RESULTS FIRST

ADULT AND YOUTH SUBSTANCE USE

MANAGEMENT AND BUDGET

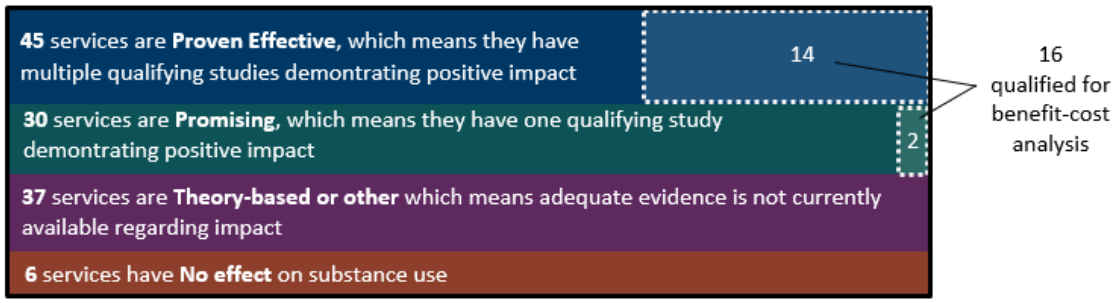
September 2017

Minnesota funds a range of services designed to prevent, identify, treat, and promote recovery from substance use disorders. Minnesota Management & Budget (MMB) worked with state and local partners to identify and estimate the benefits and costs of services currently provided in Minnesota. The full analysis is available at mn.gov/mmb/results-first.

Overall, the analysis recognizes that substance use disorder is a chronic disease that can be both prevented and treated. Using evidence-based practices can generate positive, cost-effective outcomes for Minnesotans. While many of these proven services are effective, our current substance use prevention and treatment system has gaps in access to services. These gaps are often caused by a lack of integration between substance use and primary healthcare, stigma, and workforce shortages, and are especially acute for special populations and rural residents. Moreover, our analysis reveals we do not always properly implement practices. If we fail to deliver services to the right person at the right intensity and for the right time we may not receive the anticipated returns on our investment in the program. This may also contribute to the perception that substance use disorder is not treatable.

MMB found 118 prevention, treatment, and recovery services presently offered in Minnesota. As reflected in Figure 1, there are varying degrees of evidence of effectiveness for these services in preventing or treating substance use.

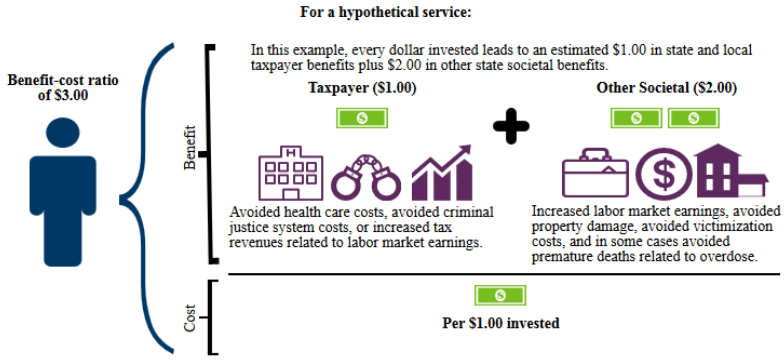
Figure 1: Summary of adult and youth substance use inventory



For 16 services, adequate information is available to conduct in-depth benefit-cost analyses. Of these, 15 have benefit-cost ratios greater than $1.00; meaning that their overall benefits exceed their cost. For five services, the taxpayer benefits alone (i.e., excluding other benefits to society) exceed the cost. Estimated benefits per dollar invested in substance use prevention and treatment range from $20.40 to $0.20. The economic benefits for treatment occur in the three years following treatment, while prevention benefits occur over the lifetime of the participant.

This benefit-cost analysis monetizes the value of a given change in alcohol, tobacco, and other drug use. To estimate the ratios, we use a statistical model that assigns dollar values to the benefits of decreasing disordered use. These benefits include reductions in health care, crime, and premature death, as well as increases in earnings from employment.

Figure 2: What is a benefit-cost ratio?



Findings: Prevention and Early Intervention Services

Prevention and early intervention services can reduce the need for more expensive services later on and also avoid negative societal outcomes associated with substance misuse. However, the availability of evidence-based prevention programs and policies varies across the state. This is related to how we fund prevention—service provision is decentralized, with much of the funding coming from school districts and local communities. This is not a problem unique to Minnesota—a national survey of school administrators found less than 10 percent were using evidence-based prevention programs, and only 11 percent of youth report participating in a program outside of school.

