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Offender Diversion into Substance Use Disorder Treatment: Demographic Variation in the Economic Impact of California's Proposition 36

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Abstract

Context: California implemented a voter-approved offender diversion program, the Substance Abuse and Crime Prevention Act (SACPA; also known as Proposition 36), in July 2001. SACPA offered probation or continued parole with substance abuse treatment in lieu of incarceration or supervision without treatment for adult offenders convicted of drug offenses and for probationers and parolees who violated drug-related supervision conditions.

Objectives: To describe demographic variation in governmental costs associated with SACPA.

Methods: Administrative data were used to define control and intervention cohorts of drug offenders meeting SACPA eligibility criteria in the proximate years before SACPA implementation and for the first year after implementation. Three separate difference-in-differences regression models estimated the effect of SACPA on the total and domain-specific costs to state and county governments incurred for white, Black, and Hispanic offenders. The main covariates of interest were sex, race, and age, as well as the interactions between these and SACPA participation. All analyses controlled for county-level crime at baseline and the change in crime rates throughout the 60-month analysis period.

Results: The greatest average savings ($6,052 per individual) were realized for Black male offenders, with lower cost savings for Hispanics ($3,238) and whites ($2,158). SACPA eligibility resulted in substantially lower savings for female participants, primarily due to increased arrest and conviction costs. A significant sex-by-age interaction showed monotonically decreasing costs associated with age for men but not for women.

Conclusions: These results indicate SACPA's effectiveness in reducing government costs for male offenders with fewer, and inconsistent, effects on savings for female offender. Implications for the selection of eligible offenders and improvements in services that meet offender needs specific to county-level circumstances are discussed.

Keywords: Offender; Diversion programs; Substance abuse; Cost savings; Demographic variation

Introduction

Providing effective interventions for offenders with Substance Abuse Disorders (SUDs) have long been an issue throughout the Criminal Justice System (CJS). Due to such factors as mandatory minimum sentences, three-strike laws, and other "tough on crime" policies and practices, the rates of incarceration for non-violent drug offenders has produced unprecedented incarceration rates over the last few decade [1]. As a result, prisons and jails and community supervision resources are overcrowded and create large social costs. Many diversion and treatment efforts have been designed, implemented, and evaluated [2]. Evaluation results have generally been positive [3,4].

A t the same time, the number of offenders with substance use problems who receive treatment is low; according to the Bureau of Justice Statistics [5], in 2004 about 15% of state prisoners who met criteria for drug dependence or abuse had participated in a drug treatment program since admission. Although drug courts have been popular as a way to divert drug-involved offenders from jail or prison to community treatment, there is doubt that they can serve a sufficiently large enough population to substantially reduce the jail and prison populations [6].

Gradually, the problems and costs associated with more traditional CJS approaches to dealing with the drug-using offender have been replaced by a philosophy of diversion into community treatment, both to save on costs and to implement a more rehabilitative approach to the long standing problems of overcrowding and judicial decisions thereto related. The SACPA program, its goals, and its implementation anticipated some of the recommendations recently proposed in the Global Committee on Drug Policy report, 45 which strongly critiqued current international and national policies that predominately criminalize drug use while failing to promote a public health perspective in prevention and intervention efforts. In addition, the advent of the Affordable Care Act (ACA) also promotes, through policy, funding, and program implementation, a large increase in options and resources for greater diversion and treatment of offenders with drug problems [7,8]. The design and implementation or expansion of such interventions should be informed by well documented studies of past and extant efforts to optimize the potential benefits expected to accrue.

To this end, a statewide program implemented in 2001 and currently ongoing has been established in California, where voters approved the Substance Abuse and Crime Prevention Act of 2000 (SACPA), commonly known as "Proposition 36," thus initiating a

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statewide criminal justice policy change for the treatment of drug-involved offenders. Under SACPA, adults convicted of nonviolent drug possession offenses can receive drug treatment in the community in lieu of traditional sentencing. Probationers or parolees who violate drug-related conditions of probation or parole may also be eligible. About 50,000 drug offenders annually have participated in SACPA [9], making it one of the largest drug offender diversion programs in the nation.

