

Youth Receiving Multisystemic Therapy®
Save Taxpayers in New Mexico More Than
\$54 Million, Save Crime Victims \$105 Million



MST®
Multisystemic Therapy

This independent report was paid for by: New Mexico's Children, Youth & Families Department

In December 2014, the New Mexico MST Outcomes Tracking Project Evaluation Report reported positive results for youth receiving Multisystemic Therapy® for serious antisocial behavior (MST) and for Multisystemic Therapy for problem sexual behavior (MST-PSB) over the nine-year period from July 2005 to June 2014. Specifically, the report presented data on the demographic characteristics, problem severity, and clinical outcomes for New Mexico's MST programs.

The more than 4,000 youth in the study demonstrated very high rates of severity at admission to MST and showed great improvement in all areas examined, including improved functioning, decreased mental health and substance-abuse problems, and cost savings to the state through reductions in utilization of Medicaid-funded behavioral health services.

This brief summarizes the results from an expanded evaluation that analyzed the economic costs and benefits of MST based on criminal adjudication data from New Mexico's Juvenile Justice Services System (JJS). Please note that this JJS cost analysis is independent of the aforementioned Medicaid analysis and the results are not cumulative. With confidentiality and data-protection processes in place, JJS Data Bureau provided the evaluators with referral, petition, and adjudication information for a sample of youths who had completed MST treatment. These data were organized into three time periods: one year prior to admission to MST, during MST treatment, and two years after discharge from MST.

The JJS Cost Analysis Showed . . .

Savings of more than \$54 million to taxpayers and almost \$105 million to crime victims through reductions in adjudicated petitions to N.M. Juvenile Justice Services for 2,052 youths. The outcome evaluation showed a 73-percent reduction in the monthly rate of criminal petitions (with a 38-percent reduction in felony petitions) during the 24 months after MST treatment compared to the 12 months before treatment. These figures represent a benefit of \$65,754 per youth.

- MST treatment costs were offset by reductions in expenses to taxpayers and crime victims over an average of 22.2 months after discharge. Returns beyond the cost of treatment reflect economic benefits.
- The rate of return, i.e., benefit-cost ratio, was 6.62. For every dollar spent on MST treatment, \$6.62 was returned in reduced crime-related expenses.
- Monthly expenses to taxpayers were much higher before MST treatment (\$2,965,190) than during (\$911,480) or after (\$822,580). Net benefits to taxpayers were more than \$30 million.
- Net benefits to crime victims were estimated at more than \$15 million dollars in the tangible domain and in excess of \$41.5 million in the intangible domain.

A Few Notes about Methodology:

The sample consisted of 2,052 youth who completed MST and had been discharged for two years or more by June 30, 2014. The youth were representative of all N.M. youth who completed MST.

- The average length of follow-up for the sample was 22.2 months, and 71 percent of the sample had the full follow-up of 24 months.

MST costs and benefits were examined using an adaptation of a benefit-cost model developed by the Washington State Institute for Public Policy (hereafter, WSIPP model). The WSIPP model provides estimates of a range of crime-related expenses, broadly categorized as:

- a. Taxpayer expenses (police, court processing, detention and supervision);
- b. Tangible losses to victims (property damage, health care, victim services, police/fire and lost productivity); and
- c. Intangible losses to victims (pain and suffering).

Criminal petitions were coded into 11 categories for all analyses: (1) murder/manslaughter, (2) sexual, (3) robbery, (4) assault, (5) property and (6) drug and for five categories of misdemeanor offenses, including (7) theft/larceny, (8) stolen property, (9) fraud, (10) misdemeanor assault and (11) misdemeanor drug. All monetary values (cost of treatment, crime-related expenses) were adjusted to 2015 values using the Consumer Price Index. Analyses of crime victim benefits included estimates of undetected crimes (i.e., those that were not adjudicated).

Detention data were not available for this analysis. It is also important to note that the FACTS database only includes cases that were processed by JJS. Any criminal petitions that were filed after the youth turned 18 (or were otherwise processed in the adult justice system) were not available.

