

# RESULTS FIRST

CHILDREN'S MENTAL HEALTH

**m1** MANAGEMENT AND BUDGET



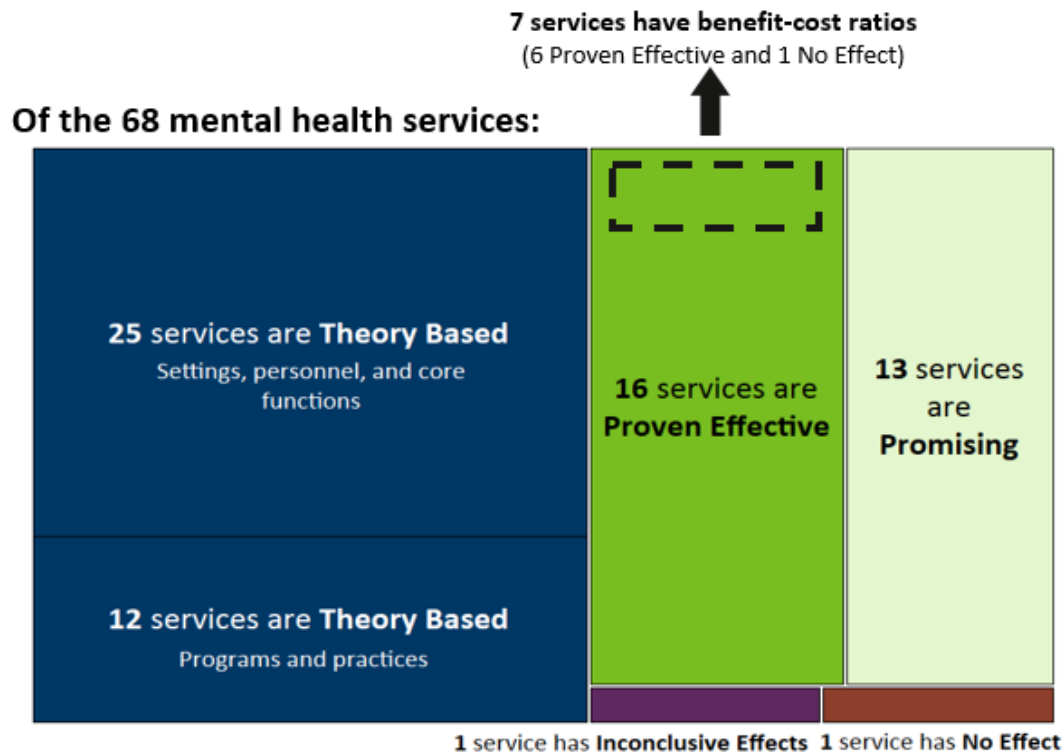
## Children's Mental Health Summary

January 2019

Private sector service providers, tribes, counties, and the Minnesota Departments of Human Services, Health, Education, and Corrections administer a range of services aimed at preventing mental illness or assuaging its symptoms. These investments have the opportunity to improve child wellbeing, decrease healthcare costs, reduce crime, and increase the future earnings of Minnesota families, thereby generating benefits to participants and taxpayers.

Minnesota Management and Budget (MMB) worked with state and local partners to identify existing, publicly funded mental health services. The resulting inventory contains 68 offerings that traverse a wide continuum of prevention, early intervention, and treatment services for children and adolescents. As reflected in Figure 1, there are varying levels of research supporting the effectiveness of these services.

**Figure 1: Summary of children's mental health inventory**



**Note:** A qualifying study uses a randomized controlled trial or quasi-experimental design, meaning there is a treatment and comparison group to test the causal impact of the service.

**Settings, personnel, and core functions:** A group of services a client may receive, dependent on need. Some categories may be evidence-based, but have not been studied holistically.