Concomitantly, a number of other states have enacted policies similar to SACPA, including Arizona, Maryland, Hawaii, Washington, and Kansas [10]. In addition, programs that share elements with SACPA, such as the Treatment Alternatives for Safer Communities (TASC) programs, are common throughout the nation, and drug courts can be found in all states [11]. In California, drug courts and SACPA coexist as diversion options along a continuum. In practice, SACPA is often used as an initial diversion option. Offenders who fail to graduate from SACPA are sometimes transferred to the more intensive supervision provided by drug courts [12].

As noted above, the ACA and recent CJS policy and practice changes have moved this issue to the forefront of enforcement and corrections considerations and program developments. The documented effects, at the diver's levels of policy, practice, and implementation strategies, provide important 'lessons learned,' which can inform the modification, design, and implementation of similar programs. Moreover, cost-benefits studies allow a convincing numerical assessment of program effects.

Recent budgetary constraints in California have resulted in the state providing California's 58 counties with little in the way of targeted financial support, even though the requirements of SACPA remain in effect. Moreover, as noted above, there is renewed interest in the development, adaptation, implementation, and evaluation of large-scale diversion programs for offenders with substance abuse. For these reasons, it is important for stakeholders to have a better understanding of the impact of SACPA on different offender groups, specifically groups based on race/ethnicity, sex, and age, since these groups have all shown different patterns in both criminal offending and drug use [13-19]. Defining cost variation by demographic characteristics can inform resource allocation to obtain the best "return on investment" for increasingly scarce funding, while identifying domains that require additional attention to improve cost-savings for offender groups that currently respond sub optimally.

Ethnic differences in drug use, offending, and associated costs are mired in a long history of policy and contextual factors, including the introduction of mandatory minimum sentences for possession of crack cocaine use in the 1980s, significantly greater gang involvement among ethnic minorities, and the association of lower socioeconomic status with both drug use and ethnic group membership. These factors have been shown to lead to longer incarceration sentences, more strict supervision, and reduced diversion to treatment for offenders with SUDs, resulting in higher overall costs to government for minority offenders [20-24].

Similarly, sex differences have long been shown to exist in rates of drug use generally and in regard to the use of specific drugs [25,26,19]. Additionally, the high rates of criminal involvement, arrest, and incarceration of American men for drug-related offences has been well documented, although this "gender" gap seems to be closing [27,17,28] and there is little doubt that such a divergence impacts the costs associated with men and women within this context.

The impact of age on drug use and rates of offending, and costs associated with both, has also been well documented [23,19]. Young minority offenders are more likely to receive longer and therefore more costly, sentences, whereas health difficulties associated with long-term drug and alcohol use produce greater costs in general for older individuals with SUDs [29-32]. At the same time, greater amenability and responsiveness to treatment by older, as compared to younger, individuals with SUDs has been a consistent finding that predicts better treatment adherence and retention, although outcome data to date is scarce for this specific age group and studies are often limited to alcohol rather than illicit drug use [33-35]. Given the complex relationship between demographic factors and criminal offending, and as specifically related to SUDs, there is a need for a better understanding of the ways in which such factors affect government costs and intervention parameters that may be associated with them. Specifically, although SACPA is intended to provide broad diversion into treatment for eligible offenders, the question of how and when diversion occurs and its effectiveness across these demographic groups remains to be clarified in terms of cost-benefits.

Anglin et al. [36] assessed the overall costs and savings attributable to SACPA as a policy that affected offenders, state and county law enforcement procedures, and SUD service providers. Costs per offender, overall and in specific domains, were used as the main outcomes of interest. The regression-adjusted results showed that, compared to a group of similar offenders in the proximate years before SACPA implementation, the program saved $3,076 per offender over the first 30 months after a qualifying conviction. As expected, the majority of savings resulted from large decreases in incarceration costs, moderated by increases in SUD treatment costs. Other cost domains affected overall savings modestly. While contributions related to offender demographic characteristics and county-level (or local "ecology") conditions were controlled in this previous work, explication of such relationships was not explored further. The present analysis extends the earlier research by addressing this knowledge gap by examining demographic variation among total and specific domain costs and examining ethnic group, sex, and age variations in costs per offender, while controlling for county-level parameters.