The Minnesota Department of Human Services, Department of Health, Department of Public Safety, school districts, colleges, and other community groups administer the services illustrated in Figure 3. Our analysis shows that investing in these services can generate cost-effective outcomes. For five of the six prevention and early intervention services listed below, the estimated lifetime benefits exceed the costs. The benefit-cost ratios range from $20.40 for Screening, Brief Intervention, and Referral Treatment (SBIRT) for Alcohol Use to $0.20 for Familias Unidas Preventive Intervention. Early interventions, including SBIRT, Brief Alcohol Screening and Intervention for College Students (BASICS), and Teen Intervene, had particular high returns but limited adoption across the state.

Figure 3: Comparison of benefit-cost ratios for prevention and early intervention services

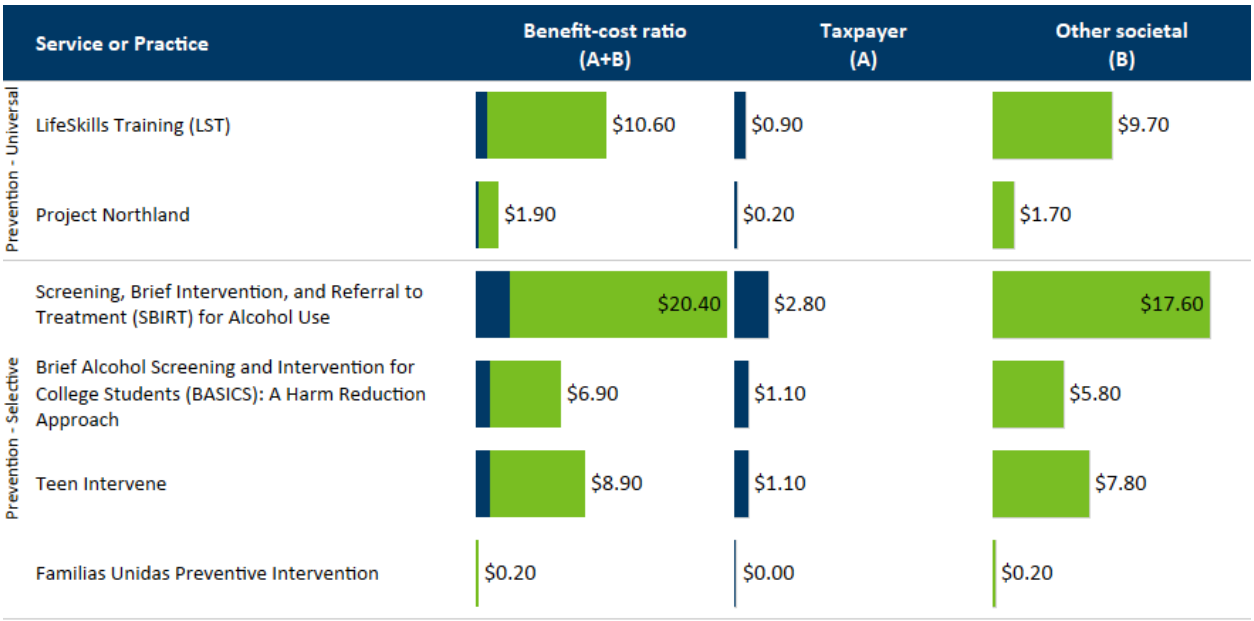


Figure 4: Understanding the results

The benefit-cost ratio is the net present value of anticipated benefits to state residents for every dollar invested in the service, over the course of a participant's lifetime for prevention and in the three years following treatment.

Taxpayer benefits (blue) accrue from publicly funded health care, criminal justice, and taxes (from increased earnings) related to changes in substance use.

Other societal benefits (green) accumulate to society through increased labor market earnings, health care costs, reductions in crime, and the value of a statistical life (associated with premature death).

