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Workforce Professionalism in Drug Treatment Services: Impact of California's Proposition 36

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Abstract

This article investigates whether California's Proposition 36 has promoted the workforce professionalism of drug treatment services during its first five years of implementation. Program surveys inquiring about organizational information, Proposition 36 implementation, and staffing were conducted in 2003 and 2005 among all treatment providers serving Proposition 36 clients in five selected California counties (San Diego, Riverside, Kern, Sacramento, and San Francisco). A one-hour self-administered questionnaire was completed by 118 treatment providers representing 102 programs. This article examines five topics that are relevant to drug treatment workforce professionalism: resources and capability, standardized intake assessment and outcome evaluation, staff qualification, program accreditation, and information technology. Results suggest that Proposition 36 had a positive influence on the drug treatment workforce's professionalism. Improvements have been observed in program resources, client intake assessment and outcome evaluation databases, staff professionalization, program accreditation, and information technology system. However, some areas remain problematic, including, for example, the consistent lack of adequate resources serving women with children.

Keywords

California Proposition 36; treatment system impact; drug treatment workforce; professionalism

Introduction

Organizational aspects of substance abuse treatment have attracted increasing attention from practitioners as well as researchers. Past research has concentrated on linking organizational characteristics of the drug treatment system with various client treatment outcomes, such as retention rates (Carise, McLellan, & Gifford, 2000; Greenlick & McCarty, 2001; Grella et al., 2007; Knudsen, Johnson, Roman, & Oser, 2003; McCarty et al., 2007; Roman & Johnson, 2002; Roman, Johnson, Walker, & Knudsen, 2003; Tinney, Oser, Johnson, &

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Roman, 2004). How drug treatment organizations respond to policy or legislative changes have rarely been studied. Treatment programs' organizational characteristics often change to adapt to their external environment and how they change are essential for understanding treatment processes, practices, and outcomes (Lehman, Greener, & Simpson, 2002). Using data from a recently completed Treatment System Impact and Outcome Study (TSI) conducted in California, this article examines drug treatment workforce professionalism in the context of a major drug legislation—the state of California's Proposition 36.

California's Proposition 36

According to the National Survey on Drug Use and Health (Substance Abuse & Mental Health Services Administration, or SAMHSA 2005–2006), more than 20% of Californians age 18–25 and around 8% of those who were 26 or older reported abuse of alcohol or illicit drugs in the past year. The Substance Abuse and Crime Prevention Act (SACPA), also known as Proposition 36, was approved by California's voters in November 2000. The legislation allows, under certain conditions, adults convicted of non-violent drug possession offenses to choose community-based substance abuse treatment in lieu of incarceration. Additionally, offenders on probation or parole who commit non-violent drug possession offenses or who violate drug-related conditions of probation or parole can also receive treatment. As a major policy redirection, California's Proposition 36 had achieved its original goal to reduce incarceration and related costs. According to a cost analysis based on its first two years, "[t]he overall cost savings to government were \$2,280 per offender for first-year SACPA offenders (140.5 million in total) and \$2,306 for second-year offenders (\$158.8 million in total)" (Longshore, Hawken, Urada, & Anglin, 2006, pp. 5).

At the same time, the implementation of Proposition 36 also has had a tremendous impact on the current drug treatment system (Fosados, R., Evans, E., & Hser, Y., 2007; Hser, et al., 2003, 2007; Longshore et al., 2002). For example, the increase in client flow has introduced considerable challenges for California's publicly funded drug treatment system: "Large increases in the number of new treatment admissions and in the number of heavy users (daily users of an illicit drug) referred to treatment through the criminal justice system occurred" (Integrated Substance Abuse Programs, UCLA, 2007, pp. 5) and placed a "demand shock" (pp. 129) to the California drug treatment system. According to the same report, California's drug treatment system received 40,000 new referrals each year after the establishment of Proposition 36 and the average new admissions per month increased to 2,572 from 1,280 in the three years before Proposition 36.

In addition to a dramatic increase of client flow, Proposition 36 also had other important implications. First, Proposition 36 funds provide \$120 million per year (roughly one-quarter of the statewide treatment funding available from all sources), which can be used for capacity expansion including purchasing more treatment slots from treatment providers with existing county contracts; acquiring new (physical) facilities; or opening new programs (e.g., intensive treatment for women with children). To meet service demand, Proposition 36 funds can also be used to hire additional treatment staff and to develop and provide new services. Second, the law also specifies that only facilities and programs licensed or certified by the state Department of Alcohol and Drug Programs are eligible to treat Proposition 36 clients. This requirement demands a certain degree of treatment infrastructure as well as workforce preparation from California's drug treatment agencies. One critical issue discussed in this article is whether legal and funding provisions under Proposition 36 have provided an opportunity for California drug treatment organizations or programs to expand their infrastructures, enhance their workforce, raise their service standards, and thereby allow them to move toward a higher level of professionalism.

Previous evaluations of Proposition 36 have focused on cost-effectiveness (Longshore, Hawken, Urada, & Anglin, 2006), treatment disparity, offender outcomes, crime trends, as well as funding levels (UCLA ISAP, 2007). No studies have investigated the impact of Proposition 36 on California's drug treatment system in terms of its workforce development. The focus of the present study is to address how California drug treatment agencies, programs and workforce have changed in response to the law, to the large influx of Proposition 36 clients, and to clients' diverse needs. We will examine the professionalism in California's drug treatment system, and whether it has increased as a consequence of Proposition 36.