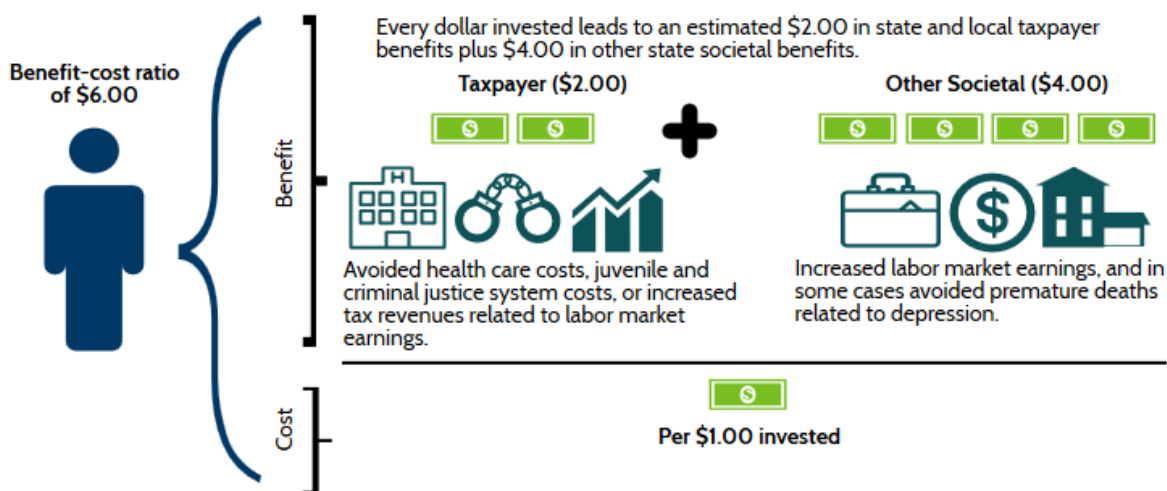
We rated sixteen services (24%) in the Results First inventory as Proven Effective, meaning they have a strong enough base of research supporting their positive impact on mental health symptoms. An additional 13 services (20%) we rated as Promising, meaning they had at least one study that demonstrated positive impacts on symptoms. We found one treatment, Cognitive Behavioral Therapy (CBT) for children with ADHD, with neither positive, nor negative impacts on psychiatric symptoms. For one practice, adding anti-depressants to psychotherapy for childhood with depression, existing research is inconclusive.

For a service to receive a Proven Effective, Promising, No Effect, or Inconclusive rating, researchers must have studied it using a randomized controlled trial or quasi-experimental design, meaning there is a treatment and comparison group to test the impact of the service. This style of study is common for therapy services, but is less common for prevention, community supports, and culturally-informed offerings. When there is not yet a high-quality impact evaluation, the service is Theory Based. Thirty-seven of the services (54%) we reviewed are Theory Based. Evaluating the impact of these services would reveal the extent to which they are effective.

## Benefit-cost analysis

For seven services, adequate research is available to conduct a benefit-cost analysis (see Figure 3). To estimate the ratios, we use a statistical model that assigns dollar values to the benefits of decreasing psychiatric symptoms.

**Figure 2: Explanation of a benefit-cost ratio**



Our assumptions about the impact of these seven services come from existing rigorous evaluations of children’s mental health services. Five of the services we examined have estimated benefits that exceed costs. Estimated benefits per dollar invested range from \$15.20 for Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) to \$0.00 for CBT for children with Attention-Deficit Hyperactivity Disorder (ADHD). Most benefits accrue to participants through future labor market earnings.

Two services with returns less than \$1 warrant additional context. Research shows CBT for ADHD can be a component of cost-effective treatment, but should be paired with parental training and other community supports. For instance, CBT is a component of the Incredible Years (ratio of \$2.70). For CBT to treat childhood depression, we find positive, but short-term persistence of the treatment effects, which explains the benefit-cost ratio of \$0.25. Unfortunately, we did not find other treatments with more sustained reductions in depression, which means this may be the most effective therapy for some of these children.