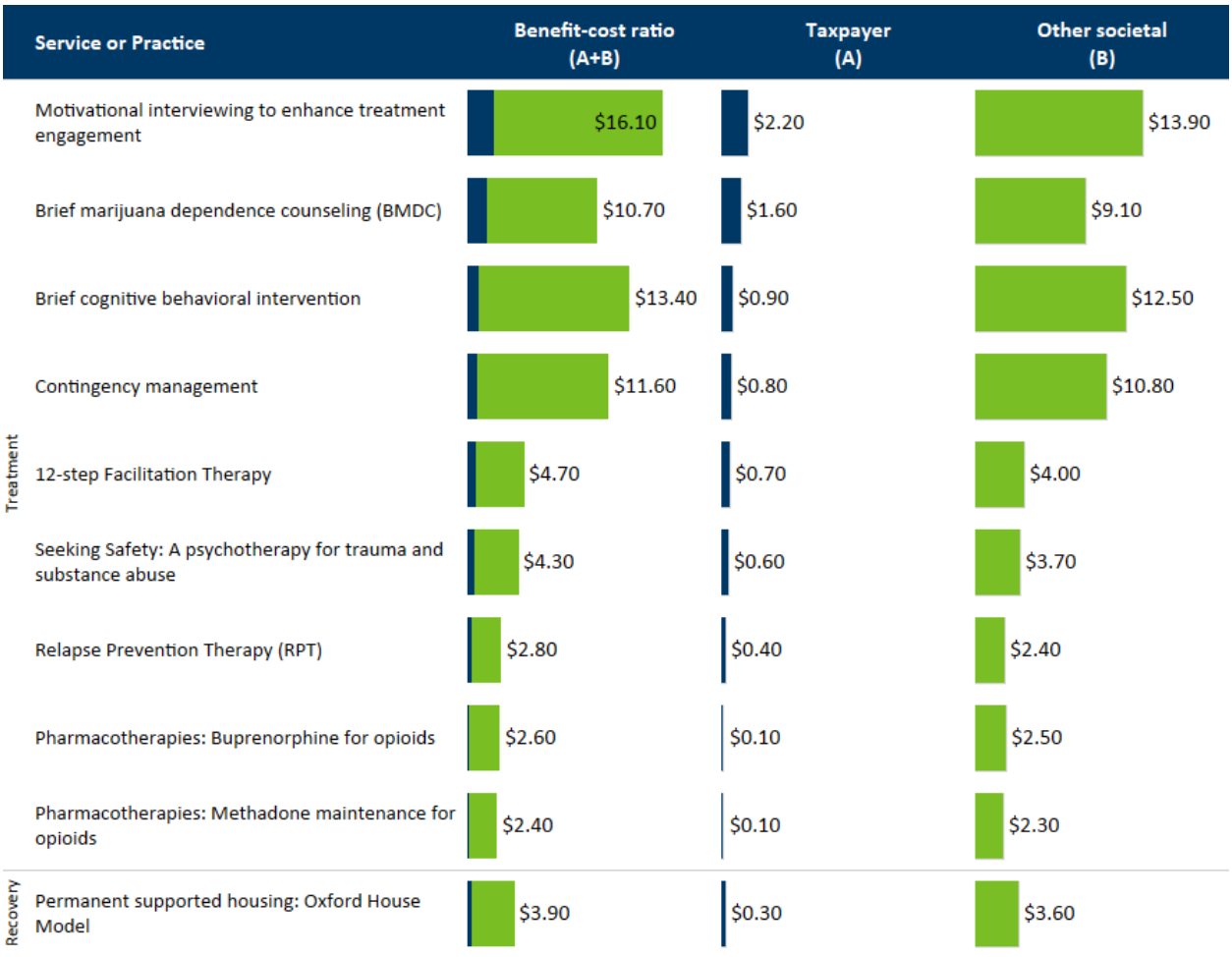
Findings – Treatment and Recovery Services

For individuals with substance use disorder, treatment is offered by trained practitioners in licensed facilities. For each treatment modality reviewed, the estimated benefits exceed costs for the three-year period of study. The benefit-cost ratio ranges from $16.10 for motivational interviewing to $2.40 for methadone maintenance for opioids. Two of the services also generate three-year returns to taxpayers (i.e., excluding other societal benefits) that exceed the initial investment. Societal benefits are larger than taxpayer benefits because decreased use causes increases in participant earnings.

Two of the services are pharmacotherapies that have become especially important because of their ability to help individuals with opioid use disorder. Pharmacotherapies involve using approved medication to reduce withdrawal symptoms, decrease cravings, and prevent use. Paired with behavioral therapy, pharmacotherapy is one of the National Institute on Drug Abuse's 13 evidence-based principles of effective treatment for substance use disorder. For Minnesota overall, buprenorphine and methadone maintenance generate $7,900 in benefits per participant per year, respectively. Their benefit-cost ratios are relatively low because of the high cost to administer treatment.

