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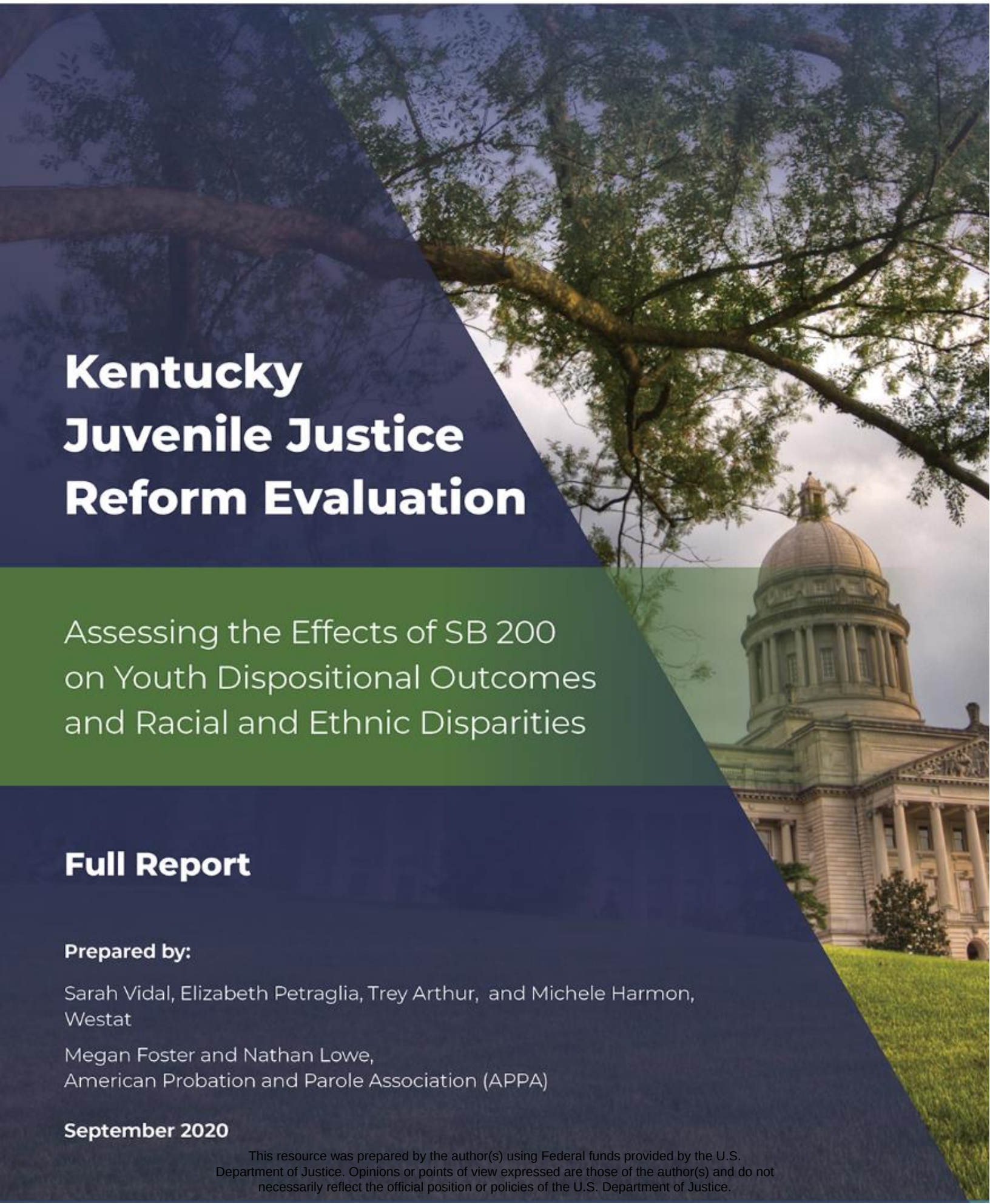

Kentucky Juvenile Justice Reform Evaluation

Assessing the Effects of SB 200 on Youth Dispositional Outcomes and Racial and Ethnic Disparities

Full Report

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September 2020

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Introduction

In 2014, the Office of Juvenile Justice and Delinquency Prevention (OJJDP) began its Smart on Juvenile Justice Initiative (now known as the Juvenile Justice System Improvement initiative). This initiative promoted system-wide reform efforts in juvenile justice with the goals of (1) adopting developmentally appropriate evidence-based practices, (2) eliminating racial and ethnic disparities, (3) maximizing cost savings while holding youth accountable, and (4) improving youth outcomes.[1]

Objectives of SB 200 Legislation

- Focus resources on most serious offending youth;
- Reinvest savings into strengthening early intervention and prevention programs;
- Increase effectiveness of juvenile justice programs and services; and
- Improve government performance by providing oversight.

Kentucky was one of the initial states involved in the OJJDP initiative. Kentucky first received assistance from the Pew Charitable Trusts to help identify areas for improvement in the juvenile justice system to be addressed through legislative changes. With support from Pew, Kentucky drafted Senate Bill 200 (SB 200) which sought to strengthen the Kentucky juvenile justice system and improve outcomes for youth. Following passage of SB 200 in 2014, with funding from OJJDP's Smart on Juvenile Justice Initiative, the Crime and Justice Institute (CJI) provided training and technical assistance to Kentucky for implementation of the reforms included in SB 200.

Westat, in partnership with the American Probation and Parole Association (APPA), worked with Kentucky agencies to evaluate key juvenile justice reforms passed in the SB 200 legislation. In previous reports, we described findings from an evaluation of the reform implementation process (Kaasa, Vidal, Meadows, Foster, & Lowes, 2019) and an assessment of community-based services for justice-involved youth in Kentucky (Vidal et al., 2020). **In this report, we describe findings on the effects of SB 200 on youth diversion, subsequent complaints filed, and dispositional outcomes. We also describe the effects of SB 200 on racial and ethnic disparities in youth outcomes**.

Senate Bill 200

In 2014, Kentucky embarked on a vast reform of the state's juvenile justice system through SB 200. The SB 200 legislation seeks to improve systems and youth outcomes by expanding access to timely, quality treatment and supervision in the community, focusing the most intensive resources on serious offenders, and enhancing data collection and oversight mechanisms to ensure the policies are working.

[1] See *Smart on Juvenile Justice Initiative: Implementation Update* at https://www.ojjdp.gov/archives/newsletter/248712/topstory.html

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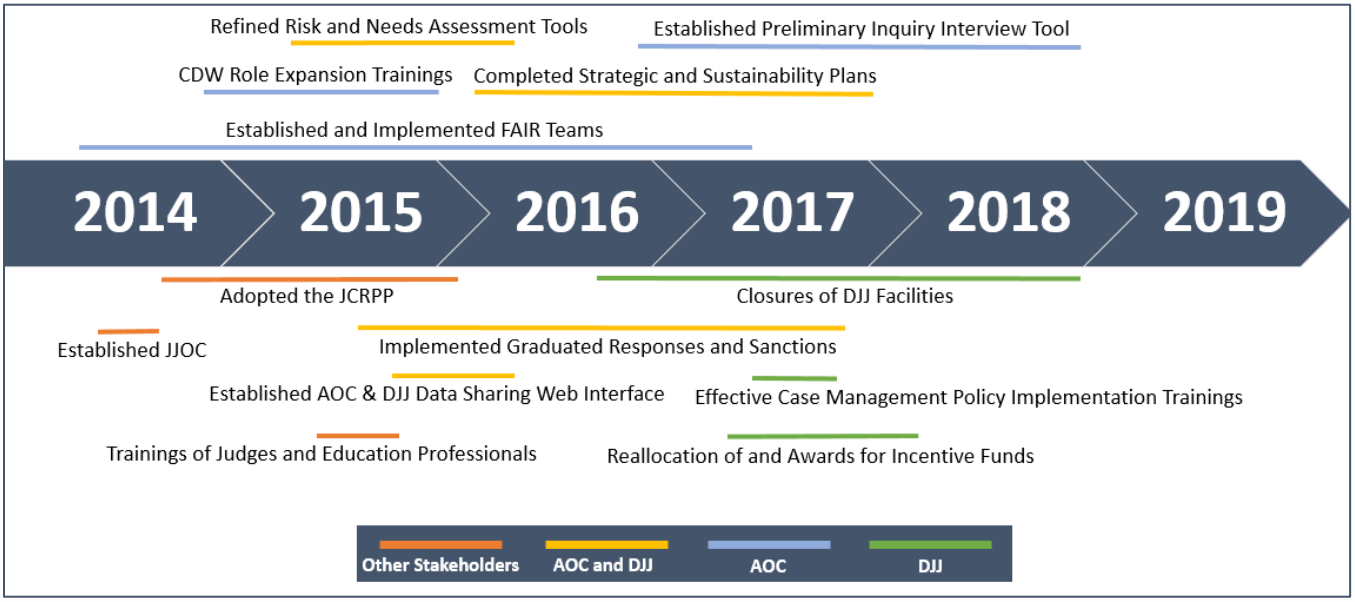
The implementation of SB 200 began prior to its passage and continued for multiple years. It involved a diverse group of stakeholders, spearheaded by the Administrative Office of the Courts (AOC) and the Department of Juvenile Justice (DJJ) in collaboration with the Department for Behavioral Health, Developmental and Intellectual Disabilities (DBHDID) and the Department for Community-based Services (DCBS). These agencies were most closely involved in the SB 200 reform, but communication and collaboration with additional state and local agencies, advocates, practitioners, and other stakeholders has been ongoing as well throughout implementation. Although Kentucky has taken an ongoing approach to systematically implement, review, and update reforms over time, most activities to establish key SB 200 requirements were conducted from 2014-2018. Figure 1 summarizes the timeline of SB 200 implementation activities. These activities are described in detail in Appendix A.

Figure 1. SB 200 Implementation Activities Timeline



As illustrated in Figure 1, SB 200 incorporated some wider trends from juvenile justice reforms across the United States (Espinosa & Skowyra, 2015; Weber, Umpierre, & Bilchik, 2018). For example, SB 200 includes statutes that call for revised procedures for screening and assessing youth risk/needs, implementation of graduated response and sanctions, increases in community-based services made available to youth, use of evidence-based programs and practices, and data sharing between justice agencies. **At the core of these reforms, however, are enhanced procedures for including more youth in the pre-court diversion program and for reducing youth out-of-home placements and commitments to DJJ facilities**.

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Enhanced Pre-Court Diversion and Establishment of Family, Accountability, Intervention and Response (FAIR) Teams

As part of SB 200, AOC's pre-court diversion process was enhanced for low-level offenders. The pre-court diversion is designed to provide community-based services and hold youth accountable for behavior without court action. Court designated workers (CDWs) and their counterparts, court designated specialists (CDSs) are responsible for investigating completion of complaints filed, completing risk and needs assessments, and supervising diversion agreements for youth.

Administrative Office of the Courts (AOC)

AOC is the operational arm of the Judicial Branch. It supports court facilities and programs in all 120 counties in Kentucky, including the establishment and implementation of the Court Designated Worker (CDW) Program and the Family, Accountability and Intervention Response (FAIR) teams.

In support of the enhanced pre-court diversion process, and central to SB 200 reform efforts, the Family, Accountability, Intervention and Response (FAIR) teams were also established in 2014. The teams consist of representatives from various youth-serving agencies, including AOC, DJJ, education, and Cabinet for Health and Family Services (CFHS), which includes the Department for Behavioral Health, Developmental and Intellectual Disabilities (DBHDID) and the Department for Community-Based Services (DCBS). It also includes local representatives from law enforcement, the county attorney's office, public defender's office, and other sectors of the community.

A CDW may refer youth to the FAIR Team for a public or status offenses, who are either assessed as having high needs, or who are struggling or not participating in diversion. Likewise, Directors of Pupil Personnel (DPPs) may also directly refer youth to the FAIR Team in consultation with CDWs. The FAIR Team will then make recommendations regarding the appropriate interventions for the youth, coordinate services provision, and continue to oversee the progress of the youth.

The FAIR Teams are mandated to meet monthly to review referrals for youth that have either failed to appear for an initial intake, declined to enter into a diversion agreement, are considered high needs, or are struggling or have failed to complete terms outlined in their diversion agreement. FAIR team members can determine that no further action be taken on certain status offense cases or continue to brainstorm and recommend resources and services that best support the needs of justice-involved youth and families. Currently, there are 114 FAIR Teams across judicial districts in Kentucky.

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Reducing Out-of-Home Placements and Youth Commitments

Department of Juvenile Justice (DJJ)

DJJ is one of the five departments under the Kentucky Justice and Public Safety Cabinet. It is responsible for prevention programs for at-risk youth, court intake, detention, residential placement and treatment services, probation, community aftercare, and reintegration programs, as well as the confinement of youth awaiting adult placement or court.

In 2012, the Kentucky General Assembly established the Task Force on the Unified Juvenile Code with the goal of improving public safety and promoting better outcomes for youth (Pew Charitable Trusts, 2014). To this end, the Task Force on the Unified Juvenile Code reviewed juvenile justice data, programs, and policies in the state. Among their findings was that a significant proportion of youth in out-of-home placements and those committed to DJJ were low level offending youth, many of whom were referred for misdemeanors, status offenses, or violations for conditions of community supervision. In addition, significant resources were spent on out-of-home placements for youth. Although most youth under DJJ's supervision were on community supervision, the Department spent more than half of its annual budget on secure and non-secure residential facilities. These findings highlight critical issues in the state's juvenile justice system and served as impetus for the passage of SB 200.

Indeed, central to the goals of SB 200 is to reduce youth out-of-home placements and commitments to DJJ, in particular, among youth referred for low level offenses. SB 200 also aimed to increase community-based services made available to youth through reinvestment of savings achieved from reductions in out-of-home placements and commitments. In support of this goal, the Juvenile Justice Fiscal Incentive Fund was established to support community- and evidence-based treatment programs and practices. Through a competitive grant opportunity, a total of $900,000 was awarded to seven programs across different judicial districts in 2017.

