



METHODS APPENDIX
Vermont Treatment Courts
Statewide Evaluation
2023



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Methodology for the Vermont Treatment Courts Statewide Evaluation 2023

In 2021, the Vermont Judiciary initiated a statewide process, outcome and cost evaluation of its adult treatment courts: Chittenden County Treatment Court (CCTC), Washington County Treatment Court (WCTC), Rutland County Treatment Court (RCTC), and the Southeastern Regional DUI Treatment Docket (SRDTD). The Judiciary contracted with NPC Research to complete the evaluation.

The evaluation began with process studies of the five programs. The process evaluations included an online assessment of program alignment with best practices, document reviews, and site visits that included observations, interviews with court teams, and focus groups with participants. Detailed methods and results for the process evaluations can be found in the individual site process evaluation reports.

This document contains the evaluation methods and analyses used to complete the outcome and cost evaluations of each site. Results are provided in individual program evaluation reports and in a statewide evaluation report that summarized key findings across all adult treatment courts in Vermont.

OUTCOMES METHODS

The main purpose of an outcome evaluation is to determine whether a program achieved its intended goals and participant outcomes. An outcome evaluation examines both short- and long-term outcomes. Short-term outcomes include in-program measures, such as whether participants are successfully completing the program in the intended amount of time and what factors lead to participants successfully graduating. Evaluation of long-term outcomes (sometimes called an “impact evaluation”) for treatment courts typically measure criminal justice recidivism. Long-term outcomes measured for this study include rearrests (overall and by charge type and severity), time spent incarcerated, and time spent on probation.

The main research questions addressed in the outcome study include:

1. What are the demographics of participants in Vermont’s treatment courts?
2. Are Vermont’s programs following the intended treatment court model?
 - a. Do participants enter the program within the intended time frame so that participants are swiftly connected to intended services?
 - b. How successful are the programs in bringing participants to completion and graduation within the expected time frame?
 - c. What participant characteristics are associated with successful participant outcomes (program graduation)?
3. Is participation in Vermont’s treatment court programs associated with reduced recidivism compared to eligible individuals who do not participate? Is there a difference in recidivism between program graduates and non-graduates?

- a. What are the differences in recidivism rates (the percent of participants who are rearrested) between program participants and the comparison group? Between graduates and non-graduates?
- b. What are the differences in the average number of rearrests and charges between program participants and the comparison group? Between graduates and non-graduates?
- c. What are the differences in the average time incarcerated between program participants and the comparison group? Between graduates and non-graduates?
- d. What are the differences in the average time on probation between program participants and the comparison group? Between graduates and non-graduates?

Analyses were performed for participants who entered one of the five Vermont treatment court programs – Chittenden County Treatment Court (CCTC), Washington County Treatment Court (WCTC), Rutland County Treatment Court (RCTC), the Southeast Regional DUI Treatment Docket (SERDTD), and Chittenden County Mental Health Court (CCMHC).

Research Design: CCTC, RCTC, WCTC, and SERDTD

For four of the five Vermont treatment courts, NPC used a quasi-experimental design with a contemporary comparison group to measure recidivism outcomes. Proxy program entry dates were calculated for comparison group individuals using the mean number of days, as well as the standard deviation, from arrest to entry for participants. All prior arrests were counted with respect to the index and entry date for both the program and comparison groups. More information on the comparison sample is included in the section on study samples.

Based on data availability, program participants and comparison group members were tracked through existing administrative databases for a period of at least 2 years following program entry (or an equivalent proxy date for the comparison group).

Research Design: CCMHC

NPC also attempted to create a matched comparison group of individuals who were eligible for CCMHC but did not participate based on demographics and prior charge patterns, but because there were no data on mental health status for comparison group members, creating a valid matched comparison group was not possible. Lacking an indicator of mental health diagnosis in the comparison group prevented confirmation that the comparison individuals were a true match to the CCMHC participants, all of whom had been diagnosed with mental health conditions. Because recidivism and other outcomes may have been influenced by group differences in mental health status, it was decided (with input from the CCMHC team) that the best option was to compare participants to themselves in a pre-post design looking at arrests pre and post CCMHC entry.

