

CHAPTER IV. THE PLANNING AND IMPLEMENTATION PROCESSES OF THE CALIFORNIA TREATMENT OUTCOME PROJECT (CaITOP)

The California Treatment Outcome Project (CaITOP) was designed to pilot test a standardized, automated system to track client movement through county alcohol and other drug (AOD) treatment programs and to examine treatment outcomes for these clients. Now in its fifth year,¹ CaITOP is an innovative and complex large-scale data collection and analysis effort, involving highly advanced technology (e.g., hardware, software, assessment instruments, protocols) and numerous stages. As such, CaITOP continues to require the collaboration of multiple stakeholders with diverse experiences, expertise and priorities, representing a broad range of urban, suburban and rural populations within California. Since the beginning, the project has both responded to changes and informed decision-making at the national, state and local levels.

This chapter describes and examines CaITOP's planning and implementation processes. After presenting the implementation phases and timeframes of the original study design, the chapter explores California's experience with the interstate consensus process, an integral part of the Treatment Outcomes and Performance Pilot Studies Enhancement (TOPPS II) initiative sponsored by the Center for Substance Abuse Treatment (CSAT), Substance Abuse and Mental Health Services Administration (SAMHSA). The next several sections concentrate on project oversight by multiple Institutional Review Boards (IRBs), communication among CaITOP stakeholders, the development of service elements, automation and data management, training and resources for participating treatment staff, and implementation schedule delays. Finally, the future of California's statewide outcome monitoring system is discussed.

Implementation Phases

The implementation of CaITOP was initially designed to include four phases, each within specific timeframes:

- Phase I: Planning (October 1998 - June 1999)
- Phase II: System Development (October 1998 - June 1999)
- Phase III: Implementation (July 1999 - June 2000, intake assessment data collection; April 2000 - March 2001, client 9-month follow-up interviews)
- Phase IV: Analysis and Reporting (April 2001 - September 2001)

As described in the following sections of this chapter, all phases of the implementation of CaITOP have been or are being completed, but not without multiple delays and challenges. Given that CaITOP was a pilot project, the lessons learned and the technology developed (e.g., the CaITOP Web-based information system, standardized

¹ As described in Chapter I, CaITOP was funded through a CSAT TOPPS II grant from September 1998 to September 2002, the period covered in this final report. In 2002, ADP officials decided to continue funding CaITOP through 2003 on a smaller scale to serve as a bridge to a statewide outcome monitoring system.

assessments and protocols) will be crucial in informing future statewide outcome monitoring system efforts.

The TOPPS II Interstate Consensus Process

The TOPPS II initiative evolved simultaneously at local, state, and federal levels prompted by policymakers' and community leaders' inquiries about the performance and functioning of state AOD abuse treatment programs and by requests of treatment program stakeholders for improved outcome monitoring and program performance. The Joint Commission on Accreditation of Healthcare Organizations also responded to similar pressures by developing the 1997-1998 Standards for Behavioral Health Care, which sought to improve organization performance through data collection on important processes or outcomes related to care, services, and organization functions. With the focus on performance and outcome measures, states endeavored to collect more extensive, systematic, and standardized information upon which to evaluate the performance of treatment providers.

The intent of TOPPS II was to encourage states to develop a standardized approach for systematically measuring the performance of publicly funded substance abuse treatment programs and client outcomes. The TOPPS II initiative included an interstate consensus process through which states worked together to develop standard measures for incorporation into local systems. Data collected were forwarded to CSAT for inclusion in a collective database that provides information on performance and outcomes at a national level. These data supplement the information already being collected nationally as part of the Treatment Episode Data Set (TEDS). The TOPPS II initiative marked a shift in focus from repeated, discrete, and varied outcome studies to a continuous, uniform, and standardized performance and outcome monitoring system. This system increased the availability of performance and outcomes data that are comparable across states so that the effectiveness of treatment can be more accurately understood at the national level.

Development of the Study Design

Nineteen states participated in the TOPPS II interstate consensus effort: Arizona, California, Connecticut, Illinois, Iowa, Kentucky, Maryland, Massachusetts, Missouri, New Jersey, New York, Oklahoma, Texas, the Utah consortium (comprised of Utah, Arkansas, New Hampshire, Rhode Island), Virginia, and Washington. These states worked together to develop both the interstate study protocol, which provides a standard definition of the project design, and the Interstate Common Core Items, the consensus-derived set of questions covering substance use, arrests, hospitalizations, and enrollment in vocational training or educational programs.

While TOPPS II states participated in the interstate consensus process, each also tailored its study plans and purposes to meet unique local needs. Therefore, aspects of the local TOPPS II study design varied by state. First, states chose to either enhance existing management information systems or develop completely new outcome monitoring systems. Second, states decided to analyze existing data (i.e., secondary or administrative data) or collect new data (i.e., primary data) and analyze them in

conjunction with existing data. Three states (Maryland, Oklahoma, and Washington) did not collect new information, but instead analyzed existing treatment management systems information augmented by data obtained from other health, social services, and criminal justice agencies. The other 16 states, including California, collected new information and combined it with existing treatment management systems information and health, social services, and criminal justice data from other state agencies. Third, states supplemented their local studies differently depending on capability and local interest. Finally, research designs, sample sizes, and data collection scopes varied greatly across states. For example, the admission sample size ranged from 500 in Missouri to 15,000 in Illinois, while the follow-up sample size ranged from 400 in Iowa and Massachusetts to 2,700 in California. Also, secondary data analysis involved sample sizes ranging from 1,200 in New Jersey to 40,000 in Maryland. The level of complexity of local TOPPS II study designs may have affected the implementation process and the subsequent performance of the outcome monitoring system in any given state.