The Current Study

In this study, we focused on assessing the effects of SB 200 on the number of cases placed on diversion and subsequent complaints among referred youth. We also examined the effects of SB 200 on dispositional outcomes among adjudicated youth and out-of-home placements. Lastly, we examined the effects of SB 200 on racial and ethnic disparities among referred, diverted, and adjudicated youth. Figure 2 summarizes these goals and outlines the outcomes we investigated in this study.

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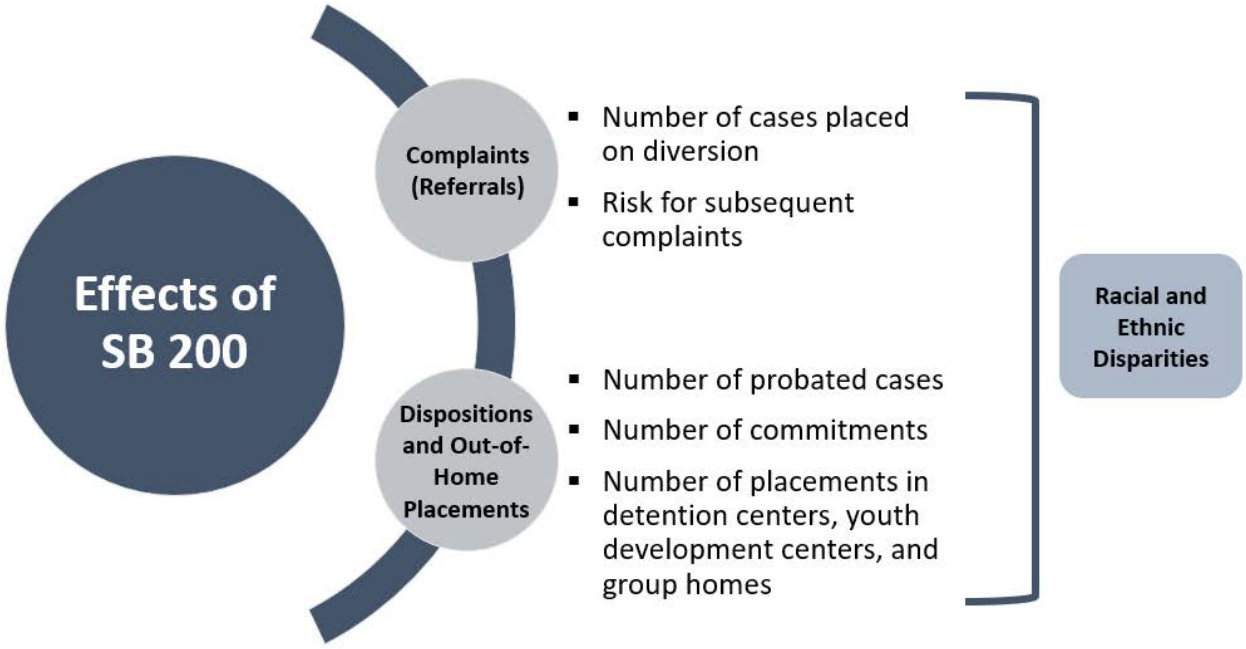
Figure 2. Summary of Evaluation Goals and Outcomes



Methodology

Data Sources and Preparation

To address the research questions, we analyzed administrative data from AOC and DJJ that include closed cases from January 1, 2011 through December 31, 2019. These data sources are summarized in Table 1.

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Table 1. Summary of Data Sources

	Outcomes	Data source	Description
Complaints/ Referrals	Number of youth placed on diversion Subsequent complaints filed	Court Designated Worker Case Management System (CDWCMS)	Statewide electronic case management and information system that contains information on youth complaints, including, but are not limited to: youth race/ethnicity, age at referral, date when complaint was filed, complaint charge level and grouping, diversion status, and diversion outcome.
Adjudication/Out of Home Placements	Number of probated cases Number of commitments to DJJ	Juvenile Offender Resource Information (JORI) Legal History Data	Statewide system that tracks probated, committed, and confined youth. Includes information such as disposition date, disposition description, offense classification/ level, and offender type.
	Number of out-of-home placements	Juvenile Offender Resource Information (JORI) Placement Data	Statewide system that tracks probated, committed, and confined youth. Includes placement date, and facility type and description.

Coding Youth Juvenile Justice, and SB 200 Variables

Youth Demographics and Case Characteristics

Demographics. Gender was coded as male or female and race/ethnicity was coded as White or youth of color, which included Black, Hispanic, Asian, Native American, multiracial, and youth who identified as other or unknown racial or ethnic group. Age at first recorded complaint during the study observation period was categorized into two groups—(1) 15 and younger and (2) 16 and older.[2]

CDWCMS. Offense severity was measured using the three categories for level of referral offense—(1) felony, (2) misdemeanor, and (3) other (includes infractions and violations of local ordinances). Any

Measurement of Race and Ethnicity

Our primary analyses were limited to comparing White youth vs. all youth of color because the data contained few youth that were not identified as White or Black. White youth make up almost three-quarters of the population of justice-involved youth. Black youth make up 69% to 76% of all youth of color in the datasets used. We explored adding more detailed categories, but the small sample sizes made modeling difficult and using the detail did not affect the main findings. See Appendix I for supplemental analyses and documentation on measurement of race and ethnicity.

[2]For a small proportion of cases (<1%) in the CDWCMS, age at referral falls outside the age range of cases processed in the juvenile justice system (age at time of referral ranged from 0 to 54). After consultation with AOC, it was determined that these

prior complaints (public or status) was coded as yes or no. History of any prior complaint for a public offense was coded yes or no. Diversion status indicated whether a particular complaint resulted to a diversion agreement (yes/no).

JORI Legal History. Adjudicated cases included those with a case status of "found to have committed" or cases with judicial determination that a youth is responsible for a public offense or status offense. We focused on two dispositional outcomes for adjudicated cases—(1) probation (community supervision) and (2) commitments (under custodial control or supervision of DJJ). Offense severity was coded using offense classification categories of (1) felony, (2) misdemeanor, and (3) other (no classification, violation, status, and other offenses). Weapons status involved use of a weapon during the offense and was coded as yes or no.

Analytic Variables

- Gender
- Race/Ethnicity
- Age
- Offense Severity
- Any Prior Complaints
- Any Prior Public Complaint
- Subsequent Complaints*
- Diversion Status*
- Adjudication Status*
- Probation*
- Commitments*
- Weapons Used
- Types of Placement Facilities*
- SB 200 Time Period

used to measure outcomes

JORI Placement History. Out-of-home placement is defined as a placement other than in the home of a parent, guardian or relative of a youth, and may include pre- and post-adjudication cases. We focused on three types of placement facilities—(1) detention centers, (2) youth development centers, and (3) group homes.[3] Detention centers provide secure detention to all counties in Kentucky (except Jefferson County). Programs offer a wide range of services including education, counseling, acute medical and mental health care, behavior management, observation and assessment, as well as continuous supervision. Youth development centers (YDCs) provide a treatment-oriented approach and each program has a section dedicated to education. Group homes provide education, counseling, substance abuse, and community services. Some group homes function as a step-down program for youth leaving YDCs and offer a less structured setting than YDCs.

SB 200 Time Variables

The SB 200 time variables included the different periods of SB 200 implementation, including pre-SB 200 (January 2011 to April 2014) and post-SB 200 (May 2014 to December 2019). The post-SB 200 period was further categorized into—(1) rollout period (May 2014 to December 2017), (2) pilot period

discrepancies are likely due to data entry error. To address this data limitation, we created a dichotomous age variable that describes two age groups—youth ages 15 and under and youth ages 16 and older.

[3] JORI's Placement History includes the types of facility a youth is placed while under DJJ's supervision and may include non-DJJ facilities such as emergency shelters, foster homes, and psychiatric and substance abuse treatment facilities. For this study, we focused on detention centers, YDCs, and group homes, but all other types of facilities are included in the total count of placements for the purposes of ITS analysis.

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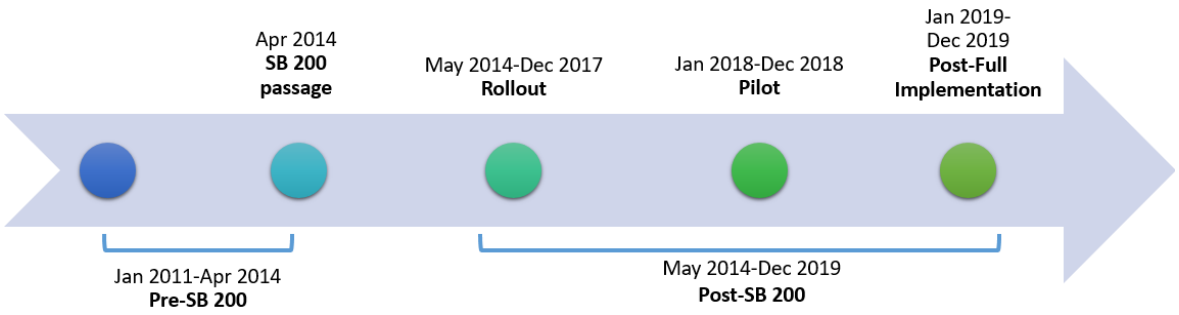
(January 2018 to December 2018), and (3) post-full implementation period (January 2019 to December 2019). Figure 3 provides an illustration of the SB 200 timeline.

Figure 3. SB 200 Implementation Timeline



Analytic Approach

To address our research questions, we conducted two sets of analyses focusing on (1) population-level data and (2) individual, youth-level data. Two primary analysis files were created: **a file with one observation per month** from January 2011 through December 2019 (for a total of 108 time points) used for population-level interrupted time series (ITS) analyses, and **a youth-level file tracking youth over time** used for survival analysis.[4] Table 2 summarizes the number of records and individual youth in the analytic files. Below, we describe our analytic approach in detail.

Table 2. Youth and Case Record Count in the Analytic Files

Data source	Record/Youth Count
Court Designated Worker Case Management System (CDWCMS)	193,656 records, 103,130 individual youth
Juvenile Offender Resource Information (JORI) Legal History data	19,121 records, 11,282 individual youth
Juvenile Offender Resource Information (JORI) Placement Data	56,789 records, 13,563 individual youth

[4] The population-level and individual-level data files were created by first de-duplicating the CDWCMS and JORI's Legal History and Placement History administrative data files. The most serious referral or adjudication charge was selected for a given recorded event. Next, the study's eligibility criteria were implemented. Specifically, cases that fall outside the study observation period of January 1, 2011 through December 31, 2019 were excluded. In JORI Legal History, only cases with a status of "found to have committed" (i.e., adjudicated) were included in the analytic file. In addition, cases with "pending" and "null" dispositions, those involved in the commission of sexual offenses, and cases that were transferred to the adult court were excluded. In JORI Placement History, cases with a facility type description of "pending closure" were excluded from the analytic file.

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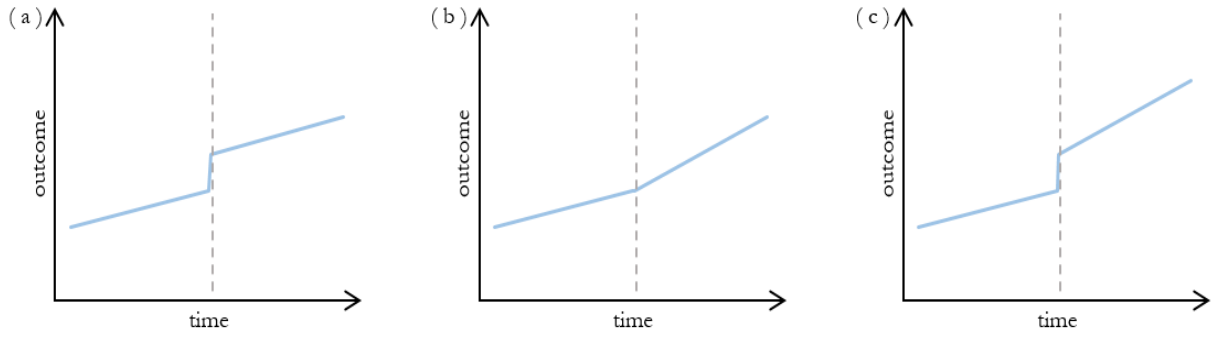
Interrupted Time Series

Interrupted time series (ITS) is a quasi-experimental research design often used to evaluate the impact of a population-level policy in the case where both the population of interest and the implementation period of the policy change are well-defined and outcomes are measured at regular time periods, but it is not feasible to use a comparison group (Penfold and Zheng 2013, Loeffler and Grunwald 2015, Bernal et al. 2017). This is exactly the situation we have in this evaluation: we know that SB 200 was enacted in April 2014, and we have monthly data on well-defined groups of youth for each outcome, but there is no practical way to develop a comparison group.

In ITS, data points are divided into pre-intervention, implementation (if applicable), and post-intervention, with a separate trend fit to each group of data points. The intervention is judged to have a statistically significant effect if the pre- and post-intervention trends are significantly different.[5] There are two main types of change we would expect to see. The first would be a simple shift, meaning that the trend over time "jumps" up or down after SB 200. This is also sometimes called a **change in the intercept** (see Figure 4a). The other type of change we could see is a change in how quickly the outcome changes over time. Visually, this means that we would see the trend over time either flattening out or getting steeper. This is also sometimes called a **change in the slope** (see Figure 4b). For each ITS model, we will test to see if we have either type or both types of change (see Figure 4c).

Figure 4. Examples of ITS Effect Models: (a) change in intercept, (b) change in slope, (c) change in both intercept and slope



We used ITS to model the number of referred cases placed on diversion, and the number of adjudicated cases that were probated and committed, and the number of out-of-home placements. For adjudicated cases, we examined the effect of SB 200 both at all post-SB 200 time points (May 2014-December 2019) and for post-full implementation only (January 2019 to December 2019). For referred

[5] Throughout this report, we use $p<0.05$ as the threshold for statistical significance.

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cases, we examined the effect of SB 200 for the post-SB 200 period only, truncated at June 2019 (May 2014- June 2019).[6]

It is important to emphasize that ITS is a **population-level** model. This means that ITS can give us information about the effect of SB 200 on the entire population of referred or adjudicated cases, but it **cannot be used to draw conclusions about the impact of SB 200 on individual youth**. For example, we might see a positive relationship between the number of youth of color and SB 200 in an ITS model. This does not necessarily mean that **individual** youth of color have better outcomes post-SB 200; it simply means that the number of positive outcomes increases post-SB 200 when the number of youth of color in the population increases. Although we control for population-level characteristics in the ITS models, all ITS findings must be interpreted in context.