Conceptual Framework

The Open Systems Perspective

Research of substance abuse treatment services typically applies the open systems framework to conceptualize the organizational aspect of service sectors (Friedman, Taxman, & Henderson, 2007; D'Aunno, 2001). This perspective analogizes organizations to organisms, whose survival depends on making their internal structures and processes open and adaptable to environmental dynamics, rather than closed to or isolated from them (Katz and Kahn 1966; von Bertalanffy 1956, 1968). Following this line of thinking, this study views the drug treatment system as an open system that constantly adjusts to changes in the external environment (Hser et al., 2003). Californian's drug treatment system receives inputs such as funding and patients from its environment, then the treatment service agencies process and transform these inputs into outputs such as client treatment outcomes. The relationships between inputs from the environment, the treatment system, and outcomes created by the system are not linear, but rather interactive. While changes in the environment affect the internal processes of the treatment system and consequently outcomes generated by the system, such outcomes may also have significant effects on the external environment and cause it to again influence the treatment system. The focus of the present study falls on the first step of the loop: how environmental forces such as Proposition 36 have changed the drug treatment system in California.

To measure systematic changes within substance abuse treatment programs, past studies based on the open systems theory have covered a variety of organizational characteristics. Some studied the organizations' physical well-being such as funding and resources, accreditation requirements or regulations, and technology and information accessibility as they are crucial for the survival of any organization (Lehman, Greener, & Simpson, 2002; D'Aunno, Vaughn, & McElroy, 1999; D'Aunno & Vaughn, 1995; Simpson, 2002; Brown & Flynn, 2002; Knudsen & Roman, 2004; Taxman & Bouffard, 2000). Other research places more emphasis on the organizational culture and climate, generally referred to as values, beliefs, attitudes, perceptions, and professional trainings and qualifications received by institutional leaders and program staff members (Friedman, Alexander, & D'Aunno, 1999a, b; Heinrich & Lynn, 2002; Knudsen, Ducharme, & Roman, 2006; Roman & Johnson, 2002; Trice & Beyer, 1995). The last category of organizational characteristics includes non-behavioral attributes such as age of the agency, ownership, modality types, administration and staffing structures, treatment capacity, inter-organizational relationships, and physical setups (Delany, Broome, Flynn, & Fletcher, 2001; Friedman, Lemon, Stein, Etheridge, & D'Aunno, 2001; Friedman, D'Aunno, Jin, & Alexander, 2000; Friedman, Alexander, Jin, & D'Aunno, 1999a&b; Grosenick & Hatmaker, 2000; Heinrich & Lynn, 2002; Magura, Nwakeze, Kang, & Demsky, 1999; Office of Applied Studies, SAMHSA, 2002; Olmstead & Sindelar, 2004; Roman & Johnson, 2002; Schmitt, Phibbs, & Piette, 2003).

Workforce Professionalism

The term “workforce professionalism” in past drug treatment research refers to program staff’s training, education, or qualification (Friedman, Taxman, & Henderson, 2007; Lehman, Greener, & Simpson, 2002; North, Pollio, Perron, Eylich, & Spitznagel, 2005; Olmstead, Johnson, Roman, & Sindelar, 2005; Swisher, 2000). Enhanced professionalism, resulting in a well-trained and better educated service team, is associated with better substance abuse prevention and treatment outcomes (Soyez & Broekaert, 2005; Swisher, & Clayton, 2001). In this study, we examine workforce professionalism at the treatment program level because the study unit is treatment program, and similar to an individual, a program has the potential to mature and improve in terms of professionalism. Extending the definition of professionalism of individuals to programs and borrowing from the open systems theory, we define program professionalism as the internal structures, processes, and climate of a treatment program. Based on the organizational constructs identified in the literature and characteristics measured in this study, we capture changes in program professionalism after Proposition 36 in terms of the following program characteristics: use of standardized client assessment tools, use of a standardized outcome evaluation system, presence of adequate resources and access to new technologies; qualified staff; and program certificate or license required by Proposition 36.

This study hypothesizes that the California drug treatment system had become more professional five years after the implementation of Proposition 36; that is, Proposition 36 organizations have acquired more resources and capabilities; used more standardized intake and outcome evaluations; had more qualified personnel; had registered with a State or county office to ensure certification and licensure; and had more access to new technologies.

Methods

Study Design

Data were drawn from an existing database assembled in a larger multi-site study, the Treatment System Impact and Outcome Study (TSI), which assessed both the effectiveness and system impact of California’s Proposition 36. The TSI was conducted in five counties selected based on geographic location, population size, and Proposition 36 implementation strategies (see Hser et al., 2003 for additional information). These five counties are San Diego, Riverside, Kern, Sacramento, and San Francisco. All treatment programs in these counties that serve Proposition 36 clients were invited to participate in surveys conducted in 2003 and 2005.

Treatment Programs

In both survey years, all treatment programs that currently served Proposition 36 clients were identified with the assistance of county administrators and all were invited to participate when surveys were conducted. A questionnaire was sent to the program director at each treatment program, and the program was compensated 100 dollars for completing surveys.