In spite of this evidence, access to treatment is limited, particularly in outstate Minnesota. Only eight counties have a methadone maintenance clinic and less than half of counties have an office-based buprenorphine prescriber.

Figure 5: Comparison of benefit-cost ratios for treatment and recovery services



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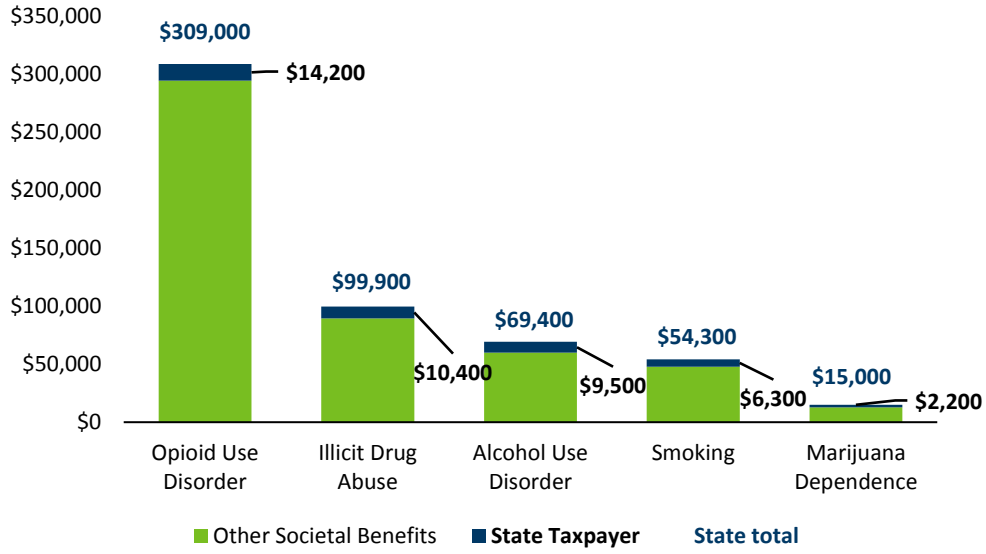
Targeting promotion, prevention, and early intervention

While a full continuum of care is necessary to combat substance use, prevention is vital because it helps individuals avoid substance use altogether. Preventing the development of substance abuse would generate benefits or avoid costs for Minnesotans ranging from $15,000 for avoiding an instance of marijuana dependence to $309,000 for avoiding an instance of opioid use disorder. Figure 6 shows the total benefits and to whom they accrue. Federal and state funding for prevention remains limited, so the funding of these services often falls to localities and school districts. This decentralized funding model causes variation in the adoption of evidence-based practices.

Figure 6: Lifetime value to Minnesotans for avoiding substance use disorder



Source: Pew-MacArthur Results First model; analysis by MMB, 2017

Background

A bipartisan provision enacted during the 2015 legislative session directed MMB to implement an evidence-based policy framework. Through the Minnesota *Results First Initiative*, MMB inventories evidence-based offerings and estimates the extent to which publicly funded services generate positive, cost-effective outcomes for Minnesotans. We partner 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. As policymakers face difficult budget choices, knowing which services have outcomes proven to provide taxpayer savings is valuable. When applied consistently, these insights improve outcomes and maximize benefits for Minnesotans. As such, they are not used to estimate fiscal impacts. Past efforts include work in adult criminal justice and adult mental health. Future analyses will study child welfare, health care, higher education, juvenile justice, and children's mental health.

For the purposes of state fiscal notes, MMB views outcomes from this analysis as secondary effects.

Figure 7: A Framework for Evidence-Based Decision Making

The nationally recognized Results First Initiative framework uses a three-step process:

1. **Use high-quality research** from across the nation to identify what works
2. **Use this research and state-specific data** to project the effect
3. **Compare services' costs and projected benefits** to identify the best return on investment of public dollars

The Washington State Institute for Public Policy (WSIPP) developed the benefit-cost analysis model. The Pew-Charitable Trust and MacArthur Foundation collaborated with WSIPP to encourage its use in other states.

To learn more about the Results First Initiative in Minnesota and access the full Adult and Youth Substance Use inventory and report, please visit mn.gov/mmb/results-first

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