Although the SACPA program is unique to California, the economic analyses reported here are widely applicable and are, ideally, relatively easy to conduct. First, a broad array of data is available to various jurisdictions and is collected on an ongoing basis for administrative purposes. Linking these data across domains is a demanding process that, when successful, allows for the quantitative assessment of social policy changes and the evaluation of program effects [37]. Second, both broad and specific effects can be ascertained, allowing a better explication of the many influencing factors and conditions that affect cost estimates. Finally, results expressed in econometric terms allow for a better allocation of increasingly scarce governmental resources in the planning for and optimizing of beneficial outcomes, by, for example, improving selection criteria for participants, providing a set of interlocking and coordinated intervention elements, and tailoring program elements to meet specific client needs.

Methods

Study cohorts

Full details on the sample and the econometric methods used are reported in Anglin et al. [36]. A time-lagged cohort of individuals meeting SACPA eligibility criteria in the proximate years before the program was enacted (July 1, 1997 to June 30, 1998, N=47,355) was

used to compare with the intervention cohort, comprised of SACPA-eligible drug offenders convicted within the first 12 months of SACPA implementation (July 1, 2001 to June 30, 2002, N=41,607).

Among offenders found in court to be eligible for SACPA in its first year, 82% chose to participate in SACPA. Among offenders who chose SACPA, 85% completed assessment, and 81% of assessed offenders entered treatment. Overall, 69% of offenders who opted for SACPA in court entered treatment. However, only 34.4% completed.

These data, for the purposes of this analysis, included only individuals identifying as white, Black, or Hispanic. Men compromised 75.2% and 75.8% respectively; ethnicities were white 46.5% and 47.9%, Black 16.4% in both cohorts, and Hispanic 28.0% and 31.7%. Only ethnic composition was significantly different between the two cohorts.

Costs pertaining to health, criminal justice involvement, and substance abuse treatment participation were captured for 30-month periods before and after the identifying conviction, for a total of 60 months of offender observation (control cohort: January 1, 1994, to December 31, 2000; SACPA cohort: January 1, 2000, to December 31, 2005). Both cohorts were followed using an intent-to-treat design, in which SACPA cohort members were included whether or not they accepted the SACPA option to enter treatment or subsequently did so. The study was approved and monitored by the UCLA Institutional Review Board and the California State Human Subjects Protection Committee.

Data sources

Five primary data sources were linked for the present analysis, as outlined in detail in Anglin et al. [36]. Criminal records were retrieved from the California Department of Justice Automated Criminal History System. Sex, age, and ethnic group were based on Department of Justice records. Substance abuse treatment admissions and discharges were captured in the California Department of Alcohol and Drug Programs California Alcohol and Drug Data System (CADDS). Prison and parole movement records were captured in the Offender Based Information System (OBIS), maintained by the California Department of Corrections and Rehabilitation (CDCR). Health resource utilization was captured in the Medi-Cal (California Medicaid) claims data, received from the Department of Health Services. And, finally, county-level predictors of outcomes, including indicators of policing intensity (i.e., arrests per capita) and socioeconomic status (i.e., average income) were collected by calendar year for each of the 58 counties of California from publicly available data from the Federal Bureau of Investigation (www.fbi.gov/ucr/ucr.htm), the Office of the California Attorney General (www.ag.ca.gov), the California Department of Finance (www.dof.ca.gov), and the U.S. Census (http://www.census.gov).