In 2003, 126 out of 137 (or 92%) service agencies that provided treatment to Proposition 36 clients completed questionnaires. In 2005, 129 out of a total of 141 (91%) Proposition 36 treatment programs completed questionnaires. A total of 118 program personnel (e.g., directors, managers, supervisors, coordinators) representing 102 programs completed surveys in both 2003 and 2005. In some agencies, one program may have had multiple units, and thus more than one respondent (each representing one treatment unit) from the same program participated in the surveys (12 agencies had 2 respondents and 2 agencies had 3). Additionally, respondents in the same treatment programs may not have been the same

individuals for the two survey points. Selected characteristics of the programs that participated in both surveys are provided in Table 1. About 60% were outpatient programs and the rest were residential programs. Approximately 17% of all the programs were in Kern county, 37% from Riverside, 12% from Sacramento, 21% from San Diego, and 13% from San Francisco. The programs had an average of 18 years in operation. Individuals who provided information about their treatment units were project directors, managers, executive directors, clinic administrators, supervisors, coordinators, and other administrative staff.

Measures

The program survey was a one-hour self-administered questionnaire that inquired about general organizational/program information, Proposition 36 implementation details, and staffing characteristics. Only variables that were consistently collected in both surveys (2003 and 2005) are included in the present study. Part of the 2003 program survey also asked the participants to provide information retrospectively to reflect the period prior to the enactment of Proposition 36, thus these items were repeatedly measured more than twice. Details of the items included in the analysis are as follows:

Resources/Capability—Whether the program had adequate resources to work with Proposition 36 clients was measured via 10 items, including whether the program had sufficient funding, information technology infrastructure, overall ability to monitor Proposition 36 clients, treatment capacity, ability to handle increases in staff caseload, ability to meet the needs of clients with severe drug problems, ability to meet the needs of clients with long criminal histories, ability to meet the needs of women with children, ability to provide culturally competent services, ability to secure state licensing/certification, regularly scheduled treatment program meetings, experience working with the criminal justice personnel, and so on. Participants rated their degree of agreement with these statements on a 5-point Likert scale (1=strongly disagree to 5=strongly agree). The Cronbach's alpha for the scale with these ten items at three time points is .8 (2001–2002), .8 (2003), and .7 (2005), indicating high internal consistency.

Standardized Intake Assessment and Outcome Evaluation—Whether or not an agency/program had a client intake assessment and outcome evaluation system was measured first with a single question on whether the agency had conducted assessment at intake (Y/N). It was then followed with a scale of assessment instruments where the participants were asked to mark whether or not they used the following (0=No and 1=Yes): Addiction Severity Index (ASI), American Society of Addiction Medicine Patient Placement Criteria (ASAM PPC), Substance Dependence Severity Scale (SDSS), Substance Abuse Subtle Screening Inventory (SASSI), Drug Use Screening Instrument (DUSI), Structured Clinical Interview for DSM-IV (SCID), assessment instrument developed by their program, Beck depression or anxiety scale, other psychiatric assessment tool, health survey, or other assessment instrument.

For the client outcome evaluation, the agency indicated, at the time of the survey, if they collect, report, and enter the data into the following outcome evaluation tools: California Alcohol and Drug Data System (CADDs), Criminal Justice Information System (CJIS), ASI, SACPA Reporting Information System (SRIS), drug testing, state/county mental health, county specific data, program specific data, and so on. Additionally, agencies were asked to mark whether there was any plan (0=No and 1=Yes) for a new or modified data system the year after and whether this new/modified plan would be implemented by the county, the state, or any other authorities (0=No and 1=Yes).

Staff Qualification—This variable was measured with three 5-point questions (0=None, 1=A few, 2=Less than half, 3=About half, 4=Most or all). The programs were asked to check the closest percentages of their staff in recovery, staff holding substance abuse counseling certificates, and staff holding a master's or higher degree.

Program Accreditation—The program licensure, certification, or accreditation section consisted of 5 dichotomous items (0=No and 1=Yes) requesting the agencies to indicate whether they acquired their accreditation/certification from one or more of the following authorities: Commission on Accreditation of Rehabilitation Facilities (CARF), Council on Accreditation of Services for Families and Children (COA), Joint Commission on the Accreditation of Health Care Organizations (JCAHO), National Committee for Quality Assurance (NCQA), or state/county offices.

Information Technology—The information technology aspect of organizational status was assessed by four items. First, the respondents were asked to estimate the computers and laptops in possession of the treatment program. Second, they rated on a 3-point scale (0=None, 1=Some [Less than ½], and 2=Most/All) of computer and internet access indicating an approximation of staff access to emails on a regular basis, staff access to substance-related websites regularly, as well as staff access to computers with web access. Cronbach's alpha for the 4 items (the first item was regrouped into a 0–2 rating variable) is .79 (2003) and .78 (2005), indicating a relatively high reliability of the information and technology scale.

Analytic Strategies

All analyses were conducted using SPSS 17.0 statistical analysis package. Both descriptive and inferential statistics were conducted to examine whether the professionalism of California's drug treatment system changed over time. Specifically for detecting changes over time, a Generalized Estimating Equations (GEE) model was utilized since it extends the general linear model to allow for analyses of correlated observations using repeated measures. The response items of this study are either ordinal, binary, or count. The GEE model is suitable also because it can work with all these levels of measurement. While conducting GEE to detect change on each item, only non-missing pairs of data were included. Respondents who had failed to answer at one or more times for a specific item were excluded from the analysis of that item (Most items had missing observations only for one or two participants; specifics are provided where exceptional missingness is noted). The software package utilizes Wald Chi Square tests of the GEE coefficients after model estimation, which will be denoted in the result section as χ^2 and β , respectively.