Population-Level Analysis:

- Examines the effect of SB 200 on the population of referred or adjudicated cases
- Accounts for population-level characteristics such as race/ethnicity, offense severity
- Accounts for important pre-intervention trends
- Cannot draw conclusions about the effect of SB 200 on individual youth

Appendix B describes the technical documentation for the ITS modeling conducted in this study.

Survival Analysis

We conducted survival analysis using Cox regression to examine the **risk of subsequent complaints[7] following the first recorded referral (baseline complaint or referral)** during the study observation period. The Cox regression is a frequently used analysis technique when both event likelihood (did the event of interest occur?) and timing (when did the event of interest occur?) are important. It models event rates in the presence of censored data, or cases for whom the outcome is not observed during a specified time period or by the conclusion of the study observation period (Connell, 2012; Allison, 1995). Effects are typically measured as **Hazard Ratio (HR)**, which describes the probability of experiencing the outcome of

Individual/Youth-Level Analysis

- Accounts for the youth's age, gender, race/ethnicity, severity of referral offense, SB 200 time period, diversion status.
- Also examines the interaction between SB 200 and youth's race/ethnicity and diversion status.
- Allows inference on the effect of SB 200 on individual youth

[6] This was done because our referral dataset included only closed cases, and after exploratory analyses and consultation with AOC, it was clear that diverted cases take longer to close. Many complaints filed in late 2019 and placed on diversion were not closed by the end of 2019, and therefore were not included in our dataset. This resulted in lower than expected diversion counts for July 2019-December 2019, but these lower counts were simply an artifact of our dataset structure rather than a true drop in diversions. To avoid biasing the findings, we dropped July 2019-December 2019 from the analysis of diversion counts. The remaining six post-full implementation data points (January 2019-June 2019) do not provide sufficient power to estimate the post-full implementation impact of SB 200 on diversions.

[7] The Kentucky Revised Statutes (KRS) defines complaint (or referral) as "a verified statement setting forth allegations in regard to a child which contains sufficient facts for the formulation of a subsequent petition" (KRS 600.020(14).

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interest (i.e., subsequent complaint) as compared to the average observation.[8] An HR greater than 1 indicates a greater risk of experiencing a subsequent complaint. An HR of less than 1 indicates a lower risk of experiencing a subsequent complaint. An HR that equals 1 indicates that there is no difference from the average.

We also wanted to explore the **effect of SB 200 on subsequent complaints**. Because pre-SB 200 cases would have significantly longer follow-up period (up to 108 months, January 2011-April 30, 2019) compared to post-SB 200 cases (up to 68 months, May 1, 2014-December 31, 2019), **we restricted our follow-up period to 24 months from the baseline referral**. In addition, we applied the following censoring criteria and cases were censored at:

- April 30, 2014 if baseline complaint happened pre-SB 200 and subsequent complaint happened post-SB 200 (on or after May 1, 2014), or
- End of study observation period (December 31, 2019) if baseline complaint happened post-SB 200 (at or after May 1, 2014) and there was no recorded subsequent complaint during the study observation period.

For censored cases, the outcome was coded as **no subsequent complaint**.

A **subsequent complaint** was coded as "yes" if a case meets one of the following criteria:

- The first subsequent complaint happened pre-SB 200 (prior to April 30, 2014).
- The baseline and subsequent complaints happened post-SB 200 (on or after May 1, 2014).

[8] Throughout this report, we use $p<0.05$ as the threshold for statistical significance.

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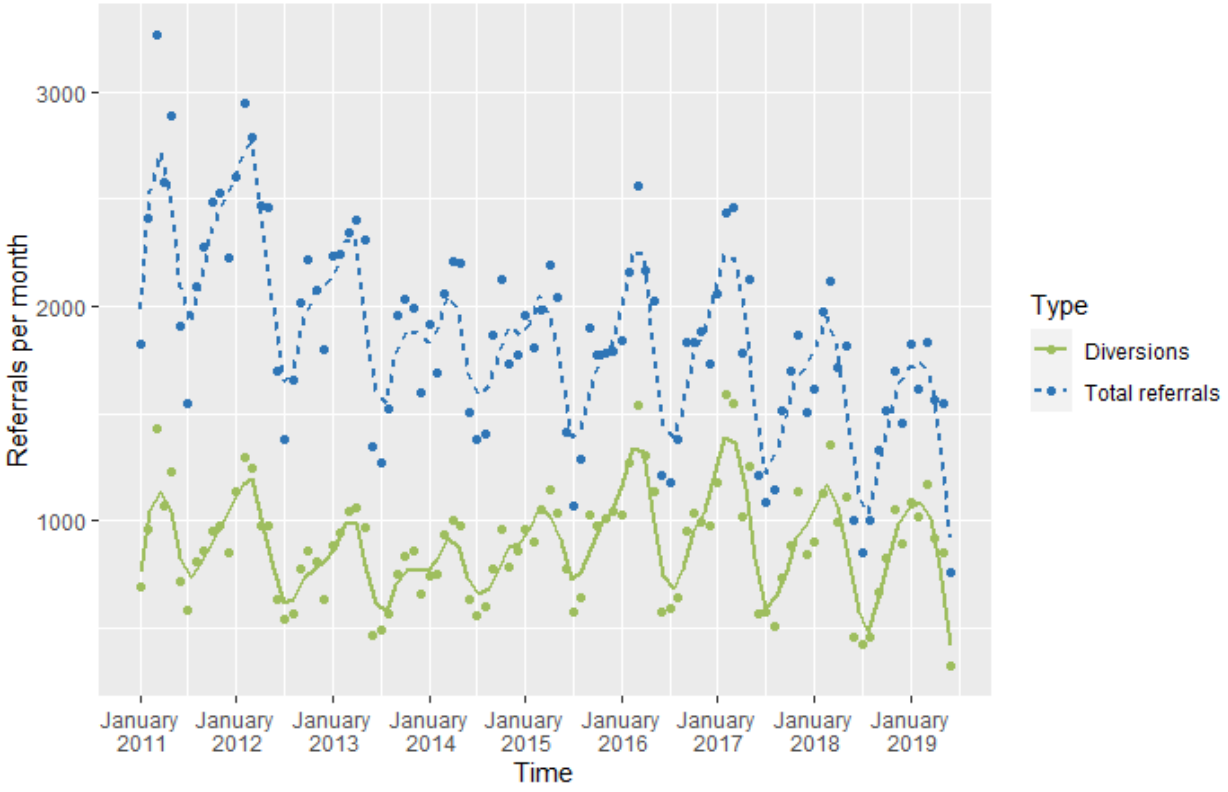
Findings

1. Did SB 200 increase the number of cases placed on diversion?

For the ITS analyses, we aggregated the data to the month of referral. The final analysis dataset had 102 time points, representing monthly referral data from January 2011 through June 2019. Referrals in the last six months of data collection (July 2019-December 2019) were dropped from the ITS analyses, since diversion outcomes often take longer than other outcomes and we did not want this delay to bias the findings. Figure 5 below shows the total number of referrals and diversions per month, along with smoothed trendlines. We see that starting around January 2015, the number of diversions per month and the number of total referrals per month begin to follow roughly the same trend, and the gap between them narrows.

Figure 5. Summary of Descriptive Statistics for Referred Youth in FY 2011-2019



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We also looked descriptively at the average number of referred youth by characteristics of interest pre- and post-SB 200 (see Table 3). Overall, it appears that the monthly referrals dropped, but the proportion of youth in each category (e.g., male vs. female) changed very little pre- and post-SB 200. The exceptions are that the average monthly percentage of youth of color among referrals increased from 29% pre-SB 200 to 34% post-SB 200, and we also saw a higher average proportion of felony cases per month (15% vs. 21%) and a lower proportion of misdemeanor cases (52% vs. 47%) post-SB 200. These are the characteristics we control for in the ITS models in this section, and can help add context for findings.

Table 3. Characteristics of Average Monthly Referrals, Pre-/Post-SB 200

	Pre SB 200 n (%)	Post SB 200 n (%)
Average referrals per month	2,131	1,593
Race		
White	1,512 (71%)	1,048 (66%)
Youth of color	620 (29%)	545 (34%)
*Black**	496 (23%)	396 (25%)
*Other race/ethnicity**	124 (6%)	149 (9%)
Gender		
Male	1,402 (66%)	1,068 (67%)
Female	728 (34%)	524 (33%)
Other	1 (0%)	1 (0%)
Offense Type		
Public	1,559 (73%)	1,148 (72%)
Status	572 (27%)	445 (28%)
Unknown	1 (0%)	0 (0%)
Offense Level		
Felony	323 (15%)	340 (21%)
Misdemeanor	1,103 (52%)	750 (47%)
Other	705 (33%)	503 (32%)
Prior Offense		
Prior offense	1,254 (59%)	939 (59%)
No prior offenses	877 (41%)	654 (41%)

*These finer racial/ethnic groups were not included in the ITS models due to the small size of the Other race/ethnicity group. The averages are presented here for descriptive purposes only.

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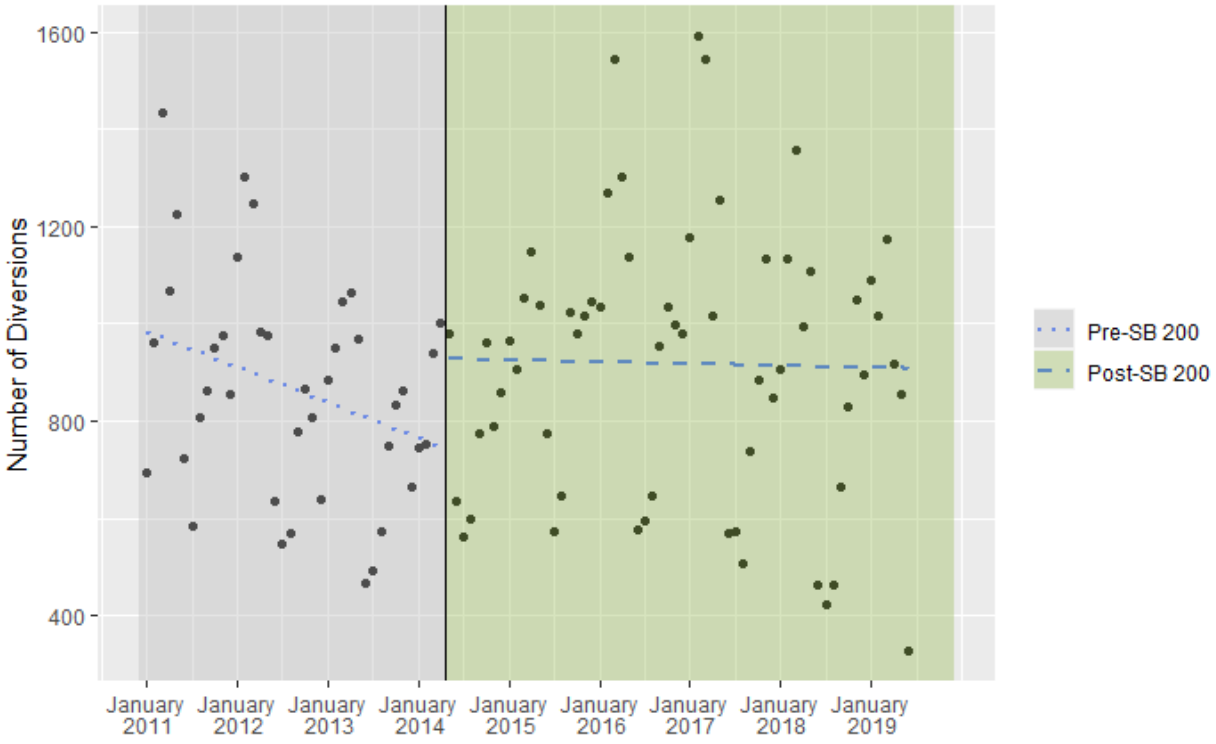
1a. Number of cases placed on diversion before and after SB 200

We fit an interrupted time series model to the number of cases placed on diversion per month pre-SB 200 (January 2011-April 2014) to post-SB 200 (May 2014-June 2019), after adjusting for covariates listed in Table 3 (see Appendix C for ITS Linear Regression Model, Monthly Diversion Count).[9] First, we compared multiple time series models to determine which type of model was most appropriate for the data. Exploratory analyses and model comparisons showed that a linear regression model including two lagged terms—that is, the number of diversions in each of the previous two months—was the best model for this analysis. Next, we tested the type of ITS effect: either a simple shift (change in intercept), change in trend (change in slope), or both. We found that after controlling for covariates only a change in intercept was statistically significant. Figure 6 below displays a scatterplot of diversions across time, along with lines showing the smoothed ITS trend pre- and post-SB 200.

Figure 6. Number of Diversions per month, January 2011-January 2019



On average, the model estimated 104 more diversions per month post-SB 200. This means that if we compared a pre-SB 200 month and a post-SB 200 month with the same number of referrals and the same breakdown of referrals by prior referral status, gender, race, and offense level, we would expect

[9] The model also included an interaction between SB 200 status and the number of referrals for youth of color, in order to test whether SB 200 had a differential effect when the population included more youth of color. Findings based on this interaction are discussed below in 1b.

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to see about 104 additional diversions in the post-SB 200 month. This effect was statistically significant.[10] This significant finding is especially encouraging given that the post-SB 200 time period examined in this analysis includes the implementation and pilot periods, which will tend to dilute the true impact of the programs.

We also see in Figure 6 that the slope of the line also flattens out, so that the declining trend in number of diversions stabilizes after SB 200. However, this change can be explained by changes in the covariates: for example, there were fewer referrals in the average month post-SB 200, as compared to pre-SB 200. This means that after we control for covariates in the ITS model, we do not see a significant change in the trend (slope) that is directly related to SB 200.