Program participants' number of arrests 2 years prior to program entry was compared to their number of arrests 2 years after program entry to assess whether it declined over time. However, without a contemporary matched comparison group, it is difficult to determine whether any changes in recidivism are a direct result of program participation or due to other changes that occurred over time. For example, recidivism generally declines as people age, so reductions in rearrests may simply reflect

people aging out of recidivism. Alternatively, arrest patterns may change over time in a jurisdiction overall which may in turn affect participant recidivism. This would be masked if only looking at one group at two different time points. Overall, the lack of available statewide data on mental health conditions required NPC to use a study design that is less rigorous than a formal comparison group and prevented the ability to conduct a thorough cost-benefit analysis for CCMHC.

Data Collection and Sources

The data necessary for the outcome evaluation were gathered from administrative databases as described in Exhibit 01. The table lists the type of data elements, the source of these data, and when the datasets were received.

Exhibit 01. Vermont Evaluation Data, Sources, and Date Received

Data	Source
<p><i>Treatment Court Program Data</i> <i>Examples:</i></p> <ul style="list-style-type: none"> • Participant demographics • Program start and end dates • Drug tests • Sanctions and incentives • Dates of court appearances 	<ul style="list-style-type: none"> • CCTC Program Database (included CCMHC participants) • RCTC Program Database • WCTC Program Database • SERDTD Program Database <p><i>(All program datasets received September 2022)</i></p>
<p><i>Criminal Justice-Related Data</i> <i>Examples:</i></p> <ul style="list-style-type: none"> • Incident dates (arrest dates) • Dates of case filings • Charges • Prison entry and exit dates • Jail entry and exit dates 	<p>Vermont Crime Information Center (VCIC) <i>(dataset received March 2022)</i></p>
<p><i>Department of Corrections Related Data</i> <i>Examples:</i></p> <ul style="list-style-type: none"> • Identifiers • Demographics • Jail and/or prison entry and exit dates • Probation and/or parole entry and exit dates 	<p>Vermont Department of Corrections (DOC) <i>(dataset received October 2022)</i></p>

Data	Source
<p>Substance Use Treatment (for participants active since 2019)</p> <p>Examples:</p> <ul style="list-style-type: none"> • Entry and exit dates of treatment received • Types of substance abuse treatment received • Treatment completion status 	<p>CCTC and CCMHC:</p> <ul style="list-style-type: none"> • Howard Center (<i>dataset received April 2023</i>) <p>RCTC:</p> <ul style="list-style-type: none"> • Evergreen Substance Use Treatment (<i>dataset received November 2022</i>) <p>WCTC:</p> <ul style="list-style-type: none"> • Central Vermont Substance Abuse Services (<i>dataset received May 2023</i>) • Washington County Mental Health Services (<i>dataset received May 2023</i>) <p>SERDTD:</p> <ul style="list-style-type: none"> • Health Care and Rehabilitation Services of Southeastern Vermont (HCRS) (<i>dataset received December 2022</i>) • Clara Martin Center (CMC) (<i>dataset received December 2022</i>)

Data Limitations

Service Delivery (Drug Tests, Court Sessions, Incentives and Sanctions)

An evaluation of service delivery data assesses whether a program is delivering its intended duration and dosage of any given service. Prior to the implementation of the statewide data information management system (DIMS) in 2023, Vermont did not have a quality database system for treatment courts statewide to collect key data to effectively monitor participants (including services provided by the program such as incentives and sanctions and drug testing, or services delivered by treatment providers such as specific substance use disorder or mental health therapies provided). For each program, NPC analyzed the available service delivery data from the program databases used prior to DIMS related to drug testing, court sessions, and the use of incentives and sanctions. NPC reviewed these initial findings with each program team. This analysis and review revealed significant gaps in data entry related to service delivery that made accurate reporting of these metrics impossible, so service delivery metrics are excluded from the evaluation results. Accurate, complete and timely data entry was hampered by the lack of an efficient and quality database (including the lack of a place to enter some information in the old database). Consistent data entry was also hampered by frequent team turnover, particularly turnover in the coordinator position.