Communication

To promote the interstate consensus process, CSAT facilitated communication between the TOPPS II states. CSAT hosted a TOPPS II Web site (<http://www.samhsa.gov/centers/csat/csat.html>) and held seven bi-annual TOPPS II grantee meetings from 1998 through 2002. The Technical Assistance Center (TAC) organized the meetings and provided local logistical support. Meetings were held in cities across the United States, including Baltimore (December 3 - 4, 1998 and October 13 - 15, 1999), Orlando (March 13 - 14, 2000), Chicago (October 30 - 31, 2000 and August 5 - 6, 2002), San Diego (March 5 - 7, 2001), and Bethesda (September 22 - 25, 2002) to encourage participation. The meetings were designed to provide a forum for sharing information on the creation of performance measures and monitoring systems, for identifying common implementation barriers and successes, and for discussing preliminary findings and results. Discussions covered a broad range of topics including protocol development, outcome measurement, data access, confidentiality concerns and solutions, subject recruitment, tracking and follow-up strategies, data analysis techniques, major tasks accomplished, publications, and preliminary results.

Assistance with Human Subjects Protection Issues

SAMHSA aided states in securing the necessary human subjects research approvals for the TOPPS II project by negotiating with the Office for Human Research Protections at the Department of Health and Human Services (DHHS) to grant a Multiple Project Assurance (MPA), covering all the TOPPS II human subjects research activities carried out by the states under one assurance, rather than separate single project assurances. The MPA acknowledges understanding of and intent to comply with DHHS human research subject regulations. Without an MPA, the TOPPS II states would have been required to obtain a separate Institutional Review Board (IRB) approval for each treatment provider site involved in the research. In California, 44 individual IRB applications and approvals would have been necessary absent an MPA.

SAMHSA also assisted TOPPS II states with securing their Certificates of Confidentiality. The Certificate protects research data from being released in the event of a legal subpoena.

Interstate Study Protocol and Data Set

A protocol and set of core data items were also developed through the interstate consensus process. The effort began with a review of the domains and instruments proposed for use in the 19 individual state studies. Every state proposed collecting data in seven broad areas, including substance use, legal status, employment status, psychiatric status, family/social status, medical status, and satisfaction. States agreed to collect data at admission (Time 1 or T_1), discharge (Time 2 or T_2), and follow-up (Time 3 or T_3). The method for collecting data included client self-report, clinician self-report, client self-administration, and data extraction from administrative records. After considering a number of substance abuse treatment outcome variables, participants developed the TOPPS II Interstate Core Data Set, consisting of the Interstate Common Core Items. These variables cover the seven Addiction Severity Index (ASI) domains (i.e., medical, employment/support, alcohol, drug, legal, family/social, and psychological status). Questions were written to solicit behavioral frequency in the past 30 days and in the past 6 months. A manual was developed to provide instruction on how to administer each item. All or portions of the TOPPS II Interstate Core Data Set have been collected by each state at admission, discharge, and follow-up. The data set and manual were released in October 1999 for states to include in their local outcome monitoring projects.

Within CalTOP, these Interstate common data elements were also referred to as the Interstate Core Outcome Questions (ICOQ). A matrix of these elements is provided in Appendix E.

At times, opinions differed concerning TOPPS II study definitions and procedures. For example, CSAT officials wanted the question regarding primary drug problem asked at discharge and follow-up to measure changes in the use of the primary drug reported at admission. That is, if an individual's primary drug problem at admission was cocaine, the discharge and follow-up primary drug problem question should capture subsequent cocaine use, rather than identifying a new primary drug problem based on usage patterns reported at follow-up.

ADP officials supported the position, as with CADDs, that the primary drug reported at discharge and/or follow-up would not necessarily match the primary drug reported at admission. Instead, the question should capture the client's actual primary drug problem experienced at those points in time. ADP staff were interested in recording current drug use independent of past use and wanted to track clients who switched their primary drug (for example, from cocaine to alcohol) over time. Ultimately, CalTOP protocol adhered to the ADP definition of primary drug problem at discharge and the CSAT definition at follow-up.

Additionally, the CSAT model follows the traditional idea that for each treatment admission a corresponding distinct discharge exists, defining a finite course of

treatment. In contrast, ADP's System of Care Redesign (SOCR) vision embraced a model in which each modality and service stay was only one component of a larger ongoing continuum of care. Ending an addiction frequently requires multiple levels of treatment. Relapse is common. As such ADP sought to record each level of service and each transition from one modality to another (Episode Status Change). Following this definition, discharge only occurred when the client had departed from a complete treatment episode that may have included one or multiple levels of service.

The SOCR model assumed that the complete constellation of services a given client receives is part of the reporting system. Movement of the client could be tracked across modalities and across multiple service providers. In practice, CalTOP included a limited number of service providers. Tracking client data across multiple providers (e.g., those not included in CalTOP) was not always possible. This led to confusion in the definition of "discharge" as it related to CalTOP versus its larger definition within the System of Care Redesign model.