Results

Program Resources & Capability

The same program resource measures were collected in 2003 and 2005. The 2003 survey also asked the respondents to think retrospectively and gave an evaluation on their program's resources and capability during the first year when Proposition 36 was implemented (2001–2002). Therefore, the analysis was carried out to detect changes over three time points. These treatment programs reported no significant changes on their treatment capacity, ability to meet the needs of women with children, to serve clients with severe drug problems, to handle the increasing caseload, to work with criminal justice personnel, and to regularly schedule treatment program meetings. However, their overall ability to monitor Proposition 36 clients ($\chi^2=8.8$, $P<.05$), to meet the needs of clients with long criminal histories ($\chi^2=7.9$, $P<.05$), to provide culturally sensitive services ($\chi^2=19.0$, $P<.001$), and to secure state licensing and certificate requirement ($\chi^2=8.6$, $P<.05$) all indicated

significant increases over time. The percentage of staff acknowledging having enough resources (rated 4 or 5 on the Likert scale) to monitor Proposition 36 clients increased from 67.3% at Time I, to 73.5 % at Time II, to 87% at Time III. Similar patterns were also found for having enough resources to meet the needs of clients with long criminal histories (63.4%, 67.2%, and 75%), to provide culturally competent services (78%, 80.5%, and 83.9%), and to secure state licensing (74.8%, 86.7, and 97.4%). The overall resources and capacity scale also showed significant increases ($\chi^2=15.3$, $P<.001$). Most of the significant increases happened between 2003 and 2005 (χ^2 indicates the overall effect of time across three data points. See Table 2 for β estimations and their Wald test results at each of the three data points).

Client Database: Standardized Intake Assessment and Outcome Evaluation

The results revealed an increase in the utilization of client intake assessment across time and a few interesting patterns of change regarding particular assessment tools (as shown in Table 3). In the intake assessment section of the 2003 questionnaire, we asked the respondents to look back two years, the year prior to the implementation of Proposition 36 and the first year Proposition 36 was implemented. Together with the 2005 survey, we collected data on intake assessment at four different time points. The only exception was a question on whether a program conducted intake assessment at all, which was measured only at 2003 and 2005. Significantly more programs reported conducting at least some kind of client intake assessment at 2005 than those at 2003 ($\chi^2=6.7$, $P<.01$). Nonetheless, not every intake assessment tool was weighed the same by the respondents. The ASI was the most frequently used intake assessment tool. In 2005, almost all drug treatment programs that conducted intake assessment were using the ASI. Usage of the ASI also had a steady and significant increase from the year prior to Proposition 36 to 2005 ($\chi^2=15.7$, $P<.01$). Compared to the ASI, the following instruments gained popularity among practitioners only during the 2003 to 2005 period: self-developed assessment tools ($\chi^2=36.3$, $P<.001$); the Beck depression and anxiety scale ($\chi^2=15.4$, $P<.01$); SDSS ($\chi^2=134.1$, $P<.001$); and health survey ($\chi^2=32.0$, $P<.001$). While health survey and self-developed surveys had a dramatic jump in usage over the years, the Beck scales just had a mild increase in application. The SDSS had an even smaller gain in usage. At the same time, usage of other instruments such as SASSI ($\chi^2=10.8$, $P<.05$), DUSI ($\chi^2=8.1$, $P<.05$), SCID, and other psychiatric tools ($\chi^2=19.2$, $P<.001$), declined over the years. All the decreases in usage were statistically significant except for SCID ($\chi^2=6.0$). χ^2 indicates the overall effect of time across all four data points. β coefficients estimating changes at each time and the Wald test of their significance are presented in Table 3.

As shown by the β estimations in Table 4, program's collection of CADDs, CJISR, ASI, SRIS, state or county mental health, and county specific data decreased from 2003 to 2005. Only the decreases in reporting to CADDs ($\chi^2=13.2$, $P<.001$), CJIS ($\chi^2=11.5$, $P<.01$), and SRIS ($\chi^2=22.7$, $P<.001$) were statistically significant. Collecting drug testing results and program specific data increased, but only the increase in collecting program specific data was significant ($\chi^2=4.0$, $P<.05$).

In regard to entering data into the outcome evaluation databases, respondents observed a decline for CADDs, CJIS, ASI, SRIS, and drug testing. The decreases in CADDs ($\chi^2=17.5$, $P<.001$), CJIS ($\chi^2=6.6$, $P<.05$), and SRIS ($\chi^2=7.1$, $P<.01$) databases were statistically significant. More programs in 2005 reported entering state or county mental health, county specific and program specific data in a database. However, none of these increases was significant. California drug treatment service providers increasingly indicated that there would soon be a new data system managed by counties ($\chi^2=7.2$, $P<.01$). While answering the question whether there was a plan for new data system managed by each county, a significantly larger number of service providers gave an affirmative answer at 2005 ($\chi^2=10.5$, $P<.01$).