**Figure 3: Comparison of benefit-cost ratios for children’s mental health services**

**Basic Clinical Services**

Service	Per participant benefit minus cost	Benefit-cost ratio (A+B)	State and local taxpayer ratio (A)	Other Minnesota societal ratio (B)
Trauma-Focused Cognitive Behavioral Therapy (TF-CBT)	\$9,320	\$15.20	\$3.10	\$12.10
Cognitive behavioral therapy (CBT) for anxiety	\$3,030	\$7.00	\$1.60	\$5.40
Parent Child Interaction Therapy (PCIT)	\$1,110	\$2.20	\$0.60	\$1.60
Cognitive behavioral therapy (CBT) for depression	(\$380)	\$0.25	\$0.05	\$0.20
Cognitive behavioral therapy (CBT) for ADHD	(\$630)	\$0.00	\$0.00	\$0.00

**Community Supports**

Service	Per participant benefit minus cost	Benefit-cost ratio (A+B)	State and local taxpayer ratio (A)	Other Minnesota societal ratio (B)
Incredible Years: Parent training	\$1,850	\$2.70	\$0.30	\$2.40
Behavioral parent training (BPT)	\$260	\$1.60	\$0.40	\$1.20

**Per participant benefit minus cost** is the difference between the present value of cash inflows (anticipated benefits) from a given service and the present value of cash outflows (costs).

**Benefit-cost ratio** is the net present value of anticipated benefits to state residents for every dollar invested.

**Taxpayer benefits (blue)** accrue from avoided health care costs, criminal justice costs, and special education costs, increased higher education costs, and higher tax revenues related to labor market earnings.

**Other societal benefits (green)** accumulate to society through increased labor market earnings, decreased healthcare costs, decreased crime victimization, and changes in education costs.

Benefit-cost analysis is a valuable tool for informing decisions about how to use scarce public resources, but cost-effectiveness is only one factor to consider when evaluating investments. When choosing which services to fund, policy-makers and administrators also need to weigh other considerations, like equity, innovation, and the well-being and stability of children and families. These factors are challenging to monetize, but represent important public values.

## Children’s mental health context

Mental health is a fluid state of well-being that includes life satisfaction, sense of purpose, feeling connected, and resilience. When mental health hinders a child’s capacity to function in their home, school, or community, they may be experiencing a range of medical disorders classified as mental illnesses, or more generally referred to as an emotional disturbance.

Seven percent of Minnesotans from birth to age 21 (109,000 total) experience severe emotional disturbance in a given year. The programs and services in this analysis include those that have an intended goal to reduce the incidence or severity of psychiatric symptoms. Mental illness includes specific diagnoses, including anxiety disorder, attention-deficit/hyperactivity disorder (ADHD), depression, disruptive behavior, post-traumatic stress disorder (PTSD), and severe emotional disorder (SED). This analysis did not address needs for children with autism.

A complex web of social and biological factors influence mental health, but research indicates that early identification and treatment can lessen symptoms associated with mental illness in childhood and adulthood. In 2016, more than 87,000 Minnesotans under 21 received publicly-funded mental health services. Treating the symptoms associated with mental illness—like any healthcare treatment—can be costly to families and communities. In 2017, Minnesota spent nearly \$1.2 billion on public mental health services for all ages. By identifying and treating mental illness early, we may be able to reduce the need for intensive services later in life.

To meet the needs of children, a full continuum of care is necessary. This includes promotion, prevention, early intervention, community, ambulatory, and residential services and settings. In Minnesota, this continuum, however, has significant gaps, particularly in rural Minnesota and for distinct populations. Our analysis points to past research on these gaps and the potential consequences when families that are unable to find appropriate, high-quality services. We also find that current Medical Assistance reimbursement rates are often inadequate to cover the cost of effective implementation of evidence-based practices.

## Results First background

Through the Minnesota Results First Initiative, MMB inventories publicly-funded services and estimates the extent to which they generate positive, cost-effective outcomes for Minnesotans. MMB collaborates with state, local, and national partners to identify and estimate the benefits and costs of a range of public services that support the well-being of Minnesotans. Past efforts include work in adult mental health, child welfare, criminal justice, higher education, juvenile justice, and substance use. Current work is underway for public health services.

**To learn more about the Results First Initiative and access the full children’s mental health inventory and report, please visit [mn.gov/mmb/results-first](https://mn.gov/mmb/results-first) or contact [ResultsFirstMN@state.mn.us](mailto:ResultsFirstMN@state.mn.us).**