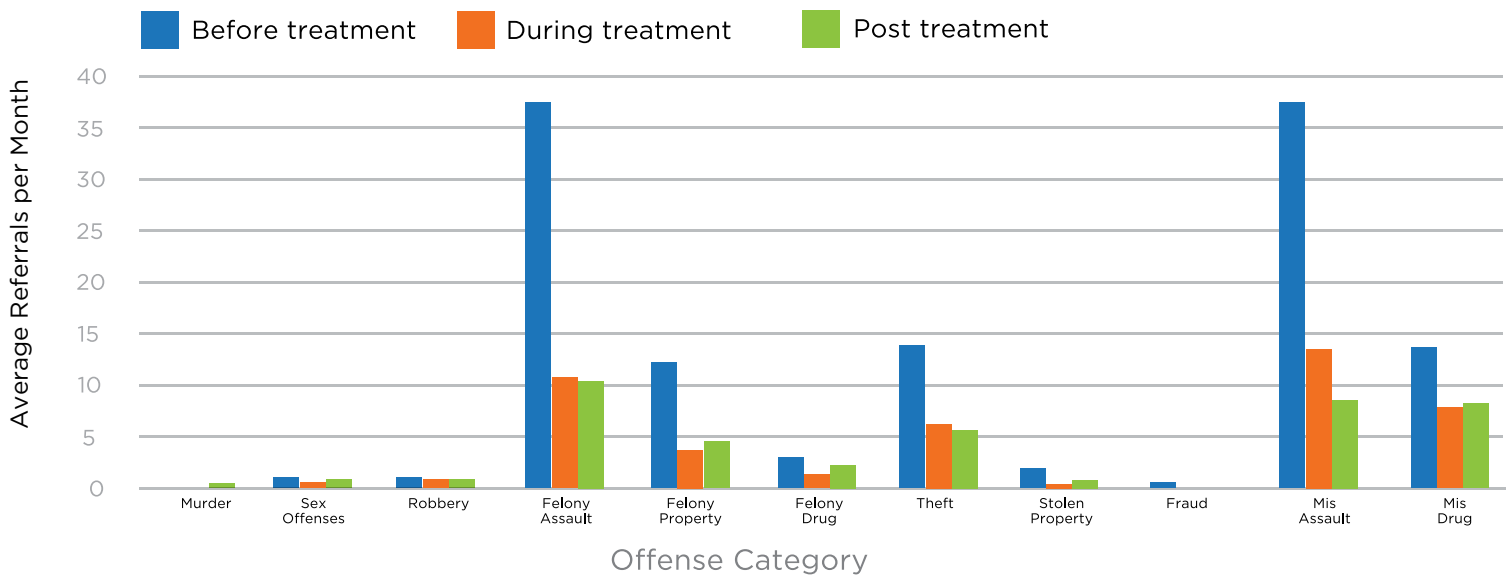


Change in Average Petitions per Month across Study Periods

Average petitions per month (AP/M) were calculated to control for the different lengths of each period. Compared to pre-treatment, AP/M was reduced by 69 percent during MST treatment and by 73 percent over the 22.2 months post discharge—Figure 1.

- Assaults accounted for 61 percent of the pre-admission petitions. Across study periods, there were significant reductions in AP/M for felony and misdemeanor assault.
- Felony property and theft/larceny represented another 22 percent of the pre-admission petitions, and both showed significant reductions through post-treatment.
- Misdemeanor drugs, which made up 12 percent of pre-admission petitions, also showed a reduction from pre-treatment through follow-up that approached significance.
- No significant changes were observed across study periods in the AP/M for the murder, sexual, robbery, felony drug, stolen property and fraud categories. Collectively, these offense categories accounted for less than 5 percent of pre-admission petitions.

Figure 1
Comparison of Average Petitions per Month^(a) Before MST, During MST Treatment and After Discharge from MST (n=2,052)



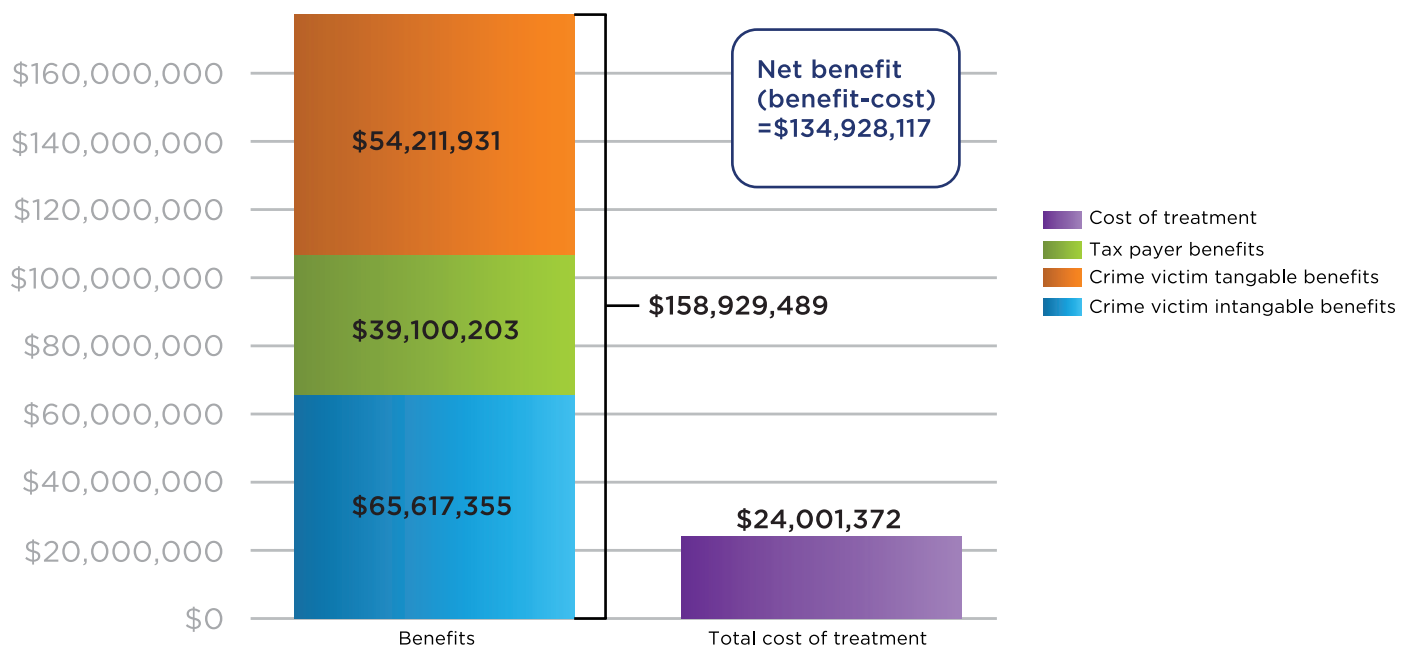
a) Average petitions per month were calculated by averaging the total petitions for each offense category by the number of months in a given period. The total petitions in each offense category were divided by (a) 12 months for the pre-MST period, (b) 4.6 months (the average length of stay across sites) for the MST treatment period, and (c) 22.2 months (the average length of follow-up) for the post-MST period.