1b. Racial/ethnic disparities among cases placed on diversion before and after SB 200

After controlling for covariates and the effect of SB 200, there was a statistically significant change in the relationship between the number of youth of color youth referred and the number of diversions after the passage of SB 200. Before SB 200, the relationship between number of youth of color per month and the number of diversions was positive but the effect was not significantly different from zero. Post-SB 200, the effect on the number of youth of color was statistically different from zero. This means that post-SB 200, higher monthly counts of youth of color are associated with significantly more diversions, after accounting for the other covariates in the model. **On average, the model predicted that we would expect to see 53 additional diversions per month for every 100 youth of color referred, as compared to 100 White youth referred**.

This finding must be interpreted with some caution because we looked at the overall monthly count of youth of color rather than assessed the effect of race at an individual level. Although the average **number** of referrals for youth of color decreased post-SB 200, we actually saw an increase in the **proportion** of youth of color among referrals: 29% of referrals were for youth of color pre-SB 200, compared to 34% post-SB 200 (see Table 3 in the previous section).[11] **This statistically significant increase in the proportion means that we predict about 85 more referrals per month from youth of color post-SB 200 than we would have otherwise expected.**

Overall, there is evidence that after SB 200, more referrals for youth of color result in more diversions; however, this finding is moderated by the fact that after SB 200 a greater proportion of referrals are for youth of color. The analysis of subsequent complaints described next examines individual-level data.

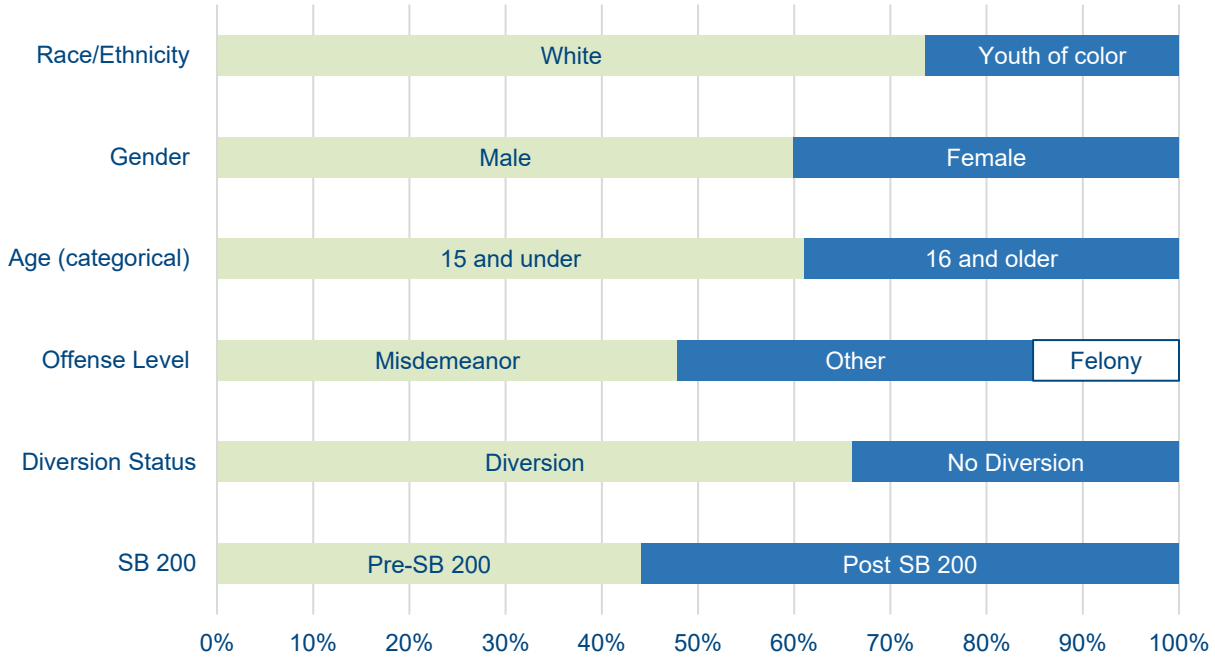
[10]Based on the post-hoc t-test on the estimated marginal mean number of diversions pre- and post-SB 200 (see Appendix C, Table 2).

[11]The findings are similar for Black and Other race/ethnicity groups separately: the proportions of Black (23% to 25%) and Other race/ethnicity (6% to 9%) among referred youth each show statistically significant increases after SB 200.

2. To what extent did SB 200 influence subsequent complaints to the juvenile justice system?

To address this research question, we restricted our sample to youth without any prior complaints at baseline referral.[12] After excluding 23,588 youth with prior complaints (23% of the 103,130 youth who received referrals in 2011-2019), the **analytic sample included 79,542 youth without any prior complaints**. As shown in Figure 7, majority of these youth were White (74%), males (60%), and the average age at baseline referral (or the first recorded complaint during the study observation period) was 14.72. Most of these youth were referred for misdemeanor offenses (48%) and 66% received diversion. Overall, the characteristics of this subpopulation of youth mirror the characteristics of all youth who received referrals in 2011-2019 (see Appendix D).

Figure 7. Descriptive Statistics for Youth without Any Prior Complaints



Of the youth without any prior complaints, 19% received a subsequent complaint within 24 months of their initial referral.[13] On average, these youth had a subsequent complaint 10.6 months

[12]We found that "prior complaints" (public or status) was a significant predictor of subsequent complaints. More specifically, having any prior complaints was strongly associated with increased likelihood of subsequent complaints regardless of SB 200 time period and diversion status. To better understand and delineate the effects of SB 200 on youth outcomes, we restricted our sample to youth without any prior complaints at baseline referral.

[13]Thirty-nine observations were excluded from the analysis because these observations had the same baseline and subsequent referral dates.

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following the baseline referral compared to 18.9 months for youth without subsequent complaints. Table 4 summarizes the descriptive statistics for youth with and without subsequent complaints.

Table 4. Characteristics of Youth without Any Prior Complaints by Subsequent Complaint Status

	No Subsequent Complaint (n = 64,175) n (%)	With Subsequent Complaint (n = 15,328) n (%)
Race		
White	48,034 (75%)	10,536 (69%)
Youth of color	16,141 (25%)	4,792 (31%)
*Black**	10,847 (17%)	3,549 (23%)
*Other race/ethnicity**	5,294 (8%)	1,243 (8%)
Gender		
Female	26,367 (41%)	5,417 (35%)
Male	37,721 (59%)	9,907 (65%)
Age		
15 and under	36,248 (57%)	11,837 (77%)
16 and older	27,247 (43%)	3,470 (23%)
Offense Severity		
Felony	9,452 (15%)	2,613 (17%)
Misdemeanor	31,317 (49%)	6,770 (44%)
Other	23,406 (36%)	5,945 (39%)
Diversion Status		
No	20,835 (32%)	6,126 (40%)
Yes	43,340 (68%)	9,202 (60%)
SB 200 Period		
Pre SB200	28,481 (44%)	6,571 (43%)
Post SB200	35,694 (56%)	8,757 (57%)

*These finer racial/ethnic groups were not included in the final survival model due to the small size of the Other race/ethnicity group (see Appendix I for additional information). The proportions are presented here for descriptive purposes only.

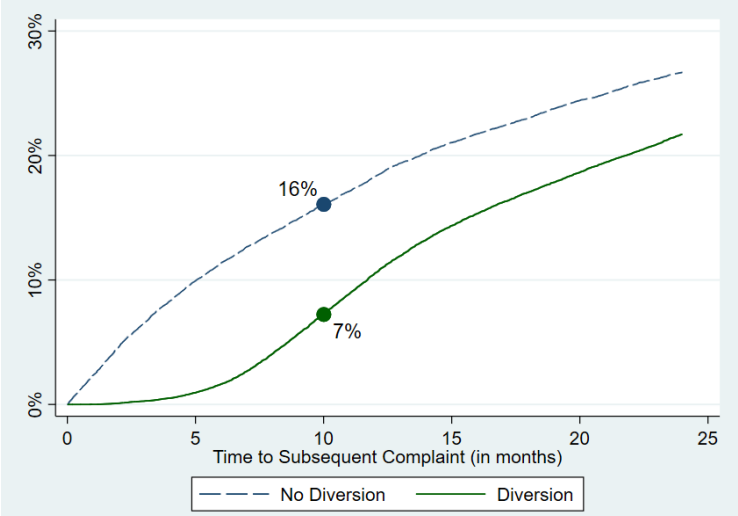
2a. Predictors of subsequent complaints

First, we examined the effect of youth (race/ethnicity, gender, age) and case (offense severity, diversion status) characteristics on subsequent complaints. Our findings show that youth of color (HR = 1.35), male (HR = 1.25), and younger (ages 15 and below; HR = 2.33) youth were significantly at greater risk of receiving subsequent complaints compared to White, female, and older youth. When offense level was considered, youth referred for “other” offenses (e.g., violations, local ordinance

infractions; HR = 1.13) were at greater risk for receiving subsequent complaints compared to youth referred for felony offenses.

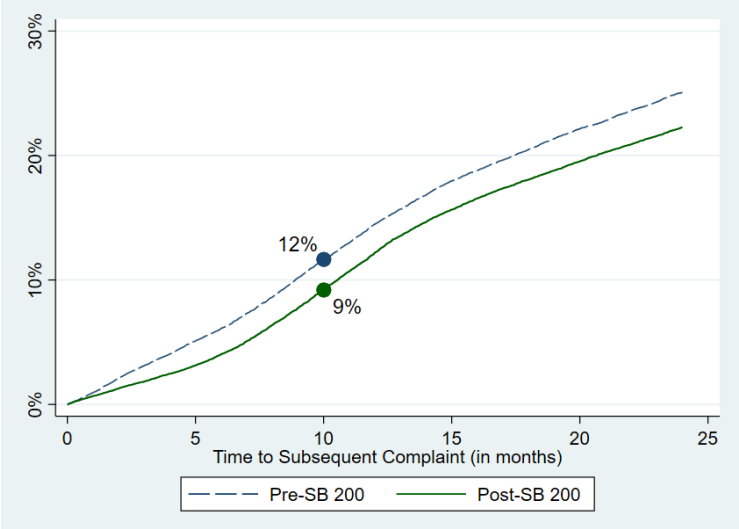
In addition, youth placed on diversion (HR = .66) were at lower risk of receiving a subsequent complaint compared to youth who were not placed on diversion. Figure 8 shows the cumulative incidence curves of subsequent complaint by diversion status. A cumulative incidence curve shows the cumulative probabilities of experiencing the event of interest (e.g., subsequent complaint). The vertical axis depicts the proportion of youth who received a subsequent complaint and the horizontal axis represents the time in months. As shown in Figure 8, at ten months following baseline referral, approximately 16% of youth not placed on diversion had a subsequent complaint compared to approximately 7% of youth placed on diversion. On average, youth not on diversion had a subsequent complaint almost two months sooner than youth placed on diversion. That is, youth on diversion received a subsequent complaint on average within 16.1 months of baseline referral compared to 17.9 months for youth placed on diversion.

Figure 8. Cumulative Incidence Curves for Diversion Status



Next, we also examined the effect of SB 200 on subsequent complaints. Youth whose baseline referral occurred post-SB 200 (HR = .83) were at lower risk of receiving a subsequent complaint compared to youth whose baseline referral occurred pre-SB 200. Figure 9 shows the cumulative incidence curves of subsequent complaint by SB 200 time period. At ten months following baseline referral, approximately, 12% of youth whose baseline referral happened pre-SB 200 had a subsequent complaint compared to approximately 9% of youth whose baseline complaint happened post-SB 200. On average youth whose

Figure 9. Cumulative Incidence Curves for Pre-/Post-SB 200



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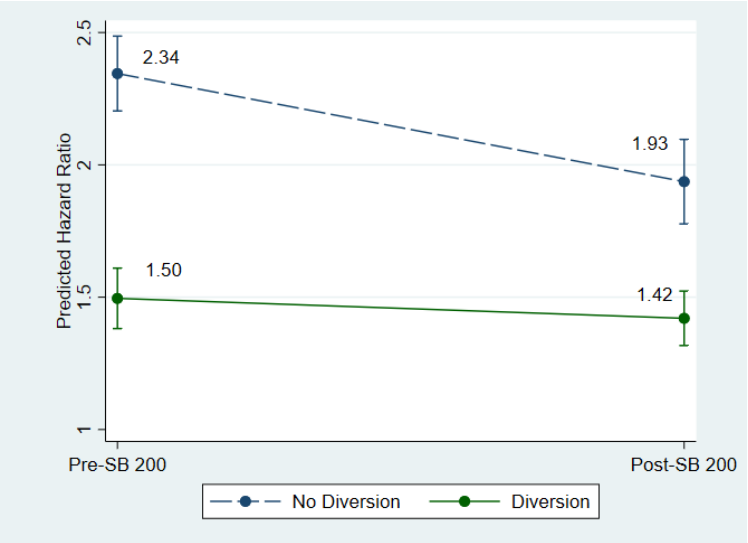
baseline referral happened prior to SB 200 received a subsequent complaint 3.5 months sooner than youth whose baseline referral happened after SB 200. The average length of time to subsequent complaint for pre-SB 200 youth was 15.3 months compared to 18.9 months for post-SB 200 youth.

2b. Risk of subsequent complaints for youth placed on diversion before and after SB 200

Next, we wanted to examine if the risk of subsequent complaint varies by SB 200 time period for youth placed on diversion. That is, were youth placed on diversion post-SB 200 at lower risk of receiving a subsequent complaint compared to youth placed on diversion pre-SB 200? Likewise, how do these findings compare for youth not placed on diversion pre- and post-SB 200? As shown in Figure 10, **the risk of subsequent complaint was lower post-SB 200 compared to pre-SB 200 for youth placed on diversion and youth not on diversion**. The graph also shows that there is a significant decline from pre- to post-SB 200 in risk of subsequent complaints and this decline is greater for youth not on diversion (average decrease of .41 points) than for youth on diversion (average decrease of .08 points).