ASI Lite CF TOPPS II Software

DeltaMetrics, as part of the TAC, developed an Addiction Severity Index, Lite version, Clinical Factors TOPPS II/TEDS (ASI Lite CF TOPPS II/TEDS) software package and made it available to the TOPPS II states free of charge. The software integrates questions from the ASI Lite CF with the TOPPS II Interstate Core Data Set. Hints, comments, and crosscheck edits are provided for nearly every question. The software generates and displays ASI composite scores and clinical factors. It also provides printouts of raw data and reports for the provider site administrators that are exportable to Excel and Word formats. Included in the package is a user's manual that provides basic computer and software information, detailed instructions for all tasks, and screen-by-screen descriptions of the interview process.

ADP staff did consider developing ADP's own Web-based ASI software. However, using the available DeltaMetrics software was considered a better alternative as CalTOP was a feasibility study with a finite life-span, software development resources were limited and concern existed that internal development of an assessment tool may be outside the scope of ADP's roles and responsibilities.

Additionally, UCLA/ISAP staff used the same DeltaMetrics software designed for the admission ASI Lite to enter the nine-month follow-up data. The data collected were then uploaded to the ADP server. Interviewers were trained to alter the timeframes of ASI Lite queries when necessary.

Interstate Data Set Repository

Every quarter, states were requested to electronically send their TOPPS II Interstate Core Data Set to CSAT for inclusion in a collective database. Originally this "TAC file" was to be sent on a quarterly basis with each submission containing data exclusively generated during that quarter. The TAC then was to combine this data with the data submitted from previous quarters. Under this submission design, any data corrected from previous quarters would not be reflected in the TAC database.

ADP worked with providers to make data corrections and enhanced the CalTOP software to reflect the tighter edits request by the TAC. Resolution of these issues delayed submission of CalTOP data to TAC until Fall 2001.

A revised data submission plan was employed which allowed ADP to send a compilation of its database, containing all data gathered to-date, each quarter. This permitted ADP to check the entire database for inconsistencies and errors and apply newly established edits prior to data submission. Additionally, this allowed for corrections to the TOPPS II data submission protocol including the linkage of treatment modality to each individual client record. Erroneous data were rejected and returned for correction and resubmission. The data set was maintained by the TAC (Johnson, Bassin and Shaw, Incorporated, [JBS]) for analysis.

Technical Assistance

The interstate study was coordinated by the TAC, which was staffed by scientists from JBS. The TAC was responsible for assisting states as they have developed and then implemented local performance measures and outcome monitoring. TAC activities included facilitating communication; aiding in the development of the study protocol, Core Data Set questions, and data collection software; serving as a repository for the interstate data set; analyzing data; and reporting study findings to project partners.

Data Analysis and Findings

The TAC conducted initial analyses and reported preliminary interstate study findings at the TOPPS II grantee meetings. In general, the reports provided a comparison of the participating states' study goals and objectives, sample size, instruments, data collection efforts, and the current status of projects. In-depth analysis of the Interstate Core Data Set is planned.

Evaluation of California's Experience with the Interstate Consensus Process

Throughout the project phases (planning, system development, implementation, and analysis and reporting), California participated in the interstate consensus process to develop common domains and indicators for treatment and performance outcomes and staff attended the national meetings to exchange knowledge gained in planning and implementing the project. The time spent in negotiating the interstate consensus was necessary to allow for interstate comparisons and collective TOPPS II reporting. The lengthy interstate consensus process, however, did contribute to delays in the implementation of CalTOP. (Please see the section on schedule delays below for more details.)

The TOPPS II initiative provided a forum for states to share experiences and problems, generate ideas, and make suggestions for designing a national outcome monitoring system. The interstate consensus process fostered communication and collaboration between organizations and states engaged in implementing common protocols. The process promoted the establishment of national standards for quality assurance,

outcomes, and performance, a message that California's participants carried back to motivate local CalTOP stakeholders. Prior to initiating its own cross-system data linkage efforts, California was able to learn from the experiences of other states. Additionally, CSAT supported state efforts by providing the DeltaMetrics software, assisted the states in securing a Certificate of Confidentiality and Multiple Project Assurance for the study, and provided financial support to help underwrite the expenses associated with the project.

Compared to other states, California's CalTOP study design was ambitious and relatively complex on multiple levels. California chose to:

- 1) develop an entirely new outcome monitoring system;
- 2) collect new information (e.g., service elements) and combine it with existing treatment management systems information (i.e., CADDIS);
- 3) test the use of the ASI as a standardized assessment and treatment-planning tool at admission;
- 4) test the use of the California adaptation of the ASAM-PPC for placing clients in the appropriate levels of care;
- 5) attempt to obtain data from seven other health, social services, and criminal justice agencies and conduct cross-system data linkage;
- 6) involve all adult clients admitted to 44 treatment programs in 13 geographically dispersed counties;
- 7) automate all aspects of data collection;
- 8) conduct two follow-up interviews at 3 and 9 months post-admission;
- 9) include 10,000 subjects in the admission, during services, and discharge sample; and
- 10) include 2,700 subjects in the follow-up sample.

The actual time required to roll out the more complex aspects of CalTOP caused delays in the implementation of its outcome monitoring system. Consequently, at the point when some of the TOPPS II states were moving on to the implementation stages of their study designs, California was still in its early design phase. Topics typically covered at TOPPS II grantee meetings related to issues with which California's stakeholders were not yet dealing. This situation gave ADP officials and UCLA/ISAP researchers an opportunity to learn from the experiences of their counterparts in other states. Moreover, the continuation of the TOPPS II grantee meetings and consensus process into a fourth year (i.e., the 12-month grant extension period) was extremely helpful.