Treatment Data

NPC requested data from treatment providers for all program participants in each program since program inception and a subsample of recent participants who entered in 2019 or later for each program. NPC received limited datasets with just the subsample from six different treatment providers (see Exhibit 1). Each treatment provider supplied a different, uniquely structured, data set with different data elements. NPC reviewed, cleaned, and analyzed each dataset. Based on the elements

provided, NPC determined what common treatment metrics could be provided for each treatment provider in each program (e.g., length of time in treatment, successful completion rates, number of treatment sessions by modality). Because all treatment providers supplied data for the subsample and some of the individuals in the subsample did not have treatment data, the sample sizes became very small. Moreover, there were some quality issues with some of the datasets. For example, one provider changed their electronic medical record system and did not provide any treatment sessions prior to December 2020. Nonetheless, for each program, NPC analyzed the small number of individuals with complete treatment data to provide the metrics that could be calculated with the data elements provided. NPC reviewed each program's treatment data results with each individual program team. Each team determined that the treatment data did not accurately reflect the typical participant experience in treatment. Data were determined not complete enough to include in the evaluation and were therefore excluded from the final results.

Study Samples

Intent to Treat

NPC employs an intent to treat (ITT) approach, where every participant entering the program, regardless of program status at the time of the study, is used to describe program impact. Outcomes for both graduates and non-graduates are impacted by the participation in the program, and an ITT model allows for an analysis of this impact. In addition, because it is not possible to determine who would graduate and who would not graduate within the comparison group, it is necessary for an ITT approach to be used for valid comparisons. For descriptive purposes only, results for graduates are presented alongside the full program group in recidivism analyses. Outcomes are presented at 2 years after program entry for everyone in the study sample who had at least 2 full years of outcomes. Participants who entered recently and experienced current program practices are not represented in this analysis as they had not had enough time (2 years) pass since their program entry for their outcomes to be included. It is also important to note that for those active participants with 2 or more years of post-entry rearrest data available, it is possible their status was updated (i.e., completed the program successfully or unsuccessfully) after receipt of program data in September 2022.

Participant Groups

Based on the availability of program data and the need to provide at least 2 years of outcomes post program entry, this evaluation examines those individuals who entered one of the five Vermont treatment court programs between 2015 and 2019 (unless otherwise noted in reports, such as when descriptive trends over time are presented).

Why use this sample?

Evaluating participants who entered in 2015-2019 provides at least 2 years of recidivism data based on when NPC received the data. Participants who entered more recently have not had enough time pass to adequately assess their long-term recidivism. This also allows sufficient time for participants to enter and complete the program based on the average time to complete. In addition, having several years of participant data allows a large enough sample size for valid analyses.

Keep in mind:

- Participant outcomes reflect treatment court practices during this time period. Process changes and improvements have been made since then.
- Because recidivism is measured 2 years after program entry, results include both in-program and post-exit recidivism.

Participant Sample for Analyses of Within-Program Outcomes (2015–2019): All non-active participants entering between 2015 and 2019. This sample was used to calculate the programs' graduation rates and the average time to program completion as well as to compare differences in characteristics between graduates and non-graduates. Since non-graduates tend to spend less time in program than their graduating counterparts, truncating the sample to exclude those entering after 2019 allows time for participants to achieve the outcomes (program completion or non-completion) necessary for a balanced comparison (i.e., at least 2 years).

Participant Sample for Comparative Recidivism Analyses (2015– 2019): All program participants entering between 2015 and 2019 with complete data. This group was used for all comparative analyses (e.g., rearrests) with the comparison group. Participants, including those still active, were included in this sample if they had at least 2 years of post-entry outcomes in the court data.