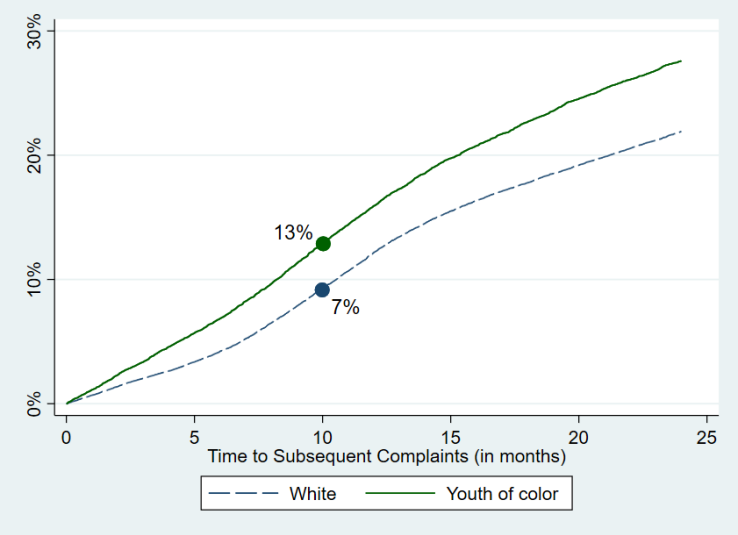
Figure 10. Interaction between SB 200 Time Period and Diversion Status



2c. Racial/ethnic disparities among youth placed on diversion before and after SB 200

As described earlier, youth of color were at greater risk of receiving subsequent complaints over time (HR = 1.35). As shown in Figure 11, at ten months following baseline referral, approximately, 13% of youth of color had a subsequent complaint compared to approximately 9% of White youth. On average, youth of color also

Figure 11. Cumulative Incidence Curves for Race



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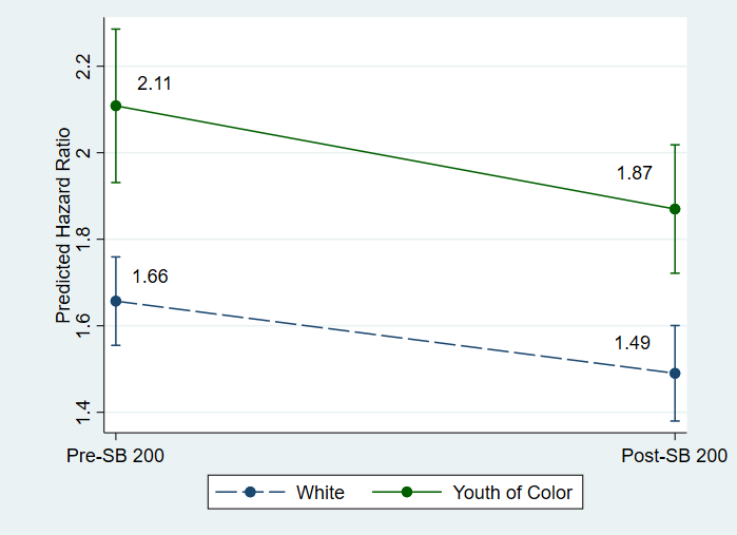
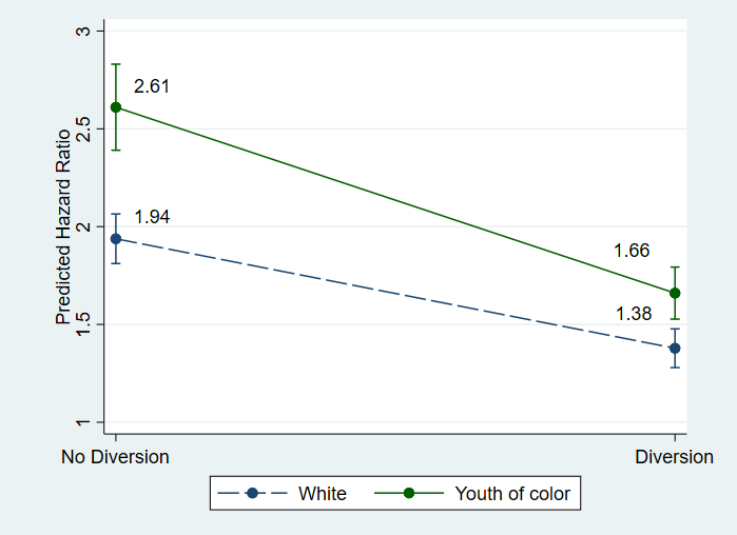
received a subsequent complaint sooner than White youth—within 16.8 months compared to 17.5 months of baseline referral for White youth.

We also examined if the risk of subsequent complaints between youth of color and White youth differ before and after SB 200 and by diversion status. As shown in Figure 12, there was no statistically significant interaction between SB 200 time period and youth's race/ethnicity. **Regardless of when the baseline complaint was filed (pre- or post-SB 200), youth of color had a greater risk for receiving a subsequent complaint compared to White youth**. In addition, the difference in the predicted risk for subsequent complaint pre- and post-SB 200 for youth of color and White youth was comparable (-.24 and -.17, points, respectively). Put simply, **we did not find evidence that SB 200 exacerbated racial and ethnic disparities <u>in subsequent complaints</u>,** but there was also no evidence that SB 200 helped reduce disparities in subsequent complaints.



On the other hand, Figure 13 shows a significant interaction between diversion status and youth's race/ethnicity. Both youth of color and White youth placed on diversion had lower risk of receiving subsequent complaints compared to youth not placed on diversion. In addition, the difference in predicted risk for subsequent complaint for youth placed and not placed on diversion was greater among youth of color (-.95) than White youth (-.56), suggesting that **diversion seemed to have a greater positive effect on youth of color than White youth**.

Figure 13. Interaction between Diversion and Race



Appendix E shows the Cox Regression model for survival analysis.

3. To what extent did SB 200 influence dispositions and out-of-home placements?

Dispositional outcomes among adjudicated cases and out-of-home placements were analyzed at the population-level (ITS analysis) only and were examined using two separate data files. The first analytic data file summarized 19,121 adjudicated records from JORI Legal History data, corresponding to 11,282 individual adjudicated youth, to the month of disposition for a total of 108 data points (January 2011-December 2019). Figure 14 shows the monthly trend in committed and probated cases as compared to all adjudicated cases with a disposition and Figure 15 shows the monthly trend by race—White and youth of color—of all adjudicated cases with a disposition.

Figure 14. Trends in the Count of All Adjudicated Cases and Dispositions of Commitment and Probation

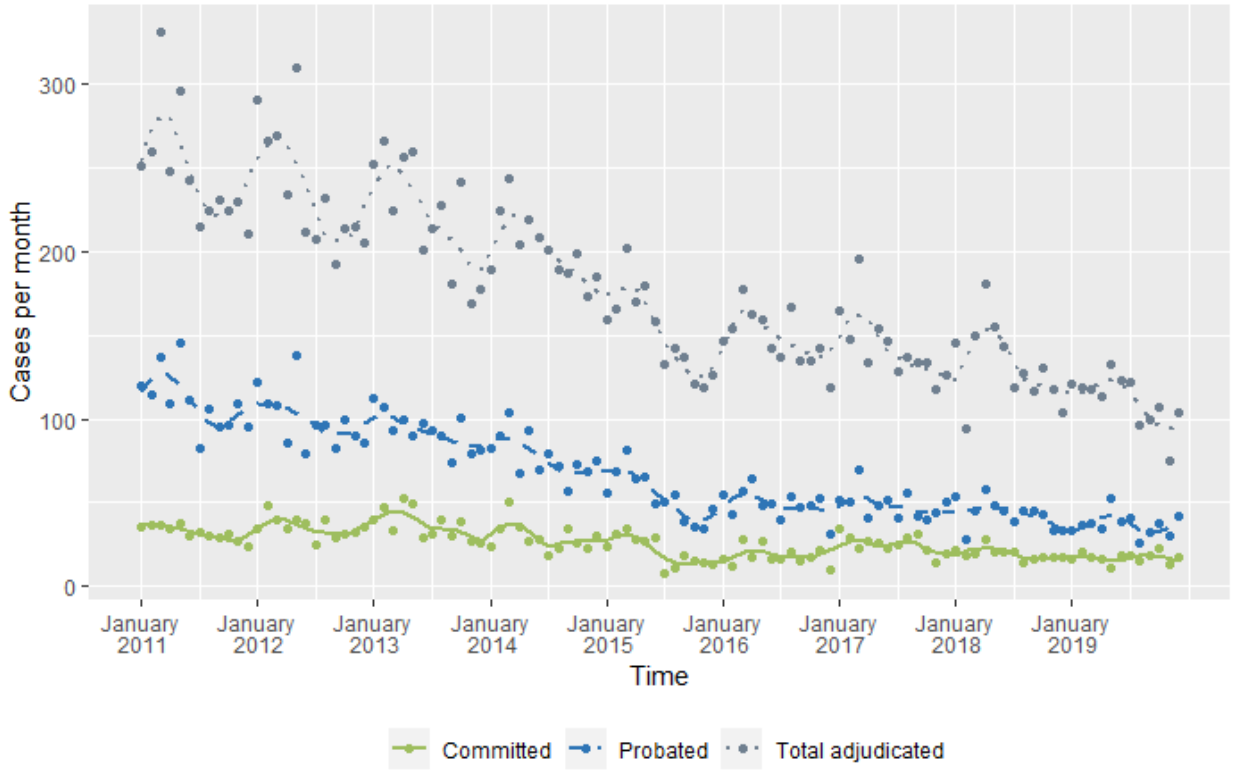


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Figure 15. Trends in the Count of Adjudicated Youth of color and White Youth

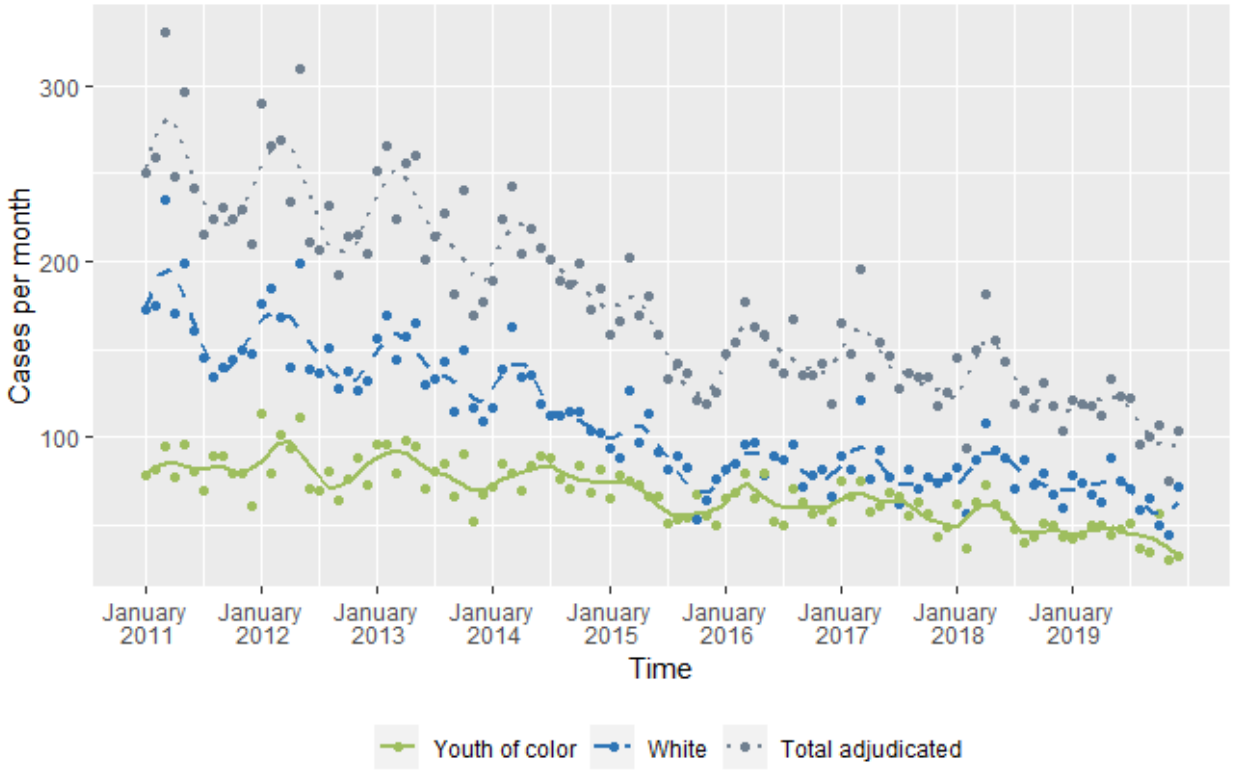

Table 5 shows the descriptive characteristics of the average number of adjudicated youth pre- and post-SB 200. There was a drop in the average number of adjudicated cases per month, from an average of 233 cases pre-SB 200 to an average of 144 cases post-SB 200. The distribution of gender and offense type was similar pre- and post-SB 200. However, we saw increases in the proportion of youth of color cases, the proportion of felony cases, and the proportion of cases with weapons involved.[14]

[14]The count of weapons cases is very low both pre- and post-SB 200, so this difference should be interpreted with caution.

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Table 5. Characteristics of Average Monthly Count of Adjudicated Youth, Pre-/Post-SB 200

	Pre SB 200 n (%)	Post SB 200 n (%)
Average adjudicated youth per month	233	144
Race		
White	151 (65%)	84 (59%)
Youth of color	82 (35%)	60 (41%)
*Black**	58 (25%)	40 (28%)
*Other race/ethnicity**	24 (10%)	20 (13%)
Gender		
Male	195 (83%)	122 (85%)
Female	39 (17%)	22 (15%)
Offense Type		
Public	134 (58%)	79 (55%)
Non-DJJ	99 (42%)	65 (45%)
Offense Severity		
Felony	58 (25%)	54 (37%)
Misdemeanor	136 (58%)	70 (49%)
Other	37 (16%)	19 (13%)
Weapons Involved		
Weapon	8 (3%)	13 (9%)
No Weapon	226 (97%)	131 (91%)

*These finer racial/ethnic groups were not included in the ITS models due to the small size of the Other race/ethnicity group. The averages are presented here for descriptive purposes only.