All items in this section regarding client database had some missing data. While most items just missed a few respondents (1–4), a considerable number of respondents (30–40) failed to provide information on a couple of items such as the SJIS.

Staff Qualification

According to Table 5, respondents from programs witnessed increases in the number of staff members in recovery, the number of staff who held substance abuse counseling certificates, and the number of staff who had a master's or higher degree. At 2005, about 20% of the programs reported more than half of their staff had a master's or higher degree, whereas in contrast, about 50% of the surveyed agencies reported having "a few staff members holding a master's or higher degree at 2003. While holding a substance abuse counseling certificate was rare at 2003, more than 60% of the programs reported most of their staff had a substance abuse counseling certificate at 2005. Similarly, more than 60% of the programs at 2005 indicated that most of their staff members were in recovery compared to only a few in 2003. β coefficients of the increases in number of staff in recovery ($\chi^2=27.3$, $P<.001$) and number of staff with substance abuse counseling certificate ($\chi^2=38.4$, $P<.001$) were statistically significant.

Program Accreditation

Almost all drug treatment programs were accredited by a state or county office at 2005 (see Table 6), which reflects a slight increase from 2003. There was also an increased rate of CARF accreditation ($\chi^2=10.0$, $P<.01$). On the other hand, COA was hardly used for accreditation from the beginning. The number of programs getting accreditation from the other accreditation agencies, namely JCAHO and NCQA, did not show significant changes over time. But only a small number of programs received accreditation from these two agencies at both 2003 and 2005. The analysis of whether a program was licensed with a county or state office was able to include all 118 respondents. However, the rest of the items in this section shared a common missing data rate of 10%.

Information Technology

Table 7 shows that during the first five years of Proposition 36, surveyed drug treatment programs on average had more computers and better access to the internet. All four items measuring computer and internet access improved significantly over time. The increase in PCs and laptops possessed by programs is significant at .01 level ($\chi^2=9.7$). The average number of computers in possession of a treatment program almost doubled from 2003 to 2005. More importantly, increases of drug treatment staff's regular access to computers with web access ($\chi^2=8.5$, $P<.01$), to emails ($\chi^2=8.5$, $P<.01$), and to substance abuse websites were all significant ($\chi^2=10.9$, $P<.01$). More than half of the surveyed programs indicated that they had regular access to these at 2005. The overall scale on technology showed a significant increase from 2003 to 2005 ($\chi^2=16.9$, $P<.001$).

Discussion

Past research points out that insufficient funding of the current drug treatment systems across the nation often jeopardizes service providers' responsiveness to people in need of care and thus compromises outcomes (Rummler, 2004; Institute of Medicine, 2001, 2004; Wolff & Schlesinger, 2002; SAMHSA, 2007). In contrast, California drug treatment providers perceived their programs as being more adequately equipped in many key service areas under the influence of Proposition 36. The identified increases in program resources all happened toward the end of the five-year period examined. This pattern was consistent with the "demand shock" found by previous studies (Longshore et al., 2002; UCLA ISAP, 2007). A sudden increase in the influx of clients could have placed tremendous pressure on

program's infrastructure, thereby explaining the perceived scarcity of resources at the beginning of Proposition 36. Service providers seemed to be able to develop resources and capacity to meet the service needs after a few years of adjustment. Among the several service areas where program resources did not show a significant growth, this study only identifies the ability to meet the needs of women with children as problematic. The overall treatment capacity, the ability to have regular program meetings, and the capability to work with criminal justice personnel all received high ratings (ranging from 75% to 88%) consistently from the beginning to the end of this study indicating sufficient resources in fulfilling these tasks. In contrast, only 43% claimed to have enough resources to meet the needs of women with children at the end of the study period. The low percentages demonstrated persistent lack of resources for women with children in the drug treatment system. This confirms previous research findings that drug treatment programs are often unequipped to serve women with children and are less effective (e.g. lower retention rates in treatment and worse treatment outcomes) for this population (Marsh, D'Aunno, & Smith, 2000; Lewandowski, & Hill, 2008).

Recent DHHS reports on the addiction treatment workforce describe a growing tendency to standardize services and client databases (2003 (2005b). Findings of this study seem to agree. Almost all treatment programs that participated in our surveys conducted intake assessment and outcome evaluation in 2005, which was a significant change from 2003. The State of California is currently implementing a statewide outcome monitoring system, California Outcome Measurement System (CalOMS). This is consistent with staff members' belief when we surveyed them. All these are signs of standardization of services and client databases (Fletcher & Chandler, 2006; Peters & Wexler, 2005; Simpson, 2002).

Certain instruments were used more by some treatment programs than others. The ASI had been the most often used intake assessment tool over the years, followed by the Beck depression and anxiety scale, health surveys, and instruments developed by the program themselves. The ASI, the CADDs, drug testing data, state or county mental health data, county and program specific data were the more steady and prevalent tools used by treatment programs as client outcome measures over the years. Meanwhile, some other instruments have lost their significance. For example, we observed significant decreases in the usage of certain instruments for outcome reporting and client databases, such as the CJIS and the SRIS.

Utilization of an instrument may be associated with certain Proposition 36 specifications. According to the law, drug treatment programs are obliged to collect data on clients' health and mental health. This may account for the increased significance of health survey and the Beck scale of depression and anxiety during intake assessment and for the consistent collection of county and state specific data for outcome evaluation. The expectation of a system like CalOMS may also explain the reduced usage of the traditional evaluation tools such as ASI and CADDs. Changes in usage of instruments may also reflect the increasing need to assess and serve a larger number of clients more efficiently.