Comparison Group. A comparison group was developed for each of the five programs from within the same county as each treatment court. The comparison groups were composed of individuals who were matched to each programs' unique participants (e.g., demographics, criminal history), but who experienced traditional court processing instead of entering the treatment court. The comparison group was selected using administrative data sources. NPC obtained statewide court case filing data from the Vermont Crime Information Center (VCIC) database. A comparison pool was selected from individuals in the same jurisdiction of the treatment courts who did not enter a treatment court program but were eligible based on criminal history, and the charge type and severity of the "index" offense. The "index" offense is the offense and associated case filing that led to treatment court participation. The comparison group all had "index" case filings that fell within the same timeframe of participants' index case filings. Individuals who were referred to the program but who did not enter were sometimes added to program databases. These referred individuals were excluded from the comparison pool. However, referrals did not appear to be consistently entered into program databases, so some referrals may have been included in the comparison pool.

Due to a lack of information available regarding mental health history and status among both the participants and the comparison pool population, the CCMHC (mental health court) participants were compared to themselves overtime with a pre-post methodology as described above.

Matching Method

The comparison groups were selected from the VCIC database, so individuals were not randomly assigned to a treatment or control group. Therefore, there is a risk that treatment court participants may systematically differ from comparison group members, and those differences, rather than participation in the treatment court, may account for some or all the differences in the impact measures between groups. To minimize this risk, NPC used both propensity score matching (PSM¹) and Mahalanobis distance matching (MDM) to balance and match the program and comparison groups on 1) gender, 2) race, 3) age at program entry (or equivalent), 4) criminal history, and 6) index offense charge. Each treatment court program was matched individually with their own comparison group from individuals in the same jurisdiction. When necessary, a caliper was employed to provide better balance between groups but never at the expense of sample size. Exhibit 02 lists the specific data elements used in the matching process.

Exhibit 02. Matched Data Elements

PSM/MDM Matched Data Element
Gender (female or non-female)
Race (non-white or white)
Age at Program Entry
Total number of arrests 2 years prior to program entry or equivalent and number of arrests with the following charges:
▶ Any
▶ Drug
▶ DUI
▶ Person
▶ Property
▶ Felony
▶ Misdemeanor

Propensity scores are a weighting scheme designed to mimic random assignment. The first step of propensity score analysis was to estimate the probability that a study participant will or will not be a program participant. This estimated probability of whether an individual is likely to enter the program is the propensity score. Once the propensity score for each individual was established, the extent to which program participants differed from comparison group members was calculated for each program using Weighted Least Squares (WLS) regression. This calculation is done by using the propensity scores to weight the parameters in the equation, which adjusts for any pre-existing differences between the two groups. This methodology has advantages over other techniques that statistically adjust for pre-existing differences because it uses a multivariate approach (taking into account many possible measured variables) to create propensity weights and thus reduces potential bias in impact (e.g., rearrest) results.

¹ Rosenbaum & Rubin (1983).

Mahalanobis distance matching is a metric that compares data from an observation (e.g., a participant characteristic such as gender, race, or number of prior arrests) to the distribution of the sample data. It considers how many standard deviations away from the mean the data is positioned before applying a distance measurement. Once the distances are established an algorithm selects those observations closest to the center based on certain user defined criteria. This methodology has advantages over other techniques that statistically adjust for pre-existing differences because it uses a multivariate approach (considering many possible measured variables) and reduces the selection bias of the binary approach inherent in the logistic regression, the analytic process involved in selecting a matched group based on propensity scores.

These methods provided a successful matching process for all programs (except the CCMHC since the lack of information on mental health diagnosis prevented a valid comparison match so a pre-post analysis approach was used instead). There were no significant differences between the program participants and the comparison group on demographics, age, or criminal history indicators. Characteristics of the program participants and comparison groups are presented in their respective program evaluation reports.

Analyses

Once all data were gathered, researchers moved the data into Statistical Package for the Social Sciences (SPSS) 23.0 for cleaning and analysis. Matching was conducted in R Core Team (2020). The analyses used to answer specific research questions are described below. Some analyses include data sources that do not cover the full outcome window for every participant. In these instances, only participants with complete information were included. Sample sizes are provided directly in reports. Outcomes are counted with respect to the participant program entry date, or the calculated proxy date used for the comparison groups.

Research Question #1: What are the demographics of participants in each program?

