Overview of CalTOP and the Final Report

The California Treatment Outcome Project (CalTOP) was an innovative, statewide effort to address data-related needs at the state and local levels while also responding to the national trend toward automation, standardization, and measurement of program performance and client outcomes. The goal of CalTOP was to develop, implement, and pilot test an outcome monitoring system (OMS) for the statewide alcohol and other drug (AOD) system of care and to enhance California’s existing management information system (MIS). This OMS was designed to track client movement through AOD treatment programs, measure standardized assessment of client service needs, record service utilization, assess treatment outcomes and client satisfaction, and determine the extent to which AOD abuse treatment produces cost-offsets in other health and social service systems. An automated statewide OMS could provide timely data to inform policy decisions as well as to suggest areas for improvement in programs and services, leading to better client outcomes, program effectiveness, and accountability. This report documents the history, implementation, and research findings of CalTOP during its first four years of funding by the Center for Substance Abuse Treatment (CSAT) of the Substance Abuse and Mental Health Services Administration (SAMHSA); California and 18 other states participated in this national initiative starting in 1998. The California Department of Alcohol and Drug Programs (ADP) led the CalTOP implementation with assistance from the UCLA Integrated Substance Abuse Programs. This Executive Summary provides highlights of the main findings and recommendations based on the initial phase of CalTOP’s OMS pilot implementation. Details and supporting materials are presented in the full report.

The CalTOP Outcome Monitoring System

The strength of CalTOP was that it built on ADP’s previous and ongoing activities to establish data-driven performance and outcome monitoring in the State’s AOD treatment system within a framework called the System of Care Redesign. CalTOP developed the OMS to address the gap in the existing MIS (the California Alcohol and Drug Data System, [CADDS]) by obtaining and integrating data on client characteristics, level of functioning, service utilization, and treatment outcomes. Data were collected by treatment provider staff at admission, during treatment, and at exit from active services through the use of standardized protocols and assessment tools (e.g., Addiction Severity Index [ASI]). Treatment staff were also responsible for recruiting clients into the follow-up study. UCLA researchers conducted follow-up interviews with clients at 3-months and 9-months after treatment admission. In addition, CalTOP developed the data infrastructure for cross-system database linkage to monitor individual client outcomes through administrative databases and measure the cost offsets in the health, social service, and criminal justice systems. All data collection efforts were automated and centralized in a state database. The CalTOP OMS was designed as an ongoing and sustainable system allowing outcomes and cost offsets to be periodically measured, promoting adjustments to the treatment delivery system as needed and facilitating continuous improvement in service quality and effectiveness.

In April 2000, when data collection officially started, 44 treatment provider sites in 13 counties had committed to participating in CalTOP. By August 2002, 15,618 consecutive admissions (accounted for by 14,420 clients) were entered into the CalTOP database. Of those selected for follow-up,
2,850 completed the 3-month interview (90% completion rate) and 2,730 completed the 9-month interview (78% completion rate). Furthermore, the first 6,545 admissions were tracked through administrative databases (i.e., included in the cross-system data linkage).

**Main Research Findings**

Major research findings based on the client interviews and administrative data, which produced complementary findings, are highlighted below; more detailed analyses are described in the full report.

**Significant Improvements Were Observed 9 Months after Treatment Admission in Key Life Areas**

As is typical in pre- and post-treatment evaluation designs, substantial improvements in overall client circumstances and behaviors were reported by clients 9 months after admission based on the Addiction Severity Index (ASI) scores. ASI scores and relevant measures provided below focus on behavioral changes during the 30 days prior to admission and follow-up.

**Addiction Severity Index Scores in Key Problem Areas Based on Client Assessment**

![Graph of Addiction Severity Index Scores](image)

**Drug Use**
- 82% reduction in drug use severity (.11 at admission, .02 at follow-up)
- 5 days/month reduction in primary drug use (6.0 at admission, 1.2 at follow-up)
- 83% reported no alcohol and drug use and 88% reported no drug use at follow-up

**Alcohol Use**
- 78% reduction in alcohol use severity (.18 at admission, .04 at follow-up)
- 2 days/month reduction in heavy alcohol use (2.4 at admission, 0.8 at follow-up)

**Psychiatric Status**
- 41% reduction in psychiatric problem severity (.22 at admission, .13 at follow-up)
- 3 days/month reduction in psychological problems (8 at admission, 5 at follow-up)

**Family and Social Relationships**
- 58% reduction in family/social problem severity (.19 at admission, .08 at follow-up)

**Legal Status**
- 81% reduction in legal problem severity (.16 at admission, .03 at follow-up)
- 7% fewer reporting arrests (8% at admission, 1% at follow-up)
- 5% fewer committing illegal acts (6% at admission, 1% at follow-up)
Medical Status

17% reduction in medical problem severity (.18 at admission, .15 at follow-up)
5% fewer reporting emergency room visits (10% at admission, 5% at follow-up)
2% fewer reporting hospital stays (4% at admission, 1% at follow-up)

Employment

18% reduction in employment problem severity (.68 at admission, .56 at follow-up)
26% more reporting employment (33% at admission, 59% at follow-up)

Cross-system Data Linkage Produced Complementary Findings Based on Official Records Showing Client Improvement During the 12-month Period after Treatment Admission, Particularly among Clients Who Stayed Longer in Treatment