Study outcomes

Our primary outcomes were the total costs, as represented by cost per offender, to state and county governments through the health and criminal justice sectors, as well as for drug treatment provision. Costs were calculated for each member of the cohorts in the 30 months before and after a SACPA-eligible conviction in eight domains: prison, jail, probation, parole, arrests, convictions, publicly funded healthcare utilization, and SUD treatment. Prison, jail, probation, and parole costs were based on average costs per day based on reports published by the appropriate agency or provided in response to UCLA inquiries. Arrest costs include police and sheriff costs, whereas conviction costs include court, county prosecutor, and victim-service costs adapted from previous research [38]. SUD treatment costs are adapted from Ettner et al. [39], whereas publicly funded healthcare utilization is based on actual costs recorded in state Medi-Cal records. Total costs in the 30-month period before conviction were then subtracted from costs post-conviction to provide a cost-difference measure-our primary outcome measure-for each individual offender. Similar procedures were applied to each constituent cost area. Costs are presented in 2009 U.S. dollars.

Statistical analysis

A regression-adjusted Difference-In-Differences (DID) approach was used to estimate the effect of SACPA implementation on a set of study cost-outcomes [36]. We estimated average changes in costs in the pre-SACPA and the SACPA cohorts before and after the SACPA-eligible conviction to estimate the average effects of the program. Multivariate linear regression models were estimated separately for each ethnic group to determine the effect of SACPA, as well as for sex and age on the pre- to post-conviction differences in total costs as well as per-domain cost for all eight cost domains. We included individual- and county-level covariates to control, insofar as possible, for differences in study cohorts. For the present analysis, we focus on the individual-level factors (i.e., ethnic group, gender, and age), using county-level covariates as controls. Analyses of this nature can be problematic if such stratification results in groups with either extremely low numbers or even no individual observations. However, in the present analysis, the smallest offender count in any single cell was 120 for pre-SACPA, Hispanic, female offenders over 45 years of age. All statistical analyses were performed using SAS version 9.1.

Results

Sample characteristics

Summary statistics for the SACPA and the pre-SACPA cohorts stratified by ethnic group are presented in (Table 1). Statistically significant age differences were identified among the ethnic groups, with Black offenders being the oldest and Hispanic offenders the youngest, although no differences were identified between the pre-SACPA and SACPA cohorts. Sex also varied by ethnic group, with more SACPA offenders being white women (30.2%) and fewer pre-SACPA offenders being Hispanic women (15.4%). For the SACPA cohort, of those eligible, 69.8% were assessed, 56.7% entered treatment, and 19.5% completed treatment. Hence the costs represent only about 20% of the sample. However, a possible deterrent effect may have been operating: Perhaps those referred, but not entering, treatment were able to self-regulate their drug use (i.e., provided negative drug tests and meeting other conditions of supervision, e.g., court appearances) and thus did not have to enter treatment.

The relationship between costs and ethnic group, sex, and age

Table 2 presents the multivariate regression results stratified by ethnic group and for the overall sample. Substantial variability can be seen regarding the effects and related costs of SACPA, as well as the influence of sex and age across the three major ethnic groups. Specifically, Black male offenders were associated with the largest savings under SACPA (i.e., -$6,052), and this effect was particularly pronounced for older individuals (i.e., age effect for Black men = -$218 per year above mean age), a finding that also holds true for Hispanics. The greatest savings for men in each ethnic group were realized through decreased prison costs, and these savings were most pronounced for Black men (-$6,940). White offenders were incarcerated more often in the SACPA cohort when compared to the pre-SACPA cohort, whereas both Black and Hispanic offenders were incarcerated less often within