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The second analytic data file again summarized cases to the monthly level, but using JORI Placement History data and based on the month of placement (January 2011-December 2019). This file summarized 56,789 cases corresponding to 13,563 individual youth. As indicated earlier, we focused on three types of placement facilities—detention centers, YDCs, and group homes. Figure 16 displays the trend in the number of placements for each type of facility compared to the total number out-of-home placements (i.e., including all other types of placement such as emergency shelters, foster homes, psychiatric and substance abuse facilities, etc.). Figure 17 shows the trend in out-of-home placements of any type by race.

Figure 16. Monthly Trends in the Count of DJJ Placements by Facility Type

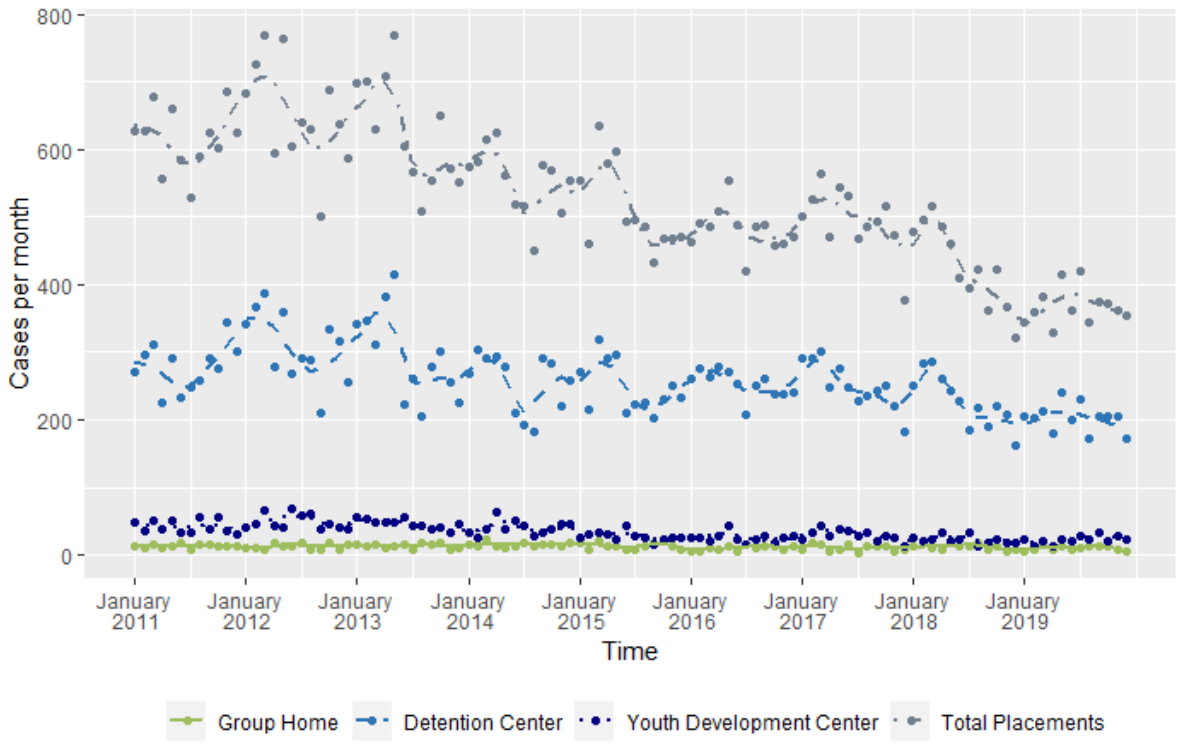

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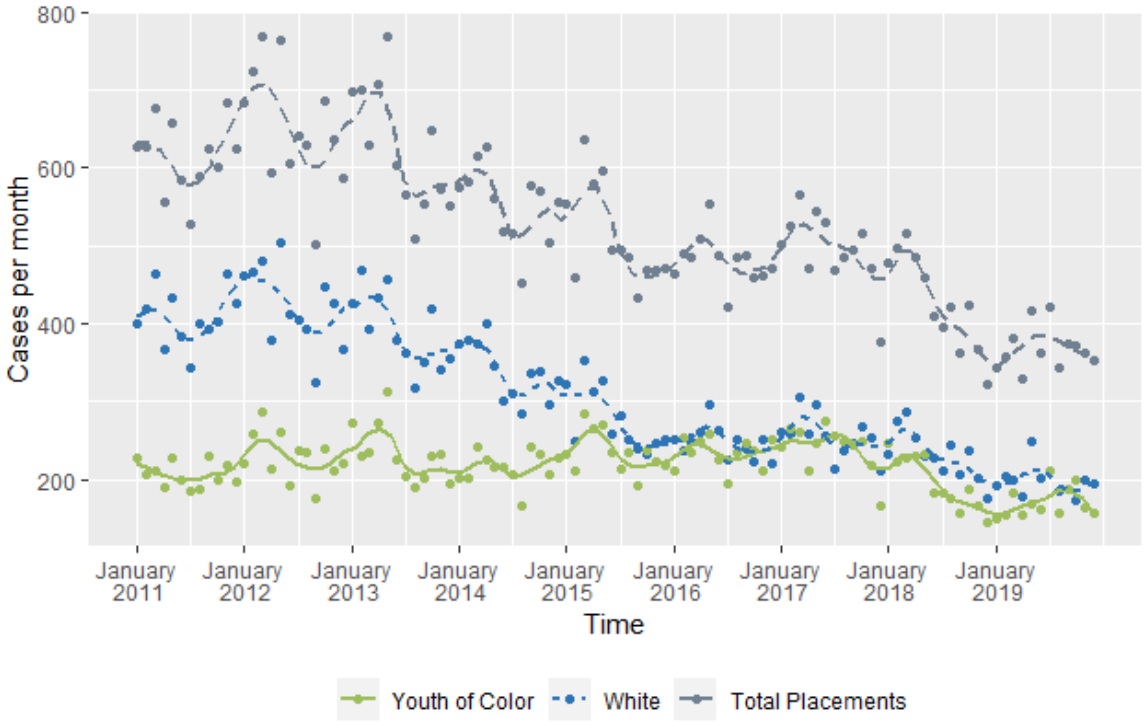
Figure 17. Monthly Trends in the Placement Count of Youth of Color and White Youth



For the analysis of placement data, only gender and race were included as covariates in the ITS models due to limitations in the available data.[15] As shown in Table 6, the average number of cases in any out-of-home placements dropped by 26% post-SB 200, but the distribution of gender did not change. However, there was an increase in the proportion of youth of color in out-of-home placements— from 36% pre-SB 200 to 46% post-SB 200.

[15]At the time of analysis, there was no reliable way to link the JORI Legal History and Placement History data. Placement history data were limited to gender, race, facility type, and dates of placement entry and exit.

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Table 6. Characteristics of Average Monthly Count of Out-Of-Home Placements, Pre-/Post-SB 200

	Pre SB 200 n (%)	Post SB 200 n (%)
Average youth in out-of-home placements per month	628	466
Race		
White	405 (64%)	251 (54%)
Youth of color	222 (36%)	215 (46%)
*Black**	158 (25%)	151 (32%)
*Other race/ethnicity**	64 (11%)	64 (14%)
Gender		
Male	540 (86%)	408 (87%)
Female	88 (14%)	58 (13%)

*These finer racial/ethnic groups were not included in the ITS models due to the small size of the Other race/ethnicity group. The averages are presented here for descriptive purposes only.

As for the analyses of diverted cases, the analyses in this section again compared trends in dispositional outcomes pre- and post-SB 200, where post-SB 200 was defined as May 2014 through December 2019. Each analysis in this section was repeated comparing the pre-SB 200 period (January 2011-April 2014) to the post-full implementation period (January 2019-December 2019). The simple pre vs. post analysis is more powerful, since it includes more time points post-SB 200, but will tend to dilute the impact of SB 200 since it includes the implementation and pilot periods. The full implementation analysis will provide a better comparison of the full impact of SB 200, but because there are only 12 post-full implementation time points, these analyses may not be powerful enough to detect changes.

For each analysis, we performed exploratory analyses and model comparisons to determine the most appropriate model for each outcome. Based on this model testing, we selected linear models with a single lagged term (that is, the outcome in the previous month is included as a covariate) for each outcome in this section.

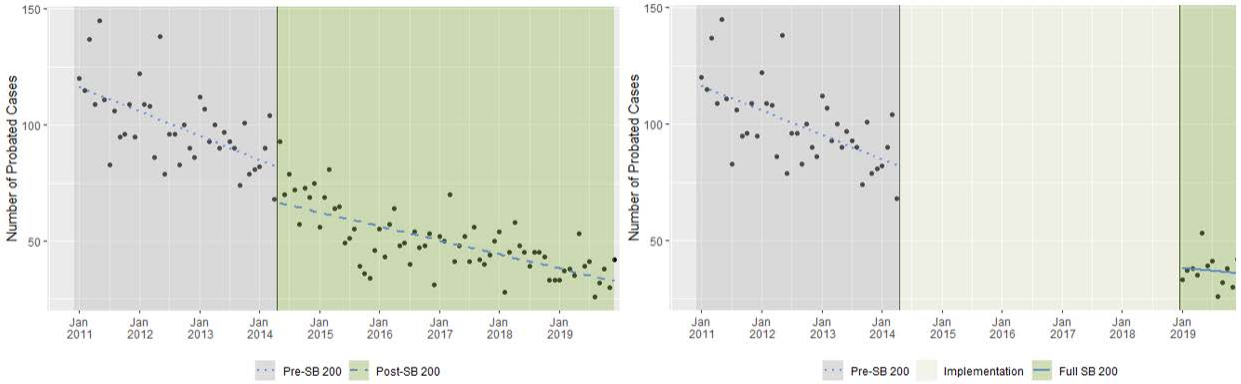
3a. Number of probated cases

First, we looked at the number of adjudicated cases placed on community supervision before and after SB 200. The ITS model showed **a significant downwards shift in number of probated cases per month and a significant change in the trend over time**.[16] The shift (intercept) term tells us that the number of probated cases per month decreased by an average of about 35 cases after SB 200, but the

[16]Other covariates in the model included the count of probated cases in the previous month, number of males, number of youth of color, number of weapons cases, number of misdemeanor cases, and number of other (non-misdemeanor, non-felony) cases. An interaction term between number of youth of color and SB 200 status was also included to assess any differential impacts by race; these findings are described later in the section.

positive trend (slope) term also tells us that the trend over time, which was decreasing quickly, flattened out after SB 200. These trends are illustrated in Figure 18, left plot. **These two effects offset, so that the overall impact of SB 200 on number probated cases per month was not statistically significant**, **meaning that we do not have sufficient evidence to conclude that SB 200 significantly reduced the number of adjudicated cases per month placed on community supervision.**

Figure 18. Count of Probated Cases per Month, post-SB 200 (left) and post-full implementation (right)



Comparing only post-full implementation with pre-SB 200 and dropping the implementation/pilot years (right figure above), we saw similar effects: there was again a drop in the average number of probated cases per month and the trend over time flattened out. However, these differences were not statistically significant because of the lack of power due to the very limited number of post-full SB 200 implementation time points. This means that **we do not have sufficient evidence to conclude that SB 200 reduced the number of adjudicated cases per month placed on community supervision after full implementation was reached.**

Appendix F shows the ITS regression models for probated cases.

3b. Number of commitments to DJJ[17]

Next, we examined if there was a change in the number of adjudicated cases placed under custodial control or DJJ's supervision. Among commitments, the ITS model showed no significant shift (change in the intercept) due to SB 200, but there was a significant change in the trend over time.[18] In the left

[17]Commitments to DJJ indicate that youth is under custodial or supervision of DJJ and may include secure and non-secure commitments.

[18]Other covariates in the model included the count of probated cases in the previous month, number of males, number of youth of color, number of weapons cases, number of misdemeanor cases, and number of other (non-misdemeanor, non-felony) cases. An interaction term between number of youth of color and SB 200 status was also included to assess any differential impacts by race; these findings are described later in the section.

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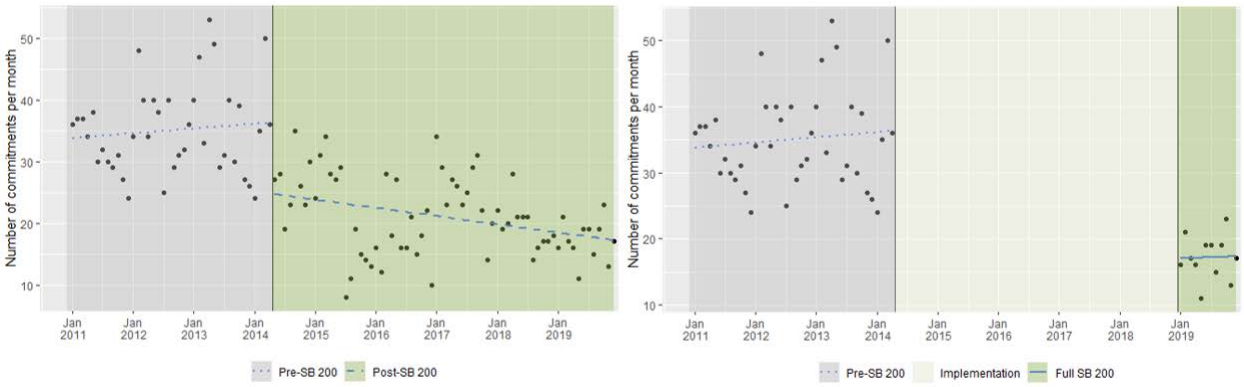
plot in Figure 19, we see that during pre-SB 200 there appeared to be an increasing trend in commitments, but post-SB 200 the trendline decreases (the blue lines show the fitted ITS predictions). **The ITS model estimated an average of 36.6 committed cases per month pre-SB 200, but only 24.5 cases per month post-SB 200**. This decrease of just over 12 cases per month was about one-third of the pre-SB 200 number of commitments, which was substantial and statistically significant.

Figure 19. Count of Committed Cases per Month, post-SB 200 (left) and post-full implementation (right)



For the ITS model looking at full implementation only (Figure 19, right plot), visually there appears to be a change in the trend as well, but there is too much variability in the number of commitments and too few post-full SB 200 implementation time points to detect any statistically significant changes.

Appendix G shows the ITS regression models for committed cases.