Savings, Net benefits and Recovered Crime-related Costs

Calculations of savings included taxpayer and crime victim benefits, as well as a cumulative benefit. Figure 2 shows that MST costs of more than \$24 million were exceeded by the cumulative savings in other areas (almost \$159 million), resulting in a net benefit of almost \$135 million. This represents a benefit of \$65,754 per youth. The associated benefit-cost ratio was 6.62, suggesting that every dollar that New Mexico spent on MST treatment resulted in \$6.62 in benefits to taxpayers and crime victims through reductions in youth criminality.

Figure 2

Estimated Benefits(a) and Treatment Cost(b)
22 Months After Discharge from MST (n=2,052)



(a) Total Benefits were calculated for each domain in four steps: (1) calculating the change in AP/M between (a) before admission and during treatment and (b) before admission and after discharge; (2) calculating the monthly expenses averted based on the change in AP/M, using methods specific to the given domain; (3) multiplying the monthly expenses averted by the time period examined (4.6 months for during treatment, 22.2 months for after discharge); and (4) summing the benefits accrued during and after treatment. (b) MST Treatment Cost was calculated using an average monthly cost of \$2,534/per youth (Center for Effective Interventions) and an average treatment length of 4.6 months for the youth in this sample. (c) Net Benefit = Total Benefits—MST Treatment Cost. All dollar values are in 2015 dollars.

Considerations for Interpretation of Benefit Estimates

Our findings suggest that MST produced substantial cost savings to taxpayers and crime victims that exceeded the cost of treatment. Although these results should be interpreted with caution because they are based on pre-post treatment changes (rather than comparison with an alternative group that did not receive MST), there are good reasons to believe that the current study provides a valid estimate of the economic benefits of MST. First, our findings are consistent with other cost-benefit analyses of MST – based on the results of a randomized clinical trial—that estimated benefit-cost ratios ranging from 5.04 to 23.59. The current study extends those findings by demonstrating that MST can produce economic benefits when implemented in a community setting, in addition to the more tightly controlled conditions of a randomized study. Second, an examination of clinical outcomes in the aforementioned clinical trial found that serious juvenile offenders who did not receive an intensive intervention had high levels of re-arrest into early adulthood. Thus, it seems likely that youths in the present study would have maintained high levels of criminal behavior throughout the study period (until age 18) had they not received MST.

We Conclude That . . . The results of the cost-benefit analysis of JJS data demonstrated economic benefits of almost \$135 million dollars as a result of reduced criminal petitions up to 22.2 months after youth completed MST.

Future analyses will seek to expand the current database to include arrests/convictions from the adult criminal justice system as well as detention data. We also plan to explore cumulative economic benefits of MST across behavioral health and juvenile justice settings.

This report was prepared by:

Alex R. Dopp, M.A.; Cost Consultant, University of Missouri
Anita Saranga Coen, MSW; LCSW; Principal,
Focus Research & Evaluation June 2015

To request the complete evaluation report, a list of footnotes or
information on MST, contact:

David Bernstein, MSW
Director
The Center for Effective Interventions
University of Denver
Graduate School of Social Work
david.h.bernstein@du.edu
303-871-2031



UNIVERSITY of
DENVER

GRADUATE SCHOOL OF SOCIAL WORK