Project Oversight by Multiple Institutional Review Boards

CalTOP was reviewed and subsequently approved by separate Institutional Review Boards (IRBs) at the state and university levels. In addition, the project was reviewed and approved at the federal level by SAMHSA. An IRB is charged with protecting the rights and welfare of human subjects participating in research. As such, the IRB is responsible for reviewing all research protocols involving human subjects. Research can begin only after IRB approval has been granted. This three-tiered approval process was 11 months long, during which recommendations made by the different reviewers were incorporated into CalTOP's protocol and Informed Consent Form (ICF).

Initial and Ongoing Communication among CalTOP Stakeholders

Since the project began in 1998, monthly face-to-face meetings have been held to allow representatives from all stakeholder groups (e.g., ADP staff, county administrators, providers, researchers) to participate in finalizing the research protocol and instruments, discuss and resolve concerns (e.g., client confidentiality), address automation and implementation issues and exchange ideas. Travel expenses were reimbursed to allow one person from each provider site in addition to one person from each participating county to attend the monthly meetings. Although usually held at ADP in Sacramento, several meetings were held in the San Francisco Bay Area or in southern California to encourage attendance from providers in those geographic regions. Initially, attendance was low and often administrators, rather than line staff, attended. As the project matured, line staff attendance grew and provider site managers and county representatives also attended frequently.

In addition to monthly meetings, project information have been distributed via designated mentors, Web sites hosted by ADP and UCLA/ISAP, focused training sessions in automation and the proper use of the standardized assessment tools, videotapes, mass mailings, electronic mails, facsimiles, and individual provider site visits. These established avenues of communication continue to be maintained. Beginning in February 2002, the meetings with county representatives and provider staff member have been held about every other month as the most significant challenges to implementation and on-going data collection have been addressed.

Development of Service Elements

ADP designated William Mercer, Incorporated through subcontract with UCLA/ISAP, to develop a framework for treatment providers to record their clients' service utilization. The purpose was to both identify the constellation of services, defined in broad terms, that a client receives in order to engage and participate in the treatment and recovery process and to document the efforts of provider staff in that process. Specifically, ADP sought to collect information on the discrete services clients receive while in treatment and, in some cases, even before and after participation in treatment. Service code reporting was emphasized to capture service utilization data, regardless of fund source (e.g., MediCal, state revenues). Since fund sources dictate specific reporting requirements, dual data entry was often required of provider staff. The pilot sought to recognize this increased workload and identify recommendations to restructure future business practices to eliminate such duplication.

The definitions of the service elements were developed, reviewed and refined by workgroups comprised of treatment providers, county representatives, constituency group representatives, prominent members of the AOD field, consultants and ADP staff members. During the summer of 1999, William Mercer, Incorporated trained county and provider staff who planned to participate in CalTOP in the proper use of these service elements. The final draft definitions were developed in the winter of 1999/2000 and distributed to providers in the "Service Element Manual" (also known as the "Greenbook"). Incorporating feedback from treatment staff responsible for recording

the service code information, the final version was published in March 2001. (See Appendix F.)

Automation and Data Management

ADP collected data from counties and providers with a wide range of technological (e.g., hardware, software, systems) capabilities and support. To do so, while allowing stakeholders to develop and implement systems to meet their own information management needs, ADP used multiple data transmission options, including open architecture over an Internet backbone. California began using the Internet backbone for communication and electronic transmission of the California Alcohol and Drug Data System (CADDs). The majority of the 58 counties in the state have been transmitting their CADDs data electronically to ADP.

CalTOP was designed to test the transmission of the expanded data set for the comprehensive OMS. CalTOP tested the feasibility of multiple data collection technologies. By accommodating the variations in technology, data were transmitted and integrated in ways that stakeholder groups could afford. Allowing for technology variation enabled ADP to move and integrate data at a cost that was considered manageable by providers and counties.

The CalTOP Web-based Information System

ADP's Information Management Services Division (IMSD) developed and maintains the CalTOP Web-based information system. This system uses the Internet to enable treatment providers to enter, edit, and update data online and to submit significant portions of CalTOP data to ADP's Enterprise Database (a centralized database) directly from their facilities in real-time. This Web-based system allows on-line submission of Unique Client Identifier data, the California Admission Form (CADDs, California Core Outcome Questions)², the American Society of Addiction Medicine Patient Placement Criteria (CA ASAM PPC) form, service elements, and the California Discharge form (CADDs, California Core Outcome Questions). Providers use common Web browser software to access the application, to update client records, establish new records and enter admission, assessment, treatment services, level of care, episode status change, and other data. They can also view online, interactive screens that provide labeled fill-in fields, point-and-click drop-down menus and lists of valid values and error messages. The system also generates detailed reports for informational and data management purposes.

The infrastructure for the CalTOP Web-based information system consists of several components. ADP has a server connected to the Internet at the Health and Human Services Data Center that runs the CalTOP software and updates the information on ADP's Enterprise Database. A high level of security was implemented with CalTOP. Access is secured through encryption, Verisign user authorization, and a user logon process that requires a valid user name and password. The major steps and timeframes used to develop this system were:

² Please see our discussion of the extraction process on page 4-11.