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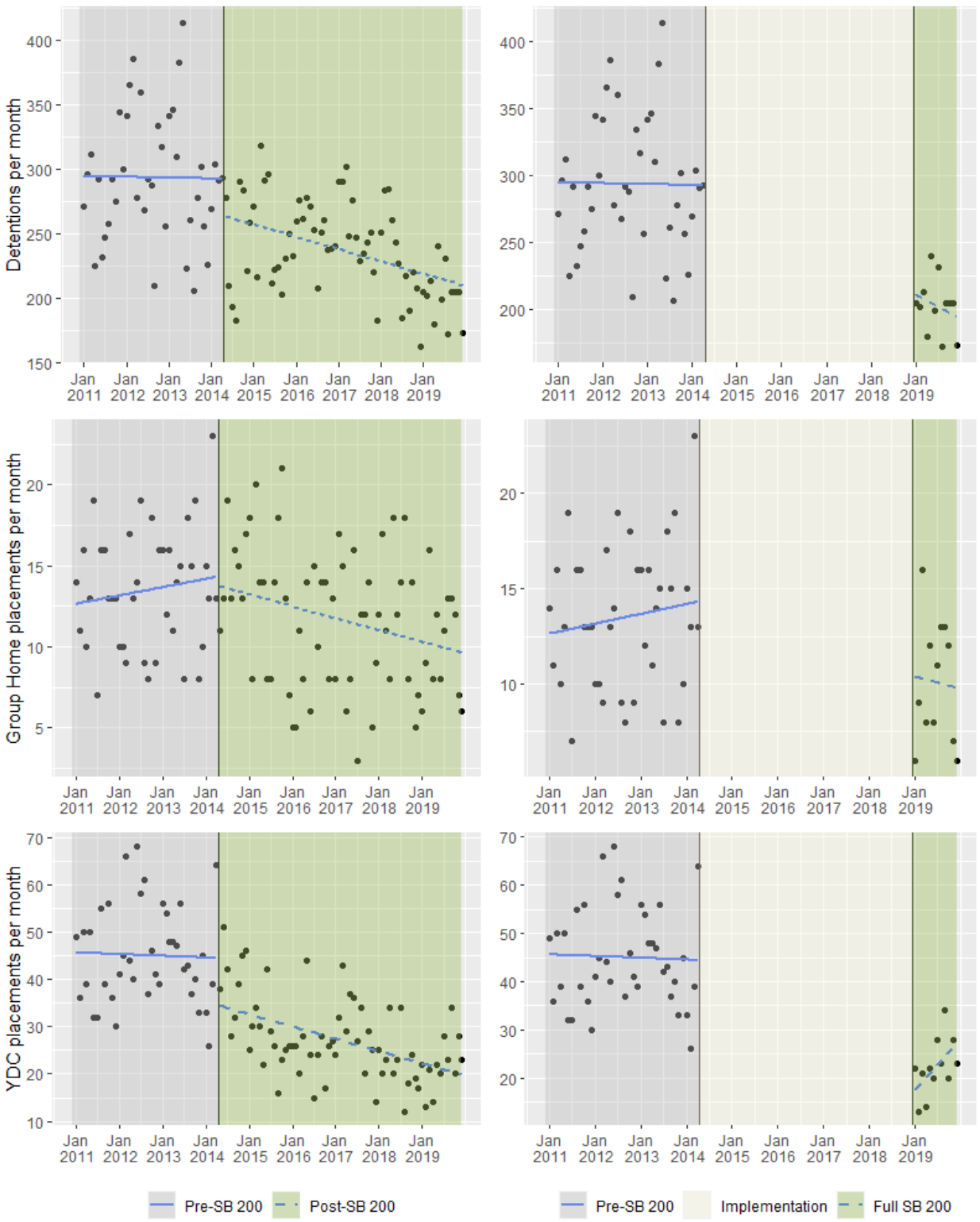
3c. Number of placements in detention centers, YDCs, and group homes

Lastly, we looked at the number of out-of-home placements before and after SB 200. For this analysis, we look at three separate types of placement facilities: detention centers, youth development centers (YDCs), and group homes.[19]

Results showed no statistically significant effects on placement for any of the three facility types, either looking at pre- vs. post-SB 200 or comparing pre-SB 200 with post-full implementation. There appear to be some changes in trends upon visual inspection of the ITS plots (see Figure 20). For example, in the plots that show effects of post-SB 200 (Figure 20, left plots), we see that the trendlines are relatively flat pre-SB 200 and then decrease post-SB 200. However, this is explained by an overall decrease in placements of all types after SB 200 because of facility closures during the same timeframe. On average, 627 cases per month were placed pre-SB 200; post-SB 200, this dropped to an average of only 466 cases per month. After controlling for this decrease in the ITS models, SB 200 did not appear to influence placements in detention centers, YDCs, and group homes. Appendix H shows the ITS regression models for out-of-home placements.

[19]The models for all three outcomes have as covariates the outcome in the previous month, number of male youth, number of youth of color, and an interaction term between number of youth of color and SB 200 status. The detention model also includes seasonal indicators for the summer months (June, July, August) and for December; the YDC model includes a seasonal indicator for summer months (June, July, August).

Figure 20. Trends in the Number of Placements, by Placement Types, Post-SB 200 (left) and Post-Full Implementation of SB 200 (right)



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3d. Racial/ethnic disparities among adjudicated cases before and after of SB 200

First, we looked at all adjudicated cases and looked at descriptive statistics, without adjusting for any covariates. Although the average number of adjudicated cases decreased by 39% post-SB 200, the proportion of adjudicated youth of color increased from 35% to 41% post-SB 200 (see Table 5). The difference in these proportions is statistically significant.[20] Looking at adjudicated cases using the ITS models, we found no statistically significant interaction between number of youth of color and adjudicated cases. This means that after adjusting for changes in case characteristics and demographics over time, SB 200 did not change the existing relationship between number of youth of color and adjudication outcome. Looking at the model predictions between the number of probated cases and number of youth of color—as the number of youth of color increased, the number of probated cases tend to decrease. For committed cases the reverse is true: as the number of youth of color increased, the number of commitments also increased. Neither of these trends were affected by SB 200.

Next, we explored the number of cases placed in any type of placement facility, without adjusting for covariates (see Table 7). Our findings showed that although **the total number of placements decreased by 26% after SB 200, the proportion of youth of color in any placement facility increased from 36% to 46%.** This difference is statistically significant.[21]

Table 7. Average Monthly Number of Youth in Out-of-Home Placements, Pre-/Post-SB 200

	Pre SB 200 n (%)	Post SB 200 n (%)
Average youth in out-of-home placements per month	628	466
Race		
White	405 (64%)	251 (54%)
Youth of color	222 (36%)	215 (46%)
*Black**	158 (25%)	151 (32%)
*Other race/ethnicity**	64 (11%)	64 (14%)
Gender		
Male	540 (86%)	408 (87%)
Female	88 (14%)	58 (13%)

[20]The findings are similar for Black and Other race/ethnicity groups separately: the proportions of Black (25% to 28%) and Other race/ethnicity (10% to 14%) adjudicated youth each show statistically significant increases after SB 200.

[21]The findings are similar for Black and Other race/ethnicity groups separately: the proportions of Black (25% to 32%) and Other race/ethnicity (11% to 14%) youth in any placement facility each show statistically significant increases after SB 200.

Findings for the placement outcomes also showed that after controlling for demographic and case characteristics over time, there were no statistically significant differences in the relationships between number of youth of color and number of placements (of any of the three types examined), before or after SB 200. Taken together, this suggests that SB 200 does **not reduce or exacerbate any disparities between White and youth of color in terms of placement outcomes, but the proportion of youth of color in out-of-home placement is increasing**.

Discussion

In response to rising crime rates in the 1980s and 1990s, many states across the U.S. enacted a vast array of ever more retributive "tough on crime" policies for youth in the justice system. However, delinquency cases processed by juvenile courts have decreased steadily over the last 15 years, showing a 55% decline between 2005 and 2018 (Hockenberry & Puzzanchera, 2020). Likewise, many previously tough policies have either fallen out of favor or been shown to be counterproductive to rehabilitation (Tanenhaus, 2013). Recent research on youth development and juvenile delinquency (National Research Council, 2013) coupled with major overhauls in state budget expenditures have led to the latest wave of juvenile justice reforms. This current round of reforms has focused on three key areas: 1) use of evidence-based practices to improve public safety, 2) diversion of first-time and low-risk offenders, and 3) investment and utilization of effective preventative and treatment options.

Through SB 200, Kentucky implemented a wide array of reforms characterized by use of evidence-based practices, enhanced diversion program, and investment in early intervention and community-based programs. In this study, we examined the effects of SB 200 on case and youth outcomes, as well as on racial and ethnic disparities among referred and adjudicated cases. Our findings are summarized below and are discussed in context of Implementation Evaluation and Assessment of Community-based Services findings to provide better insights on how the reform effort may be affecting policies and practices as well as youth outcomes. **The first set of findings (1-3) highlights the effects of SB 200 on diversion, subsequent complaints, and dispositional outcomes. The second set of findings (4-6) highlights the effects of SB 200 on racial and ethnic disparities**.

Diversion, Subsequent Complaints, and Dispositions

Finding #1. The number of cases placed on diversion increased after implementation of SB 200.

On average, there was an estimated 104 more diversions per month post-SB 200. This finding is particularly encouraging given that a key goal of SB 200 is to increase the use of diversion among referred youth. Indeed, stakeholders who were interviewed for the Implementation Evaluation shared

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that SB 200 was created in part due to underuse of diversion for first-time offenders and/or status offenders, leading to detention and formal court involvement as primary responses to delinquency. Through the enhanced diversion program, most youth are eligible for diversion under SB 200 and youth referred for first time misdemeanor receive a mandatory offer of diversion.[22]

Research shows that involvement with the justice system can have a negative impact on and is disruptive to healthy youth development (Cauffman, Fine, Mahler, & Simmons, 2018; Steinberg, 2009). Thus, interventions that direct youth away from formal processing within the justice system are viewed as more developmentally appropriate and supportive of promoting positive youth development. A recent meta-analysis of youth diversion programs shows that programs that allow youth to avoid official processing of a charge, full prosecution of a charge, or traditional dispositions such as incarceration are more effective in reducing recidivism than traditional juvenile justice responses to crime and delinquency (Wilson & Hoge, 2013). In particular, diversion programs are more effective among low-risk youth who have not been charged of an offense. These findings are consistent with the risk-need-responsivity principle, which suggests that interventions should be proportionate to the individual's level of risk to reoffend in order to effectively reduce recidivism (Andrews & Bonta, 2010).

In increasing the number of youth placed on diversion, SB 200 has met one of its most central outcomes. Although positive, it is important to note that when examining the effects of SB 200 after full implementation (i.e., excluding the rollout and pilot periods), we are only able to include six months of outcome data. Long-term tracking and analysis of outcomes are needed to demonstrate the sustainability of promising findings linked to new policies and to better understand the trajectories of youth involved in the enhanced diversion program.

Finding #2. The risk of a subsequent complaint was lower among youth who received referrals post-SB 200 than youth who were referred pre-SB 200.

Accounting for youth and case characteristics, youth who received referrals after implementation of SB 200 were at lower risk of receiving a subsequent complaint than youth referred prior to SB 200. In addition, pre-SB 200 youth received a subsequent complaint sooner than post-SB 200 youth. The average length of time to subsequent complaint for pre-SB 200 youth was 15.3 months compared to 18.9 months for post-SB 200 youth. This finding held even after accounting for diversion status. That is, regardless of diversion status, post-SB 200 was associated with lower risk of a subsequent complaint for both diverted and non-diverted youth. Notably, our finding also showed that there was a significant decline from pre- to post-SB 200 in risk of subsequent complaints and this decline was greater for youth not on diversion than for youth on diversion.

[22]Youth Offenders or those tried in the adult court and youth involved in a commission of a sex offense are not eligible for diversion.

The positive effects of SB 200 in reducing subsequent complaints may be attributed to enhanced case management system, use of evidence-based practices, and improved collaboration within and across agencies. For example, comments from stakeholders interviewed for the Implementation Evaluation reflected generally positive experiences with the reform efforts. Stakeholders credited the initial positive outcomes associated with SB 200 to improvements in case management and use of risk and needs assessments to guide decision-making. Frontline workers also shared that increased community supervision and effectiveness of supervision among youth in diversion led to treatment and more positive behaviors among youth. These statements are supported by a recent study conducted by Urban Institute on the impact of SB 200 on youth diversion outcomes. Their findings indicate that 9 out of 10 youth placed on diversion for first-time misdemeanors successfully completed the diversion program and avoided formal processing in juvenile court (Harvell, Sakala, Olsen, Lawrence, & Hull, 2020).

The implementation of SB 200 was also accompanied by a detailed plan for training of staff involved with the reforms, including timeframes and responsibilities of agencies. For example, initial and refresher trainings were offered to frontline staff, designated trainers (using a train-the-trainer model), and other leadership personnel. Trainings specific to the rollout of FAIR Teams, which played a significant role in implementing the enhanced diversion program, were extensive and included roles and responsibilities of the new Case Designated Specialist (CDS), FAIR team orientations , and initial community partner meetings. In the Implementation Evaluation, several stakeholders reported the usefulness of these trainings in gaining knowledge about available services, sharing data and information about the purpose of SB 200, and improving communication among agencies. Although stakeholders also shared that future trainings could be further improved, in general, initial reports from stakeholders directly involved in the reform appreciated the availability of these trainings in supporting their work.

Collectively, these findings demonstrate promising outcomes linked to SB 200. It is important to note, however, that more research is needed to explore and understand the mechanisms by which SB 200 supports positive youth outcomes. This may include research that specifically examines components of enhanced case management under SB 200, including refinement of risk and needs assessment tools, development of graduated sanctions, staff trainings, and increased collaboration among youth-serving agencies, and.

Finding #3. The number of commitments decreased post-SB 200; however the number of placements in detention centers, YDCs, and group homes, and cases on probation did not change.