Data Sources: Program Databases

Data on participants from Vermont's treatment courts were analyzed to answer this question. The sample was further limited to individuals who entered the treatment court programs after 2015 (rather than including previous years) to include participants experiencing more recent practices. Descriptive means and proportions were utilized to describe demographics, including age, gender, and race.

Research Question #2: Are programs in Vermont following the intended treatment court model?

a. Do participants enter the program within the intended time frame so that participants are swiftly connected to intended services?

Data Sources: Program Databases, Court Filings

Researchers identified either the referenced index arrest (when relevant docket information was provided in the program data) or the most recent eligible arrest in the statewide court records that

occurred *prior to program entry*. The average number of days from this arrest to program entry was calculated by taking the difference between these two dates.

b. How successful are the treatment courts in bringing participants to completion and graduation within the intended time frame? Do participants complete the program successfully in the intended timeframe?

Data Sources: Program Databases

The program graduation rate is calculated as the percentage of participants who graduated from the program out of all participants who started between 2015 and 2019 and who have left the program either by successful or unsuccessful discharge (i.e., none of the participants are still active and all have had an equal amount of time to complete). Graduation rates for each program were compared to the national average for treatment court graduation rates.

To measure whether each program is graduating participants in its intended timeframe, the average amount of time in the program was calculated for participants who started the program between 2015 and 2019 and have been discharged from the program. The average length of stay for graduates and non-graduates was compared to the intended time to program completion.

c. What participant characteristics are associated with successful program completion?

Data Sources: Program Databases

Graduation rates by gender and race were compared to identify potential disparities. Descriptive statistics for the average age and number of arrests (overall and disaggregated by charge type) were also compared for graduates and non-graduates.

Research Question #3: Is participation in the program associated with reduced recidivism compared to eligible individuals who did not participate? Is there a difference in recidivism between program graduates and non-graduates?

Data Sources: Program Databases, Court Filings, Department of Corrections

Recidivism outcomes are presented as the recidivism rate (the percentages of individuals in the participant and comparison groups that are rearrested), as well as the average number of new arrests per person in each group. The recidivism rate and number of new arrests are presented overall and disaggregated by charge type (drug, DUI, person, Property) and severity (felony, misdemeanor). Each outcome is measured at 2 years post program entry. Recidivism results are limited to all individuals who entered each program between 2015 and 2019 and their respective comparison group. As described above, CCMHC does not have a comparison group, and participants' recidivism 2 years *prior* to program entry is compared to their recidivism 2 years *after* program entry using a pre-post analysis.

a. Is there a difference in rearrest rates (the percentage of participants who were rearrested) between program participants and the comparison group? Between graduates and non-graduates?

Descriptive proportions were utilized to examine the differences in recidivism rates for participant groups and their respective comparison group at 2 years post program entry. Recidivism rates for graduates are also provided.

b. What are the differences in the average number of rearrests between program participants and the comparison group? Between graduates and non-graduates?

Descriptive means were utilized to examine the differences in cumulative rearrests at 2 years post program entry. These data were analyzed to compare the participant groups and their respective comparison groups. Descriptive means were also used to examine the differences between graduates and non-graduates.

c. What are the differences in the average time incarcerated between program participants and the comparison group? Between graduates and non-graduates?

Data from Vermont's Department of Corrections (DOC) were utilized to capture the average time incarcerated at 2 years after program entry to compare the participants and their respective comparison groups. Descriptive means were also utilized to examine the differences between graduates and non-graduates. This dataset was also utilized to calculate the percentage of the of all participants, graduates and non-graduates who had at least one episode of incarceration while in their first year of program participation. Additionally, the program databases contained data on jail sanctions which were utilized to calculate the percentages of all participants, graduates and non-graduates who received a jail sanction during their first year of program participation.

d. What are the differences in the average time on probation between program participants and the comparison group? Between graduates and non-graduates?

Descriptive means were utilized to examine the differences in total time on probation at 2 years post program entry between the participant groups and their respective comparison groups, as well as the difference between graduates and non-graduates.