- System design (January - August 1999)
- Construction, testing, de-bugging, and re-testing (September 1999 - March 2000)
- Computer roll-out to providers and preparation for production (March 2000)
- Begin primary data collection (April 3, 2000)
- Development of enhancements (April 2000 – Ongoing)

Software Programs

In addition to the data submitted via the CalTOP Web-based information system, the ASI Lite CF TOPPS/TEDS data were entered using software located on desktop workstations at provider sites. The data were then uploaded to the ADP CalTOP database. Employing such stand-alone software at provider sites did create data submission obstacles.

The stand-alone software did not always contain sufficient internal edits to conform to the defined ASI protocol or consistently match the edits as defined in the CalTOP system. Additionally, as the information was gathered independently, no data verification with data already contained in the CalTOP database was possible. For example, if a client was recorded as “male” in the Web-based admission form and recorded as “female” in the ASI software, the record would fail edits during the attempted upload process.

Originally, the data were submitted via e-mail attachment. This process was complex and difficult for many provider staff to master. Encryption was necessary to protect data confidentiality. Records, which failed edits during the upload process, were rejected. An e-mail message describing these rejected records was sent to the submitting provider site. Provider staff were not able to immediately address such errors as the batch upload process caused a time delay in the receipt of the e-mail response. Once the message describing the failed records was received, the records in error had to be copied to a new file, corrected, and resubmitted. Making sense of the error message received posed a challenge for many provider staff. For some, this submission process was sufficiently complex to dissuade them from submitting ASI data.

Later, Web technology made a Web-based file upload process possible. Although this greatly improved the submission process, a Web-based ASI would have eliminated initial problems related to data submission and allowed real-time data checking capabilities.

Two stand-alone software packages were used to collect ASI Lite CF data at provider sites. DeltaMetrics software was provided to all participating TOPPS II states in Spring 2000. The software not only contained the ASI Lite questions, but also incorporated the TOPPS II/TEDS required questions in a logical sequence. This software did not contain complete internal edits, so the CalTOP system had to put in place additional edits that were not activated until the file was uploaded.

Two counties elected to use software by Accurate Assessments (AccuCare). These counties represented six provider sites participating in the project. ASI and TOPPS II/TEDS questions are located in separate modules within this software package. The software developers were slow to create modifications that would allow the CalTOP data

to be extracted, formatted, and uploaded to the CalTOP database. Additionally, late in the project it was discovered that the ASI version in the AccuCare software package varied from the ASI Lite CF TOPPS II version. For example, in the psychiatric section, the AccuCare ASI version does not distinguish between problems that are and are not the result of drug use. This difference may influence the composite scores and clinical factors. Throughout the life of the project, ADP staff attempted to persuade the AccuCare software developers to make changes that would align the software with CalTOP data collection goals. These attempts were met with limited success.

The DeltaMetrics software was also used by the researchers at UCLA/ISAP to record the ASI data collected during the follow-up interviews. Like the edit obstacles encountered at provider sites, the inability to have data elements checked in real-time created data submission challenges that had to be addressed. Also, the additional unique questions asked during follow-up had to be merged with the follow-up ASI data prior to submission to ADP.

Differences between CADDs and CalTOP

Some differences between the existing MIS (CADDs) and CalTOP affected data collection and management. The CalTOP admission questions were meant to expand upon and eventually replace the existing CADDs admission questions, but in reality the two systems existed simultaneously and sometimes imposed contradictory ideologies and definitions on CalTOP providers. Most significantly, “discharge” was defined differently in the two systems. Recognizing that recovery can be a lifelong process, CalTOP’s stakeholders sought to define “discharge” and “episode” to capture the role of successive admissions in recovery. An “episode” of treatment was defined as continuous care at a single provider site. Providers were not required to discharge and readmit a client who transferred from one program (e.g., day treatment) to another (e.g., outpatient counseling) within the same provider site. “Discharge” was defined as the point at which clients stop receiving any services at a single provider site. In CalTOP the ASAM PPC was intended to indicate a change in the level of care. CADDs, on the other hand, requires that clients be discharged at treatment exit. Because CalTOP providers had to meet the usual CADDs requirement, some followed the CADDs protocol while others followed the CalTOP protocol. Further investigation is needed to study the extent of this issue.

Whenever possible CalTOP data were to be extracted into existing local systems (i.e., CADDs) to reduce redundancy in data collection and submission. The extract process required three instruments (California admission form, ASAM PPC, ASI Lite CF TOPPS II) on each client to exist in the system not more than 45 days from one another. The extract process could not occur if any of these elements were missing or entered into the system beyond the 45 day cut-off date. As a result, only some data were extracted into local systems. Also, the extract process was not implemented until 2002. At least five counties were affected by this issue (El Dorado, Kern, Orange, San Benito, San Luis Obispo) while a sixth county (Riverside) was ultimately unable to engage in the extraction process at all. Consequently some sites entered the same data into multiple systems (CalTOP and CADDs and sometimes also a county system) for the first two

years of the project while other sites continued redundant data entry for the life of the project.

Most participating providers collected CADDs data as a part of CalTOP,³ but not all CADDs items were stored in the CalTOP database. Therefore, some CADDs items, such as modality, were missing from the CalTOP database.⁴ When both CADDs and CalTOP contained similar but not identical data items, the CalTOP system deferred to CalTOP's data items (e.g., CADDs includes "multi-racial" ethnicity, while CalTOP does not).