	Pre-SACPA Cohort			SACPA Cohort		
	White (N = 13,249)	Black (N = 7,769)	Hispanic (N = 22,032)	White (N = 13,186)	Black (N = 6,835)	Hispanic (N = 19,947)
Female, (%)	29.3*	27.0*	15.4**	30.2	25.3	16.8
Age Mean (SD)	34.2 (8.0)	37.9 (9.0)	31.8 (8.7)	34.8 (9.2)	38.4 (10.1)	31.3 (9.2)
Age (%):* < 25**	13.9	8.6	25.8	18.9	13.1	31.4
26-35	45.1	31.7	44.2	34.6	25.2	38.5
36-45	31.9	39.7	22.2	33.0	35.9	21.8
> 46	9.1	20.1	7.8	13.5	25.8	8.3
Incarcerated, pre-conviction (%)	9.8*	20.4	12.1	12.5	24.5	12.9
Incarcerated, post-conviction (%)	24.8***	42.3***	32.7***	20.4	30.1	25.3
Received Tx: Pre-conviction (%)	21.3***	18.9***	18.5***	26.5	25.1	24.2
Received Tx: Post-conviction (%)	28.2***	24.1***	23.2***	53.6	44.0	45.5

Note: Statistical comparisons are between pre-SACPA and SACPA cohorts
*p < .05; ** p < .01; *** p < .001
Statistical significance indicated for interaction term

Table 1: Characteristics of Offenders in SACPA and control cohorts by ethnic group.

Outcome	Total costs	Prison	Jail	Parole	Probation	Arrest	Conviction	Healthcare	Drug Tx
Ethnicity: Black									
Men: SACPA Effect	-6,052***	- 6,940***	-2,149***	-245***	197***	2,278***	-258 .	52 .	1,013***
Age (/year above mean)	-218***	-187***	-48***	-8***	2 .	-17 .	-10 .	45***	6 .
Women: SACPA Effect	1,405***	-3,933***	-1,763 .	-201 .	156 .	3,554** .	2,187***	1,329**	847 .
Age (/year above mean)	51***	-51** .	-29 .	-12 .	0 .	51** .	63***	40 .	-9 .
Ethnicity: White									
Men: SACPA Effect	-2,158***	-2,683***	-2,349***	-275***	232***	1,658***	-294**	80 .	1,472***
Age (/year above mean)	-169***	-73***	-68***	-9***	-9***	-22***	-12** .	30***	-5 .
Women: SACPA Effect	-312***	-1,257***	-2,729* .	-213 .	163 .	1,433 .	351***	695**	1,345 .
Age (/year above mean)	-102* .	-14** .	-51 .	-5 .	-16** .	4* .	-14 .	42 .	-47***
Ethnicity: Hispanic									
Men: SACPA Effect	-3,238***	-3,364***	-2,279***	-263***	289***	1,125***	-123 .	68 .	1,308***
Age (/year above mean)	-229***	-140***	-75***	-16***	-19***	1 .	-9 .	27***	2 .
Women: SACPA Effect	-326***	-2,404 .	-3,818** .	-192 .	313 .	1,529 .	775***	926***	1,677***
Age (/year above mean)	-138 .	7***	-77 .	-8* .	-25 .	31 .	-39* .	21 .	-48***

*p < .05 ; **p < .01 ; ***p < .001; Drug Tx: Costs of drug treatment
Note: all models control for county unemployment, crime, and mean income at baseline and change in crime between the pre-SACPA and SACPA periods
SACPA effect for Women = Overall SACPA effect + (SACPA)*(Female); Statistical significance indicated for interaction term.
Age effect for Women = Age effect for men + (Age)*(Female); Statistical significance indicated for interaction term.

Table 2: Differential SACPA and age effects (in 2009 US dollars) for men and women of different ethnic groups.

the SACPA cohort.

The greatest cost increases for men were seen in the arrest and drug treatment domains, with Black SACPA men producing the greatest arrest cost increase ($2,278) and white SACPA men producing the greatest cost increase for drug treatment ($1,472). Rates of SUD treatment admissions were significantly different across ethnic groups, with white offenders in the SACPA cohort being treated most often post-conviction (53.6%), Black offenders in the SACPA cohort being treated the least (44.0%), and Hispanics being treated at only slightly higher rates than Blacks (45.5%), with similar proportions observed in the pre-SACPA cohort.