COST EVALUATION

COST METHODS

The cost evaluation addressed the following study questions:

- How much does each program cost per participant?
- What is the cost impact on the criminal justice system (and other taxpayer funded systems) of sending individuals through the program compared to individuals eligible for the program but who received traditional processing?
- Is there a return on taxpayer investment in the program due to any improved outcomes?

To answer the above questions, NPC Research conducted an analysis of the five programs across the state to assess the cost of the programs, and the extent to which program costs were offset by any cost-savings related to participant outcomes. This section provides the methods and results for the cost-benefit analysis performed. The same program and comparison groups used for the outcome evaluation were used for the cost analysis.

Transaction and Institutional Cost Analysis (TICA)

The cost approach utilized by NPC Research is called Transactional and Institutional Cost Analysis (TICA). The TICA approach views an individual's interaction with publicly funded agencies as a set of transactions in which the individual utilizes resources contributed from multiple agencies. Transactions are those points within a system where resources are consumed and/or change hands. In the case of treatment courts, when a treatment court participant appears in court or has a drug test, resources such as judge time, defense attorney time, court facilities, and urine cups are used. Court appearances and drug tests are transactions. In addition, the TICA approach recognizes that these transactions take place within multiple organizations and institutions that work together to create the program of interest. These organizations and institutions contribute to the cost of each transaction that occurs for program participants. TICA is an intuitively appropriate approach to conducting costs assessment in an environment such as a treatment court, which involves complex interactions among multiple taxpayer funded organizations.

The TICA methodology is based upon six distinct steps. Exhibit 03 lists each of these steps and the tasks involved.

NPC conducted step 1 (determining program process) during site visits, through analysis of program documents, and through interviews with key informants. Researchers completed step 2 (identifying program transactions) and Step 3 (identifying the agencies involved with transactions) through observation during site visits and by analyzing the information gathered in Step 1. Step 4 (determining the resources used) was performed through extensive interviewing of key informants, direct observation during site visits, and by collecting administrative data from the agencies involved in the program. NPC completed step 5 (determining the cost of the resources) through interviews with program staff and with agency financial officers and other staff, as well as analysis of budgets found

online or provided by agencies. Finally, Step 6 (calculating cost results) involved calculating the cost of each transaction and multiplying this cost by the number of transactions. For example, to calculate the cost of drug testing, NPC multiplied the drug test cost by the average number of drug tests performed per person. All the transactional costs for each individual were added to determine the overall cost per program participant/comparison group individual. This was reported as an average cost per person for the program, and outcome/impact costs due to rearrests, jail time and other recidivism costs. NPC was also able to calculate the cost of program processing per agency, so that it was possible to determine which agencies contributed the most resources to the program and which agencies gained the most benefit.

Exhibit 03. The Six Steps of TICA

Step	Description	Tasks
Step 1	Determine flow/process (i.e., how program participants move through the system).	Site visits/direct observations of program practice. Interviews with key informants (agency and program staff) using a treatment court typology and cost guide.
Step 2	Identify the transactions that occur within this flow (i.e., where clients interact with the system).	Analysis of process information gained in Step 1.
Step 3	Identify the agencies involved in each transaction (e.g., court, treatment, police).	Analysis of process information gained in Step 1. Direct observation of program transactions.
Step 4	Determine the resources used by each agency for each transaction (e.g., amount of judge time per transaction, amount of attorney time per transaction, number of transactions).	Interviews with key program informants using program typology and cost guide. Direct observation of program transactions. Administrative data collection of number of transactions (e.g., number of court appearances, number of treatment sessions, number of drug tests).
Step 5	Determine the cost of the resources used by each agency for each transaction.	Interviews with budget and finance officers. Document review of agency budgets and other financial paperwork.
Step 6	Calculate cost results (e.g., cost per transaction, total cost of the program per participant).	Indirect support and overhead costs (as a percentage of direct costs) are added to the direct costs of each transaction to determine the cost per transaction. The transaction cost is multiplied by the average number of transactions to determine the total average cost per transaction type. These total average costs per transaction type are added to determine the program and outcome costs.