System Edits/Quality Control

In order to submit a "complete" client record, sites are required to access and fill in relevant items on the CalTOP Web-based information system and also electronically mail to the database the corresponding ASI Lite CF TOPPS II record. As mentioned earlier, stringent edits are in place so that if any of the required items or records is missing, incomplete, or erroneous, the client record is rejected by the database and/or remains incomplete until the missing item is submitted.

Additional relational data edits were implemented beginning in Spring 2001 to meet federal reporting requirements. These edits increased the amount of data being rejected due to errors and inconsistencies, resulting in the need for providers to revisit old data, determine the source of the errors, correct the errors, and resubmit the data.

Data Management Reports

The CalTOP Reports Project was established to focus on the development of informational reports that would benefit the users and stakeholders involved in CalTOP. The goal of the project was to provide quality informational reports needed by counselors, clinics, provider organizations, counties and the State for planning, policy, development, decision-making and operational management. The requirements for these reports were defined by CalTOP providers and by ADP staff from the Information Technology Group who participated in workgroup sessions held at ADP. Report data were restricted to the requesting provider's data only; service data from other providers were not included in the reports.

The following reports were developed primarily to assist providers and ADP staff in data monitoring and analysis efforts. All are available on the CalTOP Web site.

- Client Data Status
- Provider Status
- Funding Source Monthly Activity
- Funding Source Quarterly Admissions Discharges
- Funding Source Quarterly Clients Served Summary

³ As described earlier, six providers in two counties used Accurate Assessments software, which contains CADDs questions in a separate module. Please see Chapter III for more details.

⁴ Modality is well-defined in CADDs but not well defined in CalTOP. For analysis we relied on the ASAM PPC whenever possible. This posed a problem as not all clients had an ASAM PPC on record.

- ASI Factors
- Route of Administrations by Drug Problem
- CalTOP Participation Provider

ADP staff also developed the following reports to identify client characteristics, treatment characteristics and reported outcomes. The data can be presented in graph format. These reports have been a valuable tool to provide policymakers with information on CalTOP clients at the provider, county and state levels.

- Clients Served Summary
- Drug Problem at Intake Summary
- Service Code Summary
- Outcomes Summary by Domain (Adm, NineMo)
- Outcomes Summary by Domain (Adm, ESC, NineMo)
- Employment Rates (Adm, ESC, NineMo)
- Frequency of Drug Use (Adm, ESC, NineMo)

Training for Treatment Provider Staff

Initial Training

According to the original project plan, data collection was to begin in the summer of 1999. In anticipation, UCLA/ISAP hosted two three-day training sessions in July 1999, one in Los Angeles and another in Sacramento, for CalTOP provider staff who would be returning to their sites and training others. At these training sessions, attendees were introduced to the project components, instruments, and expectations. Treatment providers were also encouraged to begin implementing the CalTOP protocols immediately upon returning to their sites to allow staff time to become familiar with the project, including the data collection instruments. However, data collection did not actually begin until April 2000, resulting in an eight- to eleven-month lag between the initial training of provider staff and actual live data collection at their sites. Compensatory training was provided, however, before data collection began.

Tailored Training Sessions for Providers

During the July 1999 training sessions, UCLA/ISAP researchers became aware that training needed to be tailored due to significant variation among counties and providers with respect to data collection processes, familiarity with assessment tools, and computer literacy. From December 1999 through March 2000, ADP held a conference call with each provider that included the program director, county representative, and UCLA/ISAP researchers. The purpose of these conference calls was to highlight aspects of CalTOP for which the program would be responsible, assess provider readiness to implement the project, and determine specific training needs. UCLA/ISAP researchers expanded the original plan of providing regional training to on-site training for individual counties/providers before each began live data collection. Trainers from UCLA/ISAP and consultants supporting CalTOP used this information to tailor training sessions to meet the individual needs of each site.

From February 2000 through June 2000, UCLA/ISAP staff and the consultants provided a series of training sessions tailored to meet the individual needs of each site. Trainings, held either at county offices, at treatment provider sites or at ADP offices in Sacramento, included:

- A two-day session conducted by UCLA/ISAP staff on the project protocols, the ASI Lite CF TOPPS II instrument and software, the California Admission and Discharge forms (CADDs and CCOQ), and how to obtain informed consent and collect locator information. A total of 19 sessions were held.
- A one-day training session conducted by the California Association of Addiction Recovery Resources (CAARR) on the CA ASAM PPC. A total of 18 sessions were conducted.
- A half-day session conducted by William Mercer, Incorporated on the service code elements. A total of 15 sessions were delivered.
- A one-to-two-day training session conducted by ADP on the online data entry system. A total of 15 sessions were held.

Follow-up Training in Assessment Tools

ADP contracted with CAARR to conduct follow-up training sessions on the ASI Lite CF TOPPS II and CA ASAM PPC instruments at various locations around California in response to providers' requests. The need for these training sessions was generated by staff turnover at provider sites and the need for "refresher" courses for staff familiar with the full version of the ASI but not familiar with the ASI Lite CF TOPPS/TEDS version used in CalTOP.

Collectively, between July 2000 and May 2002, CalTOP provided county and provider site staff members with the following training:

- 216 individuals Initial 2-day ASI Lite CF (13 classes)
- 98 individuals Follow-up 1-day ASI Lite CF (6 classes)
- 318 individuals 1-day ASAM (25 classes).