Shortages of trained and credentialed counselors in the addiction treatment workforce has been well documented, leading to a gap between service and treatment needs (Gallon, Gabriel, & Knudsen, 2003; Hall & Hall, 2002; Northeast Addiction Technology Transfer Center, 2005). Harwood (2002) points out that only about 53% of the treatment workforce were certified as substance abuse counselors and 56% of the certified counselors had a master's or higher degree. Results of this study corroborate past research findings. Although we found more staff members with substance abuse counseling certificates and with master's degrees or higher in the programs as Proposition 36 went into its 5th year, a large portion of the workforce remained uncertified and without higher education backgrounds. A

significantly larger number of staff in recovery was recruited into the system after the implementation of Proposition 36. In sum, funding increases due to Proposition 36 might have enabled treatment programs to recruit more specialized and well-trained counselors, but not to a level where programs could significantly change the composition of their workforce. Second, hiring more staff in recovery was perhaps a coping strategy of the treatment programs to handle the increasing number of clients referred under Proposition 36.

Proposition 36 requires its participating treatment programs to be licensed by the State. Almost all of the surveyed programs had either a state or a county license at both data points. Therefore, this study did not detect changes over time on this item.

According to a study by McLellan, Carise, and Kleber (2003) of the drug treatment workforce, 70% of those who provide direct services to clients have no access to the basic technologies such as computers and the internet. This study found that during the first five-year period of Proposition 36, access to new technology had improved tremendously among the surveyed drug treatment programs. It is possible that the direct increase in funding due to Proposition 36 accounts for advances in technology.

Limitations

This study cannot conclude causal relationships between the implementation of Proposition 36 and the changes we observed in California's drug treatment workforce over the five-year study period. We did not have a comparison group to experiment whether Proposition 36 was the cause of all the identified changes in California's drug treatment system. One competing hypothesis would be that the differences across the years were because some of the respondents were not the same individuals at the two survey points (2003 and 2005). We also acknowledge that organizations, as "open systems", interact with their environment all the time and therefore change all the time. There could be other confounders. For example, funding from other sources, county-specific policies or regulations on systemic processing of clients, organizational reforms like hiring policy, and changes in the number of graduates from drug treatment programs could also have influenced the treatment system. This study can only conclude that Proposition 36 might have facilitated increased professionalism in California's drug treatment system because we observed improvements during the first five-year period of its implementation.

Another limitation is the use of retrospective data. Some items in the 2003 survey asked the respondents to provide their perceptions regarding the treatment programs one or two years prior to the study time instead of actually measuring their opinions at the time. The information may not be as accurate. We still believe combining retrospective data with current surveys provided valuable information about the drug treatment workforce under Proposition 36 for the following reasons. First, collecting retrospective data is a recognized valid strategy in longitudinal research and it provides knowledge of a time period when measurement was hard or impossible to apply (Caspi, Moffitt, Thornton, & Freedman, 1996). Second, the passage and implementation of Proposition 36 was a milestone in the history of legislation and drug treatment practice. When asking the respondents to recall, this study used languages such as "prior to Proposition 36", "first year of Proposition 36", and so on because such a salient event might help the program staff anchor their memories and thus provide more accurate information. Finally, past research using retrospective data (Janson, 1990) reveals that inaccuracy often happens when inquiring about adverse, illegal, and embarrassing events in an individual's life. This study only requested perceptions of treatment programs and workforce in general, which should not cause any embarrassment or discomfort for the respondents.

This study has other minor limitations: (1) the survey relied entirely on respondents' self-reports; problems such as common method variance can occur when self-report is used. (2) the program resources and the intake assessment measurements had unequal measurement intervals. There was a two-year interval between the 2003 and 2005 survey, whereas the interval between the retrospective questions and the 2003 survey was only one year. The shorter measurement interval may account for the absence of significant changes at the beginning of the implementation of Proposition 36. (3) scaling of some particular items might not be the optimal choice. For the staff qualification and information technology questions, scales seem to favor the lower end answers.

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Future Directions

This study assessed the impact of a major drug policy initiative on the workforce in California's drug treatment services. Similar research needs to continue monitoring the effectiveness of the policy and changes in the workforce to better serve the client population. For example, we identified a considerable number of staff in recovery being hired during the study period and a lack of staff with special training in substance abuse and with higher education backgrounds. It would be interesting to see whether this pattern of staffing will change in the following years and how that impacts client outcomes. Future research also needs to pay more attention to subgroups within Proposition 36 clients to determine how to better meet their diverse needs. More efforts are needed to find out why the system persistently fails to meet the needs of women with children and how to reverse this inadequacy. A large portion of the drug-using population often has various levels of involvement with the criminal justice system and other concurrent health or mental health problems in addition to their drug problems. How systemic changes influence the handling of these conditions is still unclear, which calls for further examination. Finally, a policy can cause profound systematic changes that are beyond the scope of one study. Future research endeavors are needed to fully examine other possible changes in the California drug treatment system as it has adapted to Proposition 36. For example, serving clients' needs other than drug treatment is always associated with the drug treatment system's ability to work with other institutions, such as the criminal justice system and the primary health service sectors. More studies are needed to explore whether Proposition 36 also had any impact on the drug treatment system's ability to interact with other systems or agencies.