The interaction between female sex and SACPA eligibility provides a striking example of the influence of individual characteristics on SACPA cost-savings. The overall SACPA effect for women was found to be significantly lower across all ethnic groups (data not shown). Most dramatically, Black women produced a relative increase in overall costs equal to $1,405 when compared to non-SACPA women, which was largely accounted for by the high costs for arrest, conviction, and healthcare among Black women in the SACPA cohort. Moreover, the effect of SACPA on prison expenditures was significantly smaller for women compared to men among white women (-$1,257 for women, -$2,683 for men) and Black offenders (-$3,933 for women, -$6,940 for men). Among Hispanics, the same trend was observed but it was not statistically significant (-$2,404 for women, -$3,364 for men). Additionally, SACPA eligibility was associated with significantly greater healthcare and conviction costs for women of all ethnic groups when compared to men; the conviction costs for Black women ($2,187) were particularly strong.

We present the costs related to gender (separately for men (Figure 1) and women (Figure 2) by further separating total-cost differences for

pre-SACPA and SACPA offenders by ethnic group and age. Men reveal a clear monotonic decrease in pre- to post-arrest cost differences with older age, an effect that is larger in the SACPA cohort. Byh contrast, women show relatively weak age-related decreases in costs, and age-related savings are limited to white and Hispanic women.

Discussion

Our previously reported results estimated that SACPA implementation led to a savings of $2,317 per offender over a 30-month follow-up period. Current findings extend these results by examining specific costs, or savings, associated with ethnic group, sex, and age variation. As consistent with the literature, we found great variability in the effects of SACPA on costs based on these demographic categorizations, including important variation in particular cost domains.

One predominant finding is the significant sex difference in cost savings associated with SACPA. Further, our results indicate that SACPA is more effective in reducing offender costs for men than for women. This was found to be true overall as well as in most cost domains assessed, including prison, parole, healthcare, and conviction costs, although increased savings were demonstrated in jail costs for

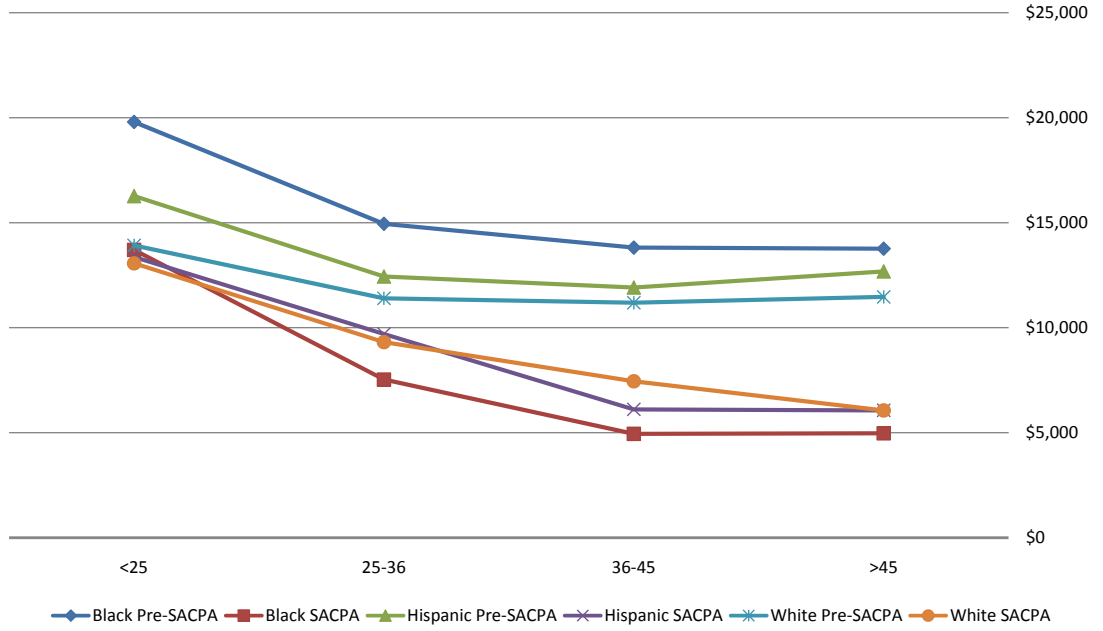

Figure 1: Monotonically decreasing pre- to post-conviction total-costs by ethnic group and age categories (X Axis) for male offenders.