Cost to the Taxpayer

To maximize the study's benefit to policymakers, a "cost-to-taxpayer" approach was used for this evaluation. This focus helps define which cost data should be collected (costs and avoided costs involving public funds) and which cost data should be omitted or calculated separately in the analyses (e.g., costs to the individual participating in the program).

The central core of the cost-to-taxpayer approach in calculating benefits (avoided costs) for treatment courts specifically is the fact that untreated substance abuse will cost tax dollar-funded systems money that could be avoided or diminished if substance abuse were treated. In this approach, any cost that is the result of untreated substance abuse and that directly impacts a citizen (through tax-related expenditures) is used in calculating the benefits of substance abuse treatment. NPC considered including other taxpayer and non-taxpayer societal costs such as health care expenses, taxes paid, and income, but was not able to acquire the necessary data.

Cost Data Collection

The cost evaluation involved calculating the costs of the program and the costs of outcomes (or impacts) after program entry (or the equivalent for the comparison group). In order to determine if there were any benefits (or avoided costs) due to program participation, it was necessary to determine what the participants' outcome costs would have been had they not participated in the program. One of the best ways to do this is to compare the costs of outcomes for program participants to the outcome costs for similar individuals who were eligible for the program but did not participate. The program participants and comparison group in this cost evaluation were the same samples as those used in the preceding outcome evaluation.

Researchers collected cost data for the program evaluation and divided them into program costs and outcome costs. The **program costs** were those associated with activities performed within the program. The program-related "transactions" included in this analysis were program sessions (including any meetings and other activities preparing for the hearings), case management, substance abuse treatment, and drug testing. The **outcome costs** were those associated with activities that occurred outside the program. These transactions included criminal justice-related activities (e.g., new arrests subsequent to program entry, subsequent court cases, jail/prison days, and probation/parole days), as well as other events that occurred such as victimizations.

The costs for this study were calculated to include taxpayer costs as well as non-taxpayer societal costs (victimizations). All cost results provided in this report are based on fiscal year 2023 dollars or were updated to fiscal year 2023 using the Consumer Price Index.

PROGRAM COSTS

Treatment Court Program Transactions

Program transactions for which costs were calculated include court sessions (including team meetings), case management, substance abuse treatment, drug testing, and jail sanctions. Obtaining the cost for court sessions and case management involved asking each team member for the average amount of time they spend on these activities (including any time needed to prepare for these activities), observing their activities on a site visit and obtaining each team member's annual salary and benefits from a supervisor or financial officer at each agency involved in the program. As this is typically public information, some of the salaries were found online, but detailed benefits information often came from the agency's financial officer or human resources department. In addition to salary and benefits, the indirect support rate and jurisdictional overhead rate were used in a calculation that results in a fully loaded cost per participant. The indirect support rates and overhead rates for each agency involved in the program were obtained from agency budgets that were found online or by contacting the agencies directly.

Court Sessions. Court sessions are typically one of the most staff and resource intensive program transactions. NPC based the cost of a court session (the time during a session when a single program participant interacts with the judge) on the average amount of court time (in minutes) each participant interacts with the judge during the court session. This included the direct costs for the time spent for each team member present, the time team members spend preparing for the session or in team meetings, the agency support costs, and jurisdictional overhead costs.

Case Management is based on the amount of staff time dedicated to case management activities during a regular work week and is then translated into a total cost for case management per participant per day (taking staff salaries and benefits, and support and overhead costs into account).²

Substance Abuse Treatment for program participants was generally provided by the treatment agencies on the team, but other area providers are also utilized. NPC obtained treatment costs from the State of Vermont Medicaid billing rates; however, the treatment data NPC obtained were not usable for this cost analysis. In lieu of site-specific substance abuse treatment data, the costs from other treatment court cost analyses that NPC has conducted nationwide over the past 8 years were used to provide the average and range of costs that would be expected to apply in Vermont for substance abuse treatment services. Substance abuse treatment estimated costs were not included in the program costs because they are not specific to the site being analyzed.

Drug Testing was generally billed to health insurance. The programs mainly use urinalysis (UA) tests, but the SERDTD also uses breathalyzer tests.