Table 1

Program Characteristics (n=118)

Program Modality	%
Outpatient	61.9
Residential	38.1
County	%
Kern	16.9
Riverside	37.3
Sacramento	11.9
San Diego	21.2
San Francisco	12.7
Years Program in Operation mean (SD)	17.7 (11.9)
Title of Individual Filled Out Surveys	%
Project Director	13.6
Program Manager	24.2
Executive Director	8.4
Clinic Administrator	8.4
Program Supervisor	23.2
Program Coordinator	7.4
Other	11.6

Table 2

Changes in Program Resources during Implementation of Proposition 36 (1–5 point) (n=118)

Item	Reponse	Time I (01–02) %	Time II (02–03) %	Time III (05) %
overall ability to monitor Prop. 36 clients	1	5.3	5.3	0.9
	2	18.9	17.7	6.9
	3	8.4	3.5	12.9
	4	30.5	37.2	49.1
	5	36.8	36.3	37.9
	β (SE)	0	-.4 (.1) **	.8 (.4)
treatment capacity	1	3.2	5.3	8
	2	10.6	14.2	8.8
	3	10.6	10.6	4.4
	4	40.4	38.1	35.4
	5	35.1	31.9	43.4
	β (SE)	0	-.3 (.2)	.2 (.2)
ability to handle increase in staff caseload	1	3.2	6.2	3.5
	2	19.4	20.4	14
	3	12.9	0	7.9
	4	38.7	32.7	46.5
	5	25.8	29.2	28.1
	β (SE)	0	-.2 (.2)	.7 (.4)
ability to meet the needs of clients with severe drug problems	1	2.2	5.3	3.4
	2	21.5	17.5	6.8
	3	4.3	4.4	7.7
	4	35.5	36.8	29.9
	5	36.6	36	52.1
	β (SE)	0	.01(.2)	.4 (.2)
ability to meet the needs of clients with long criminal histories	1	2.2	1.8	1.7
	2	25.8	20.4	7.8
	3	8.6	10.6	15.5
	4	34.4	40.7	34.5
	5	29	26.5	40.5
	β (SE)	0	.2 (.2)	.6 (.2) **
ability to meet the needs of women with children	1	18.5	19.8	20.7
	2	20.7	12.6	19.8
	3	27.2	28.8	16.4
	4	21.7	27.9	18.1
	5	12	10.8	25
	β (SE)	0	.1 (.1)	.1 (.2)
ability to provide culturally competent services	1	1.1	0.9	0
	2	1.1	0.9	2.6
	3	19.8	17.7	3.5

Item	Reponse	Time I (01–02) %	Time II (02–03) %	Time III (05) %
	4	51.6	54	47.8
	5	26.4	26.5	46.1
	β (SE)	0	.1 (.2)	1.0 (.2) ***
ability to secure state licensing/certification	1	1.1	0.9	0
	2	0	0	0
	3	14.1	12.4	2.6
	4	18.5	24.8	17.1
	5	66.3	61.9	80.3
	β (SE)	0	-.2 (.2)	.7 (.3) *
regularly scheduled treatment program meetings	1	1.1	0.9	0
	2	6.5	3.5	5.1
	3	12	10.6	8.5
	4	34.8	42.5	34.2
	5	45.7	42.5	52.1
	β (SE),	0	-.1 (.1)	.3 (.2)
experience working with CJ personnel	1	3.3	2.7	1.7
	2	8.7	5.3	2.6
	3	6.5	6.2	6.8
	4	30.4	36.3	24.8
	5	51.1	49.6	64.1
	β (SE)	0	.1 (.2)	.5 (.2)
Overall Scale (Mean, SD)		4.0 (.6)		
	β (SE)	0	.1 (.1)	.2 (.1) **

*
p<.05

**
p<.01

p<.001

1=strongly disagree 2=disagree 3=neutral 4=agree 5=strongly agree

β =GEE coefficient, SE=standard error of the GEE coefficient

Table 3

Changes in Intake Assessment before and after Proposition 36 (Y/N) (n=118)

Item	Time I (Pre Prop. 36)	Time II (01-02)	Time III (02-03)	Time IV (05)
% Conducting intake assessment at all			81	93.5
	β (SE)		0	1.2 (.5)**
% Using addiction severity index	78.7	88.4	89	97.1
	β (SE)	.6 (.3)*	.7 (.3)*	2.2 (.6)**
% Using American society of addiction medicine patient placement criteria	17	26.9	30	27
	β (SE)	.5 (.3)	.7 (.3)*	.5 (.3)
% Using substance dependence severity scale	2.3	2.6	3.4	7.1
	β (SE)	.1 (.1)	.4 (.4)	1.2 (.8)
% Using substance abuse subtle screening inventory	10	6.4	6.7	4.7
	β (SE)	-.4 (.2)	-.3 (.2)	-.8 (.6)
% Using drug use screening instrument	12	10.5	15.6	9.4
	β (SE)	-.1 (.04)*	.02 (.01)	-.6 (.5)
% Using structured clinical interview for DSM-IV	7.2	5.9	11.8	4.8
	β (SE)	.03 (.2)	.3 (.2)	-.6 (.7)
% Using assessment instrument by their own program	19.1	12.2	17.8	62
	β (SE)	-.2 (.1)	-.1 (.1)	1.9 (.4)***
% Using Beck depression or anxiety	7.8	8	8.8	24.4
	β (SE)	.2 (.1)	.1 (.1)	1.1 (.3)**
% Using other psychiatric assessment tool	43.3	44.6	49.5	18.2
	β (SE)	.03 (.02)	.11 (.1)	-1.4 (.4)***
% Using health survey	49.4	43.7	44.7	84
	β (SE)	-.2 (.1)	-.3 (.1)*	1.6 (.3)***