After controlling for important youth and case characteristics, our findings show that prior to SB 200, there was an increasing monthly trend in commitments to DJJ. This trend decreased after

implementation of SB 200. On average, there was an estimated 36.6 cases committed to DJJ per month pre-SB 200, which declined to 24.5 per month post-SB 200. As with findings related to increased number of cases placed on diversion after SB 200, fewer commitments to DJJ post-SB 200 signal positive movement towards the overall goals of the reform. This finding may be explained by closures of non-secure and secure facilities after implementation of SB 200. The closures of these facilities is largely driven by the goal of placing youth in the least restrictive environment and utilizing community-based resources to address youth risks and needs.

Although the decline in the number of cases committed to DJJ is promising, lack of appropriate programs or available services for youth, in particular high risk youth, may create unintended consequences. As shared by stakeholders in the Implementation Evaluation, one of the unintended consequences of the reform was the lack of community-based programs that would cater to the needs of youth, in particular high risk and high needs youth. As an unfunded mandate, SB 200 significantly changed procedures for working with youth, but did not necessarily provide additional resources that would enhance community-based services. Already facing significant resource limitations, community-based service providers, especially in rural areas, do not have the capacity to meet the needs of youth now going through diversion. Further, available community-based programs may not be easily accessible to youth and families as demonstrated in the Assessment of Community-Based Services. The Fiscal Incentive Fund provides an opportunity to address these challenges and future research is needed to assess how this program has been effective in meeting the goals of SB 200 to increase evidence- and community-based programs for justice-involved youth.

When we examined the monthly trends in out-of-home placement facilities—detention centers, YDCs, and group homes, and the monthly trends in probated cases, we did not find statistically significant changes before and after SB 200. There are several potential explanations to the lack of statistically significant findings. First, we define post-SB 200 as the entire period after the legislation was passed (i.e., May 2014 through December 2019). This includes the rollout period, which lasted from May 2014 through December 2017, and the pilot period, which was the entire year of 2018. Implementation of statewide reforms such as SB 200 often takes gradually, and thus, effects of the reform may not be apparent until well after the full-implementation. For example, increased availability of community-based programs for adjudicated youth, as a result of the Fiscal Incentive Fund and other SB 200 efforts, may support increased use of probation. In addition, we are only able to examine one year after the full implementation of SB 200 was completed, that is, from January 2019 through December 2019. The few data points may not be sufficient to detect statistical significance. Finally, the lack of significant finding is also at least in part because of the relatively large month-to-month variability in the outcome counts. Especially since some types of placement seem to have seasonal patterns (lower numbers of all types of placements in the summer months, higher numbers of detention facility placements in the summer months), there is quite a bit of uncertainty in our model predictions. This makes it difficult to separate the impact of SB 200 from the relatively noisy outcomes data.

Racial and Ethnic Disparities

Finding #4. The number of youth of color placed on diversion increased post-SB 200.

Overall, there is evidence that after SB 200, more referrals for youth of color result in more diversions; however, this finding is moderated, in part, by a greater proportion of youth of color being referred after SB 200. Population-level analysis comparing the monthly number of youth of color and White youth placed on diversion before and after implementation of SB 200, controlling for changes in demographics and case characteristics over time, showed an increase in the number of youth of color being referred to diversion post-SB 200. On average, there were 53 additional diversions per month for every 100 youth of color referred as compared to 100 White youth referred after SB 200. However, we also saw an increase in the proportion of youth of color among referrals post-SB 200—29% of the total referrals were for youth of color pre-SB 200 compared to 34% post-SB 200. This finding must be interpreted with caution because we examined the overall monthly count of youth of color rather than the effect of race at an individual level.

It is noteworthy, however, that when we examined the effect of diversion on subsequent complaints among individual youth, we found that both youth of color and White youth placed on diversion had lower risk of receiving subsequent complaints compared to youth not placed on diversion. Moreover, the difference in predicted risk for subsequent complaint for youth placed and not placed on diversion was greater among youth of color than White youth suggesting that diversion seemed to have a greater positive impact on youth of color. This finding supports existing evidence that diversion is linked to positive youth outcomes, and in this study, may particularly benefit youth of color. For future research, it is important to gain a better understanding about the mechanisms by which diversion have the greatest impact on youth outcomes and further increase the number of youth eligible for diversion.

Finding #5. Youth of color and White youth had comparable risk for a subsequent complaint pre- and post-SB 200; however, youth of color were at greater risk for a subsequent complaint overall.

Individual-level analysis showed that youth of color were at greater risk of receiving subsequent complaints over time—23% of youth of color received a subsequent complaint compared to 18% of White youth. When youth of color received a subsequent complaint, they were also referred sooner than White youth—within 16.8 months compared to 17.5 months of baseline referral for White youth. This finding held after accounting for youth's age, gender, severity of offense, diversion status, and SB 200 time period. We also looked at the interaction effects of race and SB 200 on subsequent complaints. That is, did risk of receiving a subsequent complaint for youth of color and White youth vary

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by SB 200 time period? Our findings showed that the difference in predicted risk for a subsequent complaint before and after SB 200 was comparable for youth of color and White youth. Altogether, these findings suggest that there is no evidence that SB 200 exacerbated racial and ethnic disparities in subsequent complaints; however, we also did not find evidence that it helped reduce disparities in subsequent complaints.

Finding #6: SB 200 did not change the existing relationships between the number of adjudicated youth of color and youth of color placed in any out-of-home facilities.

Without controlling for changes in youth and case characteristics and only looking at the proportion of youth of color and White youth, pre- and post-SB 200, a greater proportion of youth of color were adjudicated and placed in out-of-home facilities after SB 200. Before SB 200, an average of 35% of adjudicated cases were for youth of color; post-SB 200 this rose to 41%. For out-of-home placement, 35% of youth of color were placed in any out-of-home facilities prior to SB 200 and this increased to 46% after SB 200.

However, after we controlled for changes in youth and case characteristics over time, we found that SB 200 did not have a significant effect on adjudication and out-of-home placements among youth of color and White youth. That is, once we have accounted for important youth and case characteristics before and after SB 200, our findings do not provide evidence that SB 200 changed the existing relationships between race/ethnicity and number of adjudicated cases and out-of-home placement counts, and thus, is unlikely to have addressed racial disparities. However, we also did not find evidence that SB 200 exacerbated existing disparities. Again, it is important to note that these analyses only test the relationship between number of youth of color and each outcome examined. ITS analysis in general is a population-level analysis, and cannot be used to make statements about individuals: for example, it would be inappropriate to conclude, based on this analysis, that SB 200 had no effect on a given youth of color's likelihood of being adjudicated.

Altogether, our findings on the effect of SB 200 on racial and ethnic disparities show that SB 200 did not exacerbate existing racial and ethnic disparities at certain stages of juvenile justice processing; but, notable disparities still exist in juvenile justice outcomes between youth of color and White youth.

Racial and ethnic disparities in the juvenile justice system are well documented. For example, although delinquency case rates have declined for all racial groups in recent years, delinquency case rate for Black youth remains significantly higher than any of the other racial and ethnic groups. In 2018, the delinquency case rate for Black youth was 55.5, three times the rate for American Indian (22.8), White (19.3), and Hispanic (18.0) youth (Hockenberry & Puzzanchera, 2020). Although the presence of racial and ethnic disparities in the legal system is well-established, the mechanisms through which it exists remain unclear. SB 200 magnified and brought attention to existing disparate outcomes for racial and

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ethnic minority youth population, but it also has the potential to address these issues and create outcomes that are more equitable for youth. Indeed, Kentucky state officials have engaged in proactive actions to better understand and confront issues surrounding racial and ethnic disparities. Likewise, research should continue to examine current policies and practices under SB 200 (e.g., charging levels, judicial overrides; see Kaasa et al., 2019 and Harvell et al., 2020) that may potentially contribute to existing racial and ethnic disparities in juvenile justice outcomes.

Strengths and Limitations

We note two important strengths of this study. First, this study offers a unique opportunity to conduct a natural policy experiment to examine the effects of a statewide policy on youth outcomes. We employed an interrupted-time series approach, a robust quasi-experimental design that includes multiple time points before and after an intervention is implemented. In practice, implementation of a policy change happens in phases. Using ITS allows us to capture and account for the phased-in nature of SB 200 implementation and how this might have affected youth outcomes. As opposed to merely comparing before and after intervention effects and outcomes, ITS allows us to control for confounding factors that may also influence changes in outcomes over time. For example, our ITS models control for autocorrelation (the dependence of trends across time), seasonal fluctuations, and changes in the demographics and case characteristics of the Kentucky juvenile justice population over time. We are also able to examine trends after full implementation separately for most outcomes, which is important because the effect of SB 200 may not be fully evident during the implementation period. Second, we draw upon information gathered through the Implementation Evaluation and Assessment of Community-Based Services to contextualize findings from the outcome evaluation. This mixed-method approach provides a richer understanding of SB 200's implementation successes and challenges as well as the associated outcomes.

There are also several limitations to keep in mind when interpreting the study findings. Although the use of ITS is among the most rigorous approaches when a randomized control trial is not a possibility, we did not use a comparison group in our analysis. Including a comparison group would strengthen our ability to make causal inferences about the impact of SB 200 on outcomes. However, most youth, except those involved in the commission of sex offenses and those transferred to the adult court, are eligible for diversion as well as other programming and services under SB 200. Thus, there is no practical way to identify a viable group of youth for comparison. Second, we are limited by the availability of data on reoffending. SB 200 defines reoffending as an adjudication of a new public offense within three years of release from an out-of-home placement or release from commitment and includes adult convictions. Because SB 200 consists of a wide range of reforms, implementation happened gradually and lasted through late 2018. This did not give us adequate time to assess reoffending after post-full implementation of SB 200. Although we accounted for the rollout and pilot periods of SB 200 in our analyses, only one year of post-full implementation data was included in the

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analyses (with the exception of diversion cases, which only included six months of post-full implementation data). In order to assess the long-term effects of an intervention on outcomes, sufficient data points after full implementation are needed.

Recommendations for Research, Policy, and Practice

Since passage of SB 200, Kentucky has made significant strides in juvenile justice reform. Below, we provide recommendations for research, policy, and practice to support continued improvement and sustain promising outcomes resulting from SB 200. These recommendations reflect the amalgamation of findings and lessons learned from the Implementation Evaluation, Assessment of Community-Based Services, and the current study.

Research

- Continue to track and compare trends regarding use of diversion over a multiyear period
- Track long term outcomes of youth who have been diverted or are otherwise involved in the juvenile justice system
- Examine specific components of enhanced case management under SB 200, including refinement of risk and needs assessment tools, development of graduated sanctions, increased collaboration among youth-serving agencies, and staff trainings
- Conduct periodic needs assessment to identify gaps and ensure that current and new policies and practices are responsive to stakeholder needs (e.g., CDS/CDWs, probation officers, youth, families)
- Conduct a cost-benefit analysis that will compare the cost associated with implementation of SB 200 mandates to the benefits from anticipated increased use of community-based services, decreased use out-of-home placements, and improved youth outcomes

Policy

- Examine further the unintended consequences of "upcharging" and prosecutorial and judicial overrides
- Expand the types of low-level offenses that may be considered for a mandatory diversion referral to include additional misdemeanor complaints and first-time non-violent felonies
- Evaluate the implementation and outcomes of the Fiscal Incentive Fund

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Practice

- Incorporate youth and family voice in research, policy, and practice decision-making
- Continue to implement and review strategies to reduce racial and ethnic disparities
- Bring in additional stakeholders and experts around racial justice to provide recommendations, conduct trainings, and advise policymakers
- Continue staff trainings (including booster trainings) and expand trainings to other stakeholders, including county attorneys, judges, education, and law enforcement
- Continue enhanced data tracking and monitoring, and data sharing between agencies to better inform policies and practices

Lessons Learned for Other Jurisdictions

Although Kentucky was not the first state to undergo profound reforms of their juvenile justice system, the findings of this evaluation are some of the first large scale data demonstrating the effects of a wide-ranging set of policies and practices. As such, these findings provide critical roadmaps for other agencies looking to enact similar, sweeping reforms, and may provide for cautious optimism for adopting similar policies and practices. For states considering justice reform, there are several key takeaways to consider.

Stakeholder Buy-in and Integration

SB 200 was implemented with wide support and brought a wide variety of stakeholders together to both establish and implement new policies and procedures. For example, a taskforce for independent review, the Juvenile Justice Oversight Council (JJOC), was established and served as a platform for multidisciplinary stakeholders to meet regularly and discuss juvenile justice issues. Interagency collaboration is vital to implementing new policies and is critical to the effectiveness of reforms.

Lessons Learned to Promote Buy-In and Include Diverse Voices

1. Identify **a champion** devoted to leading the reform effort. Infrastructure must be implemented to aid in supporting the champion and sustainability of reforms.
2. Obtain **support from technical and training assistance** (TTA) providers early on in the process to help with planning, development, and implementation of reforms.
3. Provide **funding for the reform up front** to allow for partnerships with TTA providers and reduce challenges with implementation.
4. Develop a **buy-in and stakeholder engagement plan** to help manage statewide transitions.
5. Implement **diverse and comprehensive trainings** for staff directly involved in reforms and others whose buy-in is necessary.
6. Establish a **multi-agency oversight council** to support inter-agency communication and leadership support of reform implementation.

Data Gathering, Sharing, and Utilization

SB 200 created an infrastructure for collecting and sharing data between justice agencies, AOC and DJJ. This data collection underscored several issues endemic in the juvenile justice system prior to and during the implementation of SB 200, including racial and ethnic disparities in youth outcomes and gaps and barriers to service provision for youth in the communities. Although improving data monitoring procedures and data management systems are still in progress, Kentucky has adopted initial, critical steps to monitoring and addressing these issues through the SB 200 data collection and sharing mandates.

Lessons Learned to Promote Data Gathering, Sharing, and Utilization

1. Improve **data tracking before, during, and after implementation of the reform** to effectively identify areas for reform and monitor successes and unintended consequences.
2. Conduct **staff trainings** on how to efficiently and accurately use data entry tools.
3. Support data collection policies and practices with **manuals and data codebooks**.
4. Conduct **quality assurance checks** early on (when new data elements are collected or data entry tools are set up) and on a regular basis to assess and address missing or inaccurate data.
5. Create a **Memorandum of Understanding** (or Information Sharing Agreement) to allow for data sharing across agencies.

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