Jail Sanctions are provided by the Vermont Department of Corrections (DOC). Jail sanction days are not included in the program costs as the jail sanction data received from the old program database included estimated number of days rather than actual time served. All jail time is based on the data

² Case management included meeting with participants, evaluations, phone calls, referring out for other help, answering questions, reviewing referrals, consulting, making community service connections, documentation, file maintenance, and referrals.

received from the DOC and, to avoid double counting, is included only in the outcome costs and was omitted from program costs.

OUTCOME COSTS

Outcome costs include any events (transactions) that occur after program entry that were not related to program activities. For this study, criminal justice system related events and life events were included in the cost analyses. These events included arrests, court cases, days in jail/prison, time on probation/parole, and victimizations (person and property crimes).

The cost per **Arrest** incorporated the time of the law enforcement positions involved in making an arrest, the salaries and benefits for those positions, support costs and overhead costs. Information about which law enforcement agencies typically conduct arrests was obtained by talking with program staff along with web searches. NPC contacted staff at law enforcement agencies to obtain time and cost information, but some cost information was obtained online from agency budgets or pay scales.

Court Cases include those criminal cases that were dismissed as well as those cases that resulted in conviction. Because they were the main agencies involved, court case costs in this analysis were shared among the Vermont Judiciary, Vermont State's Attorney's Office, and Vermont Office of the Defender General. Budget and caseload information from each agency was used to obtain the average cost per case.

Jail and Prison were provided by the Vermont Department of Corrections. Budget and average daily population information from Vermont Department of Corrections Budget documents was used to obtain the average cost per day of jail/prison. Note that some jail days included in the outcome costs are jail sanctions that occurred as a part of the program. However, using all jail time experienced by both the treatment court participant and comparison individuals during the same two year period, is the most valid comparison of incarceration related costs.

Probation and Parole costs were calculated using online information on the Department of Corrections- Field Services Division's budget and caseload.

Victimization costs were calculated from the National Institute of Justice's *Victim Costs and Consequences: A New Look* (1996).³ The costs were updated to fiscal 2023 dollars using the Consumer Price Index. Victimization are crimes that impact another individual (a victim). Crimes with person and property charges are considered victimizations.

The outcome cost analyses were based on a cohort of individuals who participated in the program and a matched comparison group of individuals who were eligible for the program but who did not attend

³ The costs for victimizations were based on the National Institute of Justice's *Victim Costs and Consequences: A New Look* (1996). This study documents estimates of costs and consequences of personal crimes and documents losses per criminal victimization, including attempts, in a number of categories, including fatal crimes, child abuse, rape and sexual assault, other assaults, robbery, drunk driving, arson, larceny, burglary, and motor vehicle theft. The reported costs include lost productivity, medical care, mental health care, police and fire services, victim services, property loss and damage, and quality of life. In our study, arrest charges were categorized as violent or property crimes, and therefore costs from the victimization study were averaged for rape and sexual assault, other assaults, and robbery and attempted robbery to create an estimated cost for violent crimes, arson, larceny and attempted larceny, burglary and attempted burglary, and motor vehicle theft for an estimated property crime cost. All costs were updated to fiscal 2023 dollars using the consumer price index (CPI).

the program. The same program and comparison groups used for the outcome evaluation were used for the cost analyses. These individuals were followed through administrative data for 2 years post program entry (and a similar time period for the comparison group). This study compared recidivism and other outcome costs for the groups over that 2-year period by transaction, as well as the outcome costs by agency.

The outcome costs do not represent the entire cost to the criminal justice system or other public systems. Rather, the outcome costs include the transactions for which NPC's research team was able to obtain data and cost information on both the program and comparison group from the same sources. Note that some possible costs or cost savings related to the program were not considered in this study. These include health care expenses and program participants legally employed and paying taxes. The gathering of this kind of information is generally quite difficult due to HIPAA confidentiality laws and due to the fact that much of the data related to this information are not collected in any one place, or are not collected at all. Although NPC examined the possibility of obtaining this kind of data, it was not feasible within the time frame or budget for this study.

Each individual program's evaluation report contains an appendix with detailed cost results specific to that site.



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