Department of Motor Vehicles Database

- Rates of arrests for driving under the influence (DUI) decreased from 5% during the year before treatment admission to 3% during the year after
- Rates of motor vehicle accidents decreased from 6% to 4%
- Clients who stayed longer (than 90 days) in treatment had a lower DUI arrest rate (2%) during the year after treatment admission, compared to clients with a shorter treatment retention (3%)

Department of Justice Database

- Rates of arrests decreased from 44% during the year before treatment admission to 30% during the year after
- Rates of incarceration remained at 5% to 6%
- Clients who stayed longer (than 90 days) in treatment had a lower arrest rate (24%) during the year after treatment admission, compared to clients with shorter treatment retention (34%)
- Clients who stayed longer in treatment had a lower incarceration rate (4%) during the year after treatment admission, compared to clients with shorter treatment retention (8%)
- Clients who stayed longer in treatment had decreased incarceration rates during the post-treatment period
**Department of Mental Health Services Database**
- Rates of inpatient mental health services remained at 3% to 4%
- Rates of outpatient mental health services remained at 20% to 23%

**Clients Generally Expressed Satisfaction with Treatment Services and Staff**
- 54% were strongly satisfied with the services they received
- 55% strongly agreed to return to the same program if needed in the future
- 60% strongly agreed that they would recommend the program to others in need

**Client Problem Severity at Admission Was High and Services Needed Were Diverse**
- 33% reported meth/amphetamine, 11% cocaine/crack, 15% heroin
- 27% reported alcohol problems
- 54% had psychiatric problems
- 24% had significant physical medical problems
- 55% were on probation or parole
- 44% had a history of being physically abused
- 28% had a history of being sexually abused
- 6% of women were pregnant

**Correspondence between Problem Severity/ Needs and Services Received Was Modest**
- Correlations between problem severity/needs and intensity of services received were low (all less than 0.1) in each of the seven ASI domains except for alcohol (0.27). Treatment services were not well matched to the level and type of needs or problem severity required by the clients.

**Client Retention and Length of Stay in Treatment Were Insufficient**
- Rates of dropout within 30 days were high: 18% for outpatient drug-free programs, 39% for residential programs, and 20% for narcotic treatment programs (i.e., methadone maintenance)
- The average length of stay in treatment was 105 days for outpatient drug-free programs, 64 days for residential programs, and 160 days in narcotic treatment programs
- Clients with more severe problems and less favorable outcomes had shorter lengths of stay in treatment
Expenditures for substance abuse treatment result in society avoiding greater costs in related criminal justice and other social services.

- Substance abuse treatment costs $1,521 on average (as measured over nine months) and is associated with an average benefit to taxpayers of $10,931, representing a greater than seven to one ratio of benefits to costs.
- The benefits were primarily due to reductions in the costs of crime (including incarceration) and increases in employment earnings.
- Among clients with outpatient and residential treatment as their primary modality, the average cost of treatment was $725 and $2,769 respectively, compared with estimated cost offsets of $8,774 and $15,369, for benefit:cost ratios of 12:1 and almost 6:1.
- Among clients with methadone maintenance as their primary modality, the average cost of treatment was $3,100; due to the small number of clients in this category, cost offset effects were not found to be statistically significant.

Main Implementation Recommendations

Based on the lessons learned during the implementation of CalTOP, we provide recommendations for the statewide implementation of an OMS. A detailed description of the implementation and lessons learned are provided in the full report.

Provider Training and Compensation

- Provide treatment staff with continued training, education, technical assistance, and support to facilitate the accurate recording and reporting of data
- Implement quality assurance procedures
- Provide compensation for the increased workloads placed upon programs
- Make it mandatory, rather than voluntary, that providers collect and submit data

Automation System

- Simplify and fully integrate data submission procedures
- Provide on-site training and on-going technical assistance

Data Collection Instruments

- Integrate instruments to avoid redundant data collection within the statewide OMS and across other data reporting systems
- Modify or provide special training on certain elements (level of care, service codes, discharge)
- Improve data collection for cost analysis

Administrative Databases

- Establish a data acquisition mechanism to routinely update data for assessing long-term treatment outcomes
- Continue to develop the methodology for cross-system data linkage
Development of the Statewide OMS Implementation Infrastructure

- Form a statewide advisory board (including stakeholders from all levels and areas of expertise) to guide the development of the statewide OMS
- Develop partnerships across state agencies, and build greater involvement of county agencies, providers, and local organizations
- Plan for the phase-in of the implementation of the statewide OMS
- Include long-term follow-up to assess treatment outcome as part of the OMS
- Make outcome data available to policymakers and providers to facilitate treatment improvement (e.g., to increase treatment retention)
- Expand the current centralized system as it may not be able to handle the huge volume of training needs and the data flow from all of the publicly funded treatment providers in the state
- Build in mechanisms for continual improvement of the statewide OMS

Policy Considerations

CalTOP demonstrated that an outcome monitoring system could be implemented to provide valuable ongoing outcome data. Establishing an effective OMS requires successful implementation across a broad array of coordinated activities and stakeholder groups. Unresolved problems at any level can limit the utility of findings derived from the OMS data. Although there are costs (e.g., in terms of resources, time, resistance to change, learning curve) associated with implementing such an OMS, the potential short and long-term benefits outweigh them because improvements in program effectiveness, service provision, and client outcomes all rely on the comparable, accurate, and timely information provided by an effective statewide OMS. In order to sustain the infrastructure and momentum built by CalTOP, a statewide advisory board (including stakeholders from all levels and areas of expertise) devoted to guiding the development of a statewide OMS needs to be established immediately to assess the feasibility and associated costs of implementing the recommendations presented in this report.