Follow-up Automation Training

In the spring of 2001 persistent provider difficulties with submission of ASI data compelled ADP to develop an automation training program intended for provider staff directly responsible for such data submission. These training sessions were held in the computer training lab at ADP and allowed provider site staff to develop the skills necessary to master the data submission process in a hands-on classroom environment. This supplemental training resulted in substantial improvement in data submission success rates.

Resources for Treatment Providers

Funding for Participating Counties/Providers

ADP initially estimated the workload imposed by CalTOP on treatment staff would range 1.5 to 2 hours per complete client dataset. For this purpose a "complete client dataset" was defined as all client information collected by the treatment provider including data collected at admission, during treatment, at time of discharge and the client consent/locator data for those clients agreeing to participate in the follow-up portion of the study. Each site was given the opportunity to review the workload projections and their client dataset "quota" (based on previous year CADDs client data submission volume). Sites were encouraged to integrate the assessment tools specified for CalTOP into their daily business practices to reduce duplication of effort.

In order to defray partially the cost of participating in CalTOP, prior to data collection start-up, ADP gave providers, via their counties, a one-time lump sum based on the client record "quota" at \$26 per complete client dataset. Some counties also matched or supplemented these funds to further offset the costs associated with project participation.

Supplemental Funding for Participating Counties/Providers

As the project data collection time line was extended and providers recognized the significant staff time participation in the project required, some provider site managers and county administrators began to consider terminating participation before the project data collection goals had been achieved. ADP identified and directed local assistance funding to participating counties and treatment providers to help offset the costs associated with continued data collection. During State Fiscal Year 2001-2002 (July-June), \$89,100 was directly distributed to participating provider sites and counties based proportionally on the number of complete client data sets submitted over a specified time period. This amounted to an average of \$2,025 per participating treatment provider site.

Additionally, \$200 was given to each provider site completing the Drug Abuse Treatment Cost Analysis Program (DATCAP). Information garnered from the DATCAP provided valuable data regarding the economic cost of treatment. The \$200 funding was intended to help offset the staff costs associated with completion of the DATCAP. Funds were distributed in partnership with the County Alcohol and Drug Program Administrators Association of California (CADPAAC).

Training Materials

Training materials, including binders containing reference materials (e.g., protocol, Informed Consent Form, Locator Form, assessment instruments with instructions, list of contacts) and manuals were prepared for each participant in the training sessions and for county representatives. (A copy of the 265-page *CalTOP Training Manual* will be made available upon request.)

A videotape developed to train users on the CA ASAM PPC II was distributed to providers in May 2000. In addition, a leading ASAM researcher presented at several of the initial training sessions.

At the request of provider staff, an 8-minute video that provides an overview of CalTOP was developed. This tool was distributed to all providers in January 2001. Most providers reported using the videotape as a method of introducing clients to the project and encouraging them to consider participation in the follow-up portion of the study.

Computer Equipment and Technical Support

In March 2000, ADP staff distributed to each site a desktop computer with a modem, a subscription to an Internet service provider, and a Verisign certificate for confidentiality of data. ADP staff also established a toll-free Help Desk to assist providers with their technical questions and maintained a technical service contract for problems related to computer hardware.

Client Confidentiality Brochure

Acknowledging providers' concerns about confidentiality issues, a brochure was developed in October 2000 entitled "CalTOP Client Confidentiality Assurance." (See Appendix H.)

In-house Mentors

In May 2001, ADP staff asked each site to identify an in-house mentor who would be responsible for coordinating the implementation of CalTOP at the site. Special sessions tailored to mentors were then added to the CalTOP monthly meetings.

Recognition Program

To enhance overall participation in CalTOP, a program was developed to recognize sites and individuals for improved performance from month to month and for consistently high levels of overall performance. Monetary and certificate awards were presented on a monthly and quarterly basis for "most improved" and "best performer," respectively. The incentive program operated from October 2000 through October 2001.

On-Site Visits and Technical Assistance

Beginning in February 2001 and continuing through June 2002, one full-time ADP staff member began to conduct site visits with treatment providers in response to a downturn in data submission. Providers reported that they greatly appreciated receiving on-site assistance from an expert who could facilitate implementation of the project and walk staff through the entire CalTOP process. During these site visits, the ADP staff member typically conducted business process analysis and demonstrated the full capacity of the system, trained new and long-term staff, set specific deadlines for submission of complete data sets, shared tips for using the system efficiently, resolved technical problems, and distributed resources (e.g., manuals, reports, training sign-up logs). Issues and concerns from the field were brought back to ADP for system enhancements and regular follow-ups with providers were conducted by phone, at monthly CalTOP meetings and at subsequent site visits.

Reports and Presentations

Reports were prepared by UCLA/ISAP researchers and submitted to ADP on a regular basis throughout the project. ADP, in turn, attempted to respond to CSAT project status reporting requests via monthly, quarterly, summary, ad hoc and financial status reports. CSAT requested that many of these reports be submitted via the Web-based WebSTAR system. The structured format imposed by the WebSTAR system and its inconsistent availability made this a less than optimal reporting method.

Preliminary results were regularly presented since October 2000 to stakeholders at the regular monthly CalTOP meetings. These included reports on participation rates by provider, missing data, quality control, the status of the follow-up study, pre/post comparisons of clients, and client demographics. Nearly all process reports were also posted on the Web site.