* p<.05

** p<.01

*** p<.001

 β =GEE coefficient, SE=standard error of the GEE coefficient

Table 4

Changes in Outcome Evaluation during Implementation of Proposition 36 (Y/N) (n=118)

Item	Currently Reporting		Entered in Database	
	Time I (03)	Time II (05)	Time I (03)	Time II (05)
% Using California alcohol and drug data system	95.1	79.4	88.9	66
β (SE)	0	-1.6 (.4)***	0	-1.4 (.3)***
% Using criminal justice information system	18.3	2	16.9	4.4
β (SE)	0	-2.4 (.7)**	0	-1.6 (.6)*
% Using addiction severity index	92	88.8	45.4	41.7
β (SE)	0	-.3 (.4)	0	-.2 (.3)
% Using SACPA reporting information system	48.2	16	35.5	15.6
β (SE)	0	-1.6 (.3)***	0	-1.1 (.4)**
% Using drug testing	74.7	81.1	35.2	33
β (SE)	0	.4 (.3)	0	-.1 (.3)
% Using state/county mental health	26.7	22.8	18.2	20.3
β (SE)	0	-.2 (.3)	0	.1 (.4)
% Using county specific data	76.7	75.2	56	68.6
β (SE)	0	-.1 (.3)	0	.5 (.3)
% Using Program specific data	69.2	81.2	54	66.7
β (SE)	0	.7 (.3)*	0	.6 (.3)
% Believed there will be a database planned by the county/state			34	47
β (SE)			0	1.7 (.5)**
% Believed there will be a database managed by county			61.8	90.4
β (SE)			0	1.3 (.5)**
% Believed there will be a database managed by state			23.1	52.1
β (SE)			0	.8 (.6)

*
p<.05**
p<.01***
p<.001 β —GEE coefficient, SE—standard error of the GEE coefficient

Table 5

Changes in Staff Qualification during Implementation of Proposition 36 (0–4 point) (n=118)

Item	Response	Time I (03)%	Time II (05)%
Staff in recovery	None	0	27.1
	A few	99.1	2.5
	Less than half	0	5.1
	About Half	0	16.9
	Most or all	.9	48.3
	β (SE)	0	1.5 (.3) ***
Staff with special certificates	None	12.3	3.4
	A few	86.8	12
	Less than half	.9	11.1
	About Half	0	11.1
	Most or all	0	62.4
	β (SE),	0	6.6 (1.1) ***
Staff with >=master degree	None	45.2	41.9
	A few	54.8	35
	Less than half	0	16.2
	About Half	0	3.4
	Most or all	0	3.4
	β (SE)	0	.3 (.2)

*
p<.05**
p<.01***
p<.001 β =GEE coefficient, SE=standard error of the GEE coefficient

Table 6

Changes in Program Qualification during Implementation of Proposition 36 (Y/N) (n=118)

Item	Time I (03)	Time II (05)
% Certified with the Commission on accreditation of rehabilitation facilities	4.8	21.3
β (SE)	0	1.9 (.6) **
% Certified with the Council on accreditation of services for families and children	1.3	0
β (SE)	too small to calculate	
% Certified with the Joint commission on the accreditation of health care organizations	7.5	8.7
β (SE)	0	.2 (.4)
% Certified with the National committee for quality assurance	3.7	1.1
β (SE)	0	-1.2 (1.2)
% Certified with a State or county office	96.4	98.1
β (SE)	0	.6 (.7)

*
p<.05**
p<.01***
p<.001 β =GEE coefficient, SE=standard error of the GEE coefficient

Table 7

Changes in Information and Technology during Implementation of Proposition 36 (n=118)

Item	Reponse	Time I (03)	Time II (05)
# of PCs and laptops owned (regroup) %	Mean (SD)	5.6 (5.6)	9.33 (17.17)
	0–10	90.8	84.5
	11–20	8.3	11.8
	>30	.9	3.6
	β (SE)	0	.5 (.2)**
		Time I (03)%	Time II (05)%
Regular email access	None	15.7	12
	Some (less than 1/2)	47	33.3
	Most or all	37.4	54.7
	β (SE)	0	.6 (.2)**
Access to drug abuse related website	None	18.3	15.4
	Some (less than 1/2)	48.2	34.2
	Most or all	36	50.4
	β (SE)	0	.7 (.2)**
Access to computers with web access	None	15.8	9.5
	Some (less than 1/2)	48.2	40.5
	Most or all	36	50
	β (SE)	0	.6 (.2)**
Overall Scale (Mean, SD)	1.0 (.5)		
	β (SE)	0	.2 (.1)***

*
p<.05**
p<.01***
p<.001 β =GEE coefficient, SE=standard error of the GEE coefficient