Foundation » Foundation Launches TEAM UP for Children Initiative. Retrieved March 23, 2018, from http://www.smithfamilyfoundation.net/2016/09/15/foundation-launches-team-up-for-children-initiative/

[220] *Pediatric Physicians Organization at Children's Integrated Behavioral Health Program*. Retrieved from https://www.youtube.com/watch?v=8RacVtQVa-k

[221] Report to the Legislative and Health Policy Commission. (2013). Behavioral Health Integration Task Force. Retrieved from http://www.mass.gov/anf/docs/hpc/quipp/behavioral-health-integration-task-force-final-report-and-recommendations-july-2013.pdf

[222] Massachusetts Child Psychiatry Access Program. About MCPAP. Retrieved from https://www.mcpap.com/About/OverviewVisionHistory.aspx

[223] Sparks, A., & Berninger, A. (2017). *Access to Behavioral Health Care in Massachusetts: The Basics*. Retrieved from https://bluecrossmafoundation.org/sites/default/files/download/publication/BH_basics_Final.pdf

[224] Middlesex Sheriff's Office. Sheriff Koutoujian, Senator L'Italien announce funding to establish a restoration center in Middlesex County. (2017, July). Retrieved from: https://www.middlesexsheriff.org/press-releases/news/sheriff-koutoujian-senator-l%E2%80%99italien-announce-funding-establish-restoration.

[225] Schoners-Reichi, Ph.D., K., Kitil M.P.H., J., & Hanson-Peterson, M.A., J. (2017). To Reach The Student's, Teach The Teachers: A National Scan of Teacher Preparation and Social and Emotional Learning.

[226] Recess | Physical Activity | Healthy Schools | CDC. (2017, September 27). Retrieved from https://www.cdc.gov/healthyschools/physicalactivity/recess.htm

[227] The Crucial Role of Recess in School | From the American Academy of Pediatrics | Pediatrics. (n.d.). Retrieved March 23, 2018, from http://pediatrics.aappublications.org/content/131/1/183

[228] Jarrett, O. (2013). A Research-Based Case for Recess. US Play Coalition. Retrieved from https://usplaycoalition.org/ wp-content/uploads/2015/08 /13.11.5_ Recess_final_online.pdf