In December 2001, ADP staff delivered touch-of-the-button reports in response to providers' requests. Providers can generate the reports themselves to capture real-time, site-specific and county trends regarding client characteristics and outcomes. (Please see Appendix I for a list and samples of these reports.)

The above resources and interventions helped to increase client recruitment over time, especially after the first several months of live data collection.

Implementation Schedule Delays

Implementation Phase	Initial Schedule	Actual Schedule
I. Planning	October 1998 - June 1999	October 1998 – December 1999
II. System Development	October 1998 - June 1999	January 1999 – March 2000
III. Implementation	July 1999 – June 2000 (intake assessment data collection); April 2000 - March 2001 (nine-month follow-up data collection)	March 2000 (computer roll-out); April 2000 (begin primary data collection); January 2001-June 2002 (nine-month follow-up data collection); April 2000 – On-going (system enhancements)
IV. Analysis and Reporting	April 2001 – September 2001	March 2002 – September 2002

Although all phases of the implementation were completed, delays due to a variety of circumstances extended the timeframes of each phase. The original plan, based on a timeline established by the TOPPS II Technical Assistance Center (TAC), a coordinating center serving all 19 states involved, was to begin collecting CalTOP data during July 1999. However, the need to address several major issues affected the implementation schedule. For example, the interstate consensus process, described in detail above, was extremely lengthy. The process began in October 1998 when the grant was awarded and continued through August 1999. Only after the process was completed, were UCLA/ISAP researchers then authorized to move forward in the development and the submission of the Informed Consent Form and protocol to the two separate Institutional Review Boards (IRBs) and to SAMHSA for approval. The approval process, which took 11 months, was extensive, involving much negotiation and resubmission of forms to

meet the requirements of each IRB. The project received IRB approval on December 13, 1999, and a Certificate of Confidentiality was subsequently issued by SAMHSA on February 1, 2000.

Delays also occurred in software implementation. ADP staff began developing the Web-based information system in January 1999 and released it in April 2000. The overall release of the Web-based information system occurred six months later than anticipated, due in part to a change in the system design (which replaced a Web/ASCII file data capture tool with DeltaMetrics software for the ASI Lite CF). Also, Y2K-related problems had to be addressed before the system was released. The TAC released the final version of the DeltaMetrics software in June 2000, approximately one year later than originally planned. Moreover, primary data collection did not start until April 2000 and the target number of clients completing nine-month follow-up interviews could not be finalized until June 2002. Similarly, the process for obtaining state administrative data did not start until after 2000. Gaining access to state databases has involved protracted negotiations, which are ongoing.

The Challenge of Sustaining Momentum in a Climate of Shifting Public Policy Mandates

By November 2000, ADP, counties, and treatment providers exhibited a pervasive feeling of uncertainty about and ambivalence toward CalTOP, which was due in part to the competing demands placed on staff within all three stakeholder groups by new public policy mandates.

The California Substance Abuse and Crime Prevention Act (SACPA)

SACPA, which was passed by the California electorate in November 2000, marks a major shift in criminal justice policy. Adults convicted of nonviolent drug possession offenses in the state can receive drug treatment in the community in lieu of incarceration or community supervision without treatment. Offenders on probation or parole who commit nonviolent drug possession offenses or who violate drug-related conditions of probation or parole can also receive treatment in lieu of re-incarceration.

Each county in California was required to create and implement a plan for assessing and treating SACPA-eligible clients by July 1, 2001. In November 2000, ADP reported that some of their CalTOP-dedicated staff were being reassigned to SACPA. Also, in July 2001, a staff member at a multi-site provider announced that the organization had stopped CalTOP data entry altogether in order to focus on assessing and serving SACPA clients.

The Health Insurance Portability and Accountability Act (HIPPA)

The 1996 federal HIPPA act requires states to adopt and automate common standards for health care information by 2003. In order to comply with HIPPA, states must adopt standard procedures for data format, content, transmission, and confidentiality. Exactly how California's efforts to comply with HIPPA will affect CalTOP remains unclear, and a matter of great concern for some CalTOP stakeholders.

ADP Staff Changes

By March 2001, senior ADP staff began transferring to other projects or leaving the ADP altogether. Over the next eight months, staff turnover in approximately four senior positions occurred. By March 2002, only one long-term senior staff member who possessed the institutional memory so vital to sustaining the momentum of projects affected by multiple levels of bureaucracy remained.

In November 2000, a new director was appointed to ADP. With more consistent and focused new leadership, the challenges of sustaining momentum can be met and a statewide OMS can be successfully implemented.

The Future of California's Statewide Outcome Monitoring System

The goal of the TOPPS II cooperative agreement program was to enable states to collect information on publicly supported treatment services and monitor common AOD treatment effectiveness data measures across various state management information systems. TOPPS II encouraged states to reach agreement on performance and outcome measures to be included in a national outcome monitoring system. This goal was partially realized in initiatives funded during the life of the TOPPS II project.

In keeping with the trend toward outcome monitoring and standardization at the local, state and national levels, in February 2002 ADP unveiled plans to pursue a statewide outcome monitoring system, tentatively called the California Outcomes Measurement System (CalOMS). Although CalOMS is currently under consideration, it is likely to include a significant number of data elements and implementation processes that have been piloted as part of CalTOP.