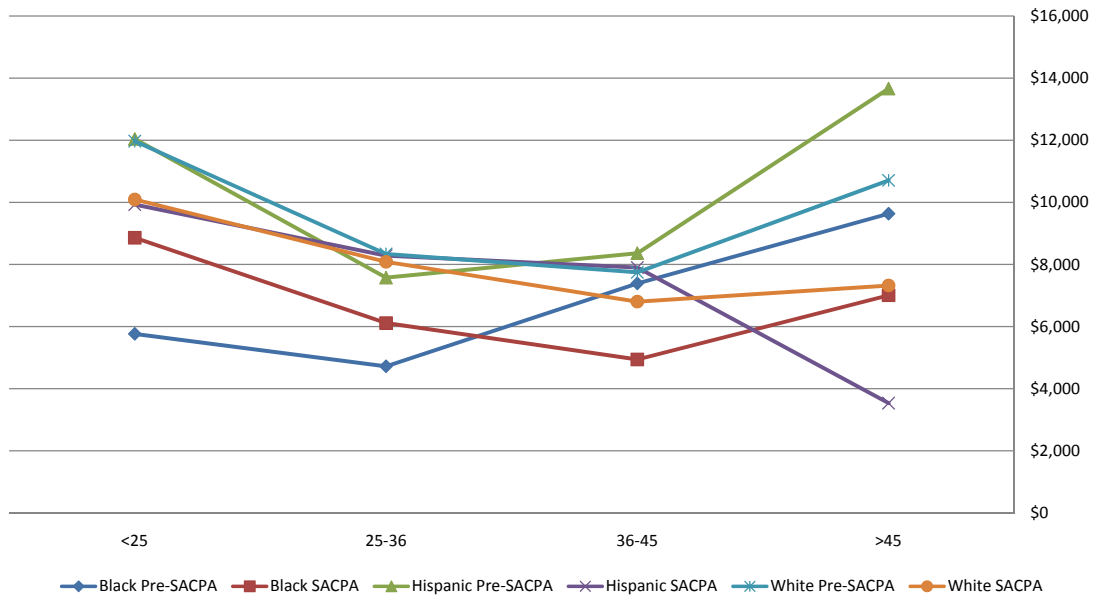

Figure 2: Inconsistent pre to post-conviction total-costs by ethnic group and age categories (X Axis) for women.

women. The difference in prison and parole costs may reflect a greater tendency for men to be incarcerated in prison (and therefore require parole) relative to women prior to SACPA. That is, SACPA produced the greatest savings among offenders who were more likely to have otherwise been incarcerated for extended terms. Higher publicly funded healthcare costs among women may be due in part to Medi-Cal eligibility criteria (e.g., pregnant women) that tend to result in more women than men being eligible for Medi-Cal. Females constituted 58% of Med-Cal eligible individuals in 2003 (RAND, 2011) [40]. Accordingly, female SACPA participants may have been more likely to accrue publicly funded health costs relative to male participants. Still, this alone may not account for the sex differences in health costs, so additional research into why women accrue higher Medi-Cal costs is warranted.

Additionally, men of all ethnic groups showed greater savings associated with increased age in a manner that seemed to accelerate a pattern of reduced costs for older offenders regardless of SACPA status. This may reflect a decrease in criminal activity as male offenders age, although similar trends have been identified in women (Prendergast et al., 2010) [17], but here no overall age-dependent increase in savings was found for women, perhaps due in part to older women producing greater health costs than their younger counterparts. A distinct exception to this trend existed among older Hispanic women, a group that produced significant savings (-$10,129), primarily due to lower arrest-related costs in the SACPA group than in the non-SACPA cohort.

SACPA has been serving an important role in California since its inception a decade ago by attenuating the large increase in the incarcerated drug offender population that began in the 1990s and by offering diversion options for offenders with SUDs. As reported earlier [36], the suggestions that SUD treatment diversion is a costly measure that burdens states [41]is not supported by our findings, which instead suggest that states can realize significant long-term savings by offering diversion from incarceration for this population. Given the current fiscal crisis being experienced in California and other states, such savings can be seen as both fiscally and rehabilitative important. Moreover, the recent legislative and court decisions related to adequate healthcare and facilities overcrowding have proptend further interest in the outcomes and cost benefits of diversion programs.

Research support for the concept that treatment, rather than incarceration, improves rates of post treatment criminal offending and drug use, and also improves social functioning, is widely available and accepted [42,43]. In this tradition, SACPA can be shown to be an effective program that allows for treatment while reducing long-term costs associated with the heretofore expansion of offender incarceration capacity. The current findings reveal that these benefits come not at a cost to taxpayers, but instead offer savings along with other societal benefits. Despite the overall cost benefits of SACPA, our results identified specific subgroups that account for larger cost-savings (e.g., Black men) as well as groups associated with a reduced cost-savings likely related to the services provided them, and hence display either increased costs despite SACPA eligibility (i.e., Black women) or reduced savings (i.e., white and Hispanic women). While our findings indicate that the most cost-beneficial group of SACPA offenders was Black men (with $6,052 in savings), it was also the one least likely to actually receive treatment. These findings echo long-standing relationships in the gender and ethnic effects of current enforcement throughout the legal system.

However, the gender and ethnic cost-benefits show a more equitable distribution of Black male incarceration time than in the pre-SACPA cohort. Previous work performed by our group revealed that this may be due in part to the assessment and assignment processes used by California courts [12]. Further examination is needed in order to ascertain why SACPA does not produce cost savings for women closer to that for men and, more specifically, why women who participate in SACPA are associated with significantly greater arrest and conviction costs than men.

Additionally, given our initial assessment of the importance of contextual variation such as local per capita criminal arrests and their influence on SACPA costs [36], future work would do well to examine the interaction between such contextual variables and specific offender demographics. Given the availability of population-level data for both the control and SACPA cohorts, extensions of our analysis may allow for further evaluation of ecological determinants of the effect of the SACPA program in future work. Thus, better targeting of services for subgroups of offenders and their improved application within particular county ecologies are likely to optimize outcomes of SACPA and other offender diversion programs.

Study limitations

The present work offers a unique look into a statewide substance abuse diversion program by making use of established econometric methods [44] to assess the association of individual variability with overall and specific program costs. Still, the study is not without limitations. The inherent limitation in such analyses is the assumption of parallel trends in differences in outcomes of two disparate cohorts-a limitation that is particularly important when using a time-lagged comparator cohort. The inclusion of individual demographic variation and differential trends in county-level crime provide a measure of control regarding this assumption. Yet results could have been strengthened by the inclusion of further control variables, including indicators of family status, socioeconomic status, and additional county-level variables to control for ecological variability. Unfortunately, such data were not available for this analysis. Second, linkage between administrative datasets also resulted in some degree of misclassification, which was corrected, when possible, using multiple imputation methods discussed in depth in previous work [36]. Third, costs of health resource utilization were only available for individuals eligible for Medi-Cal coverage, but this domain contributed relatively little to the overall costs in any given period. Moreover, the difference-in-difference effect of SACPA on healthcare costs was not significant, suggesting that this limitation was not consequential.

Conclusions

California's SACPA program offers a procedure to divert nonviolent drug offenders into SUD treatment while producing significant long-term savings by reducing the incarcerated offender population, or at least attenuating its growth, and by realizing cost reductions in other domains. Our analysis reveals that SACPA-associated savings are particularly strong among men and even more so among Black men. Still, program adjustments are needed in order to optimize cost savings among women, since this population appears to benefit the least in terms of cost reductions associated with SACPA eligibility.

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