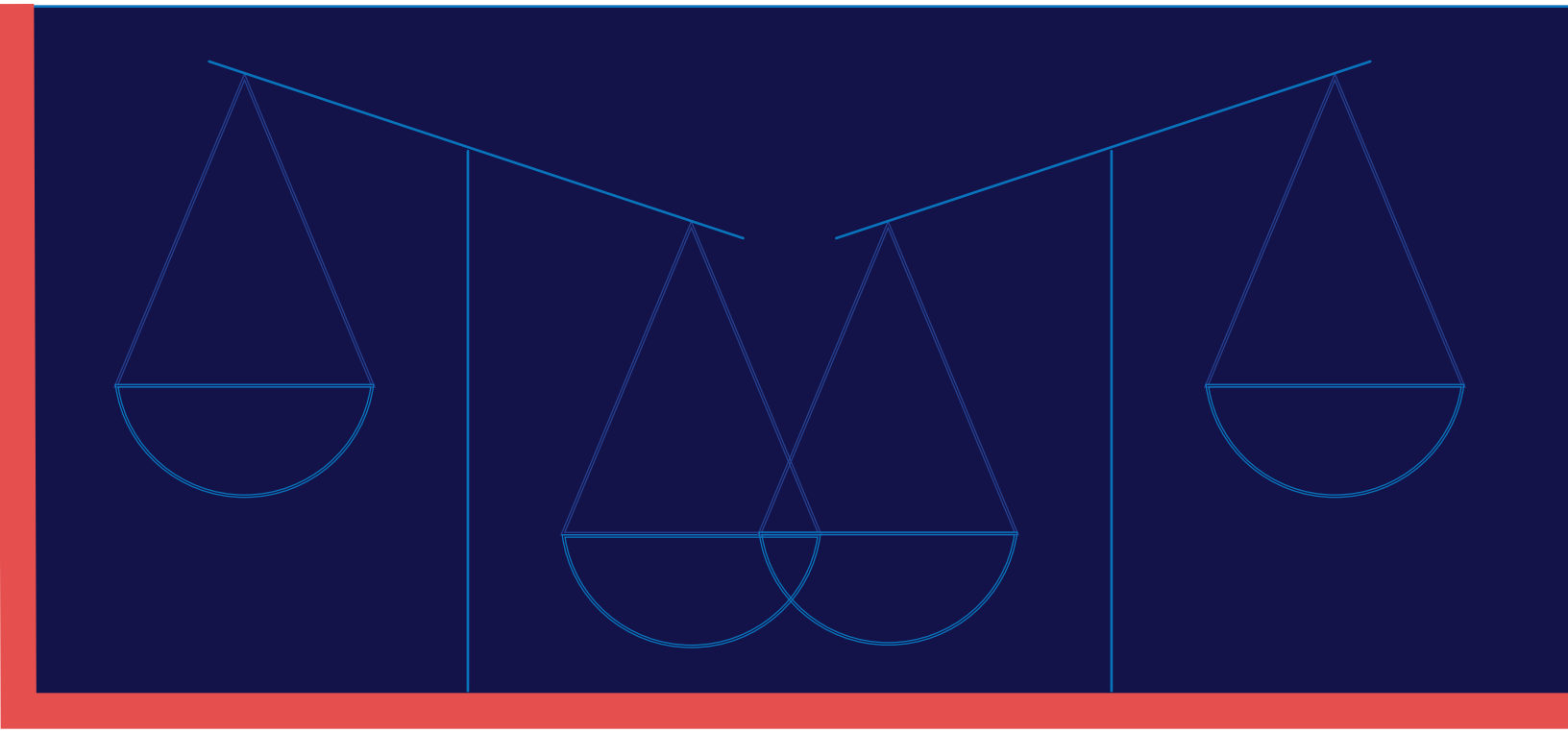

Racial disparities in detention outcomes:

Evidence from detentions of Harris County youth with no prior justice involvement

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ABOUT THE TEXAS POLICY LAB

The Texas Policy Lab (TPL) is a research institute within the School of Social Sciences at Rice University. Founded in 2018, TPL partners with policymakers to pursue data-driven scientific inquiry in decisions that affect millions of Texans. We are an interdisciplinary, closely knit collection of faculty, professionals, researchers, and data scientists, focusing primarily on early childhood development and youth justice. We strive to build government capacity to innovate and implement new programs while putting science at the center of policy decisions.

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EXECUTIVE SUMMARY

Detention, the practice of holding youth in secure facilities between the time of their arrests and court hearings, is a commonly used tool in juvenile justice systems across the United States, with almost 200,000 cases involving detention each year. This practice, however, is not equally experienced by youths of different racial or ethnic backgrounds. Every year, national statistics consistently show that the cases of Black and Latino/a youth are more likely to involve detention than white youths' cases. The Harris County juvenile justice system has not been an exception to these national trends.

However, these observed differences in detention outcomes may also capture differences in other characteristics of youths' cases. For example, screening procedures routinely use information about the alleged offense, prior adjudications, and existing warrants to determine the need for secure detention. To address this issue, this report uses detailed individual-level data to account for multiple confounding characteristics when comparing detention rates along racial lines.[1] We analyze detention decisions during the initial contact with the system for the roughly 45,000 boys and girls who became involved with the juvenile justice system in Harris County between 2010 and 2022.[2]

Furthermore, recognizing that detention outcomes are a result of multiple specific decisions by different actors, our analysis also disaggregates the detention process into multiple steps. Identifying which of these steps create or exacerbate racial disparities is necessary if the goal is to implement interventions to address these disparities.

We divide our analysis into two parts. Our initial analysis uses data of youths who became involved with the system between 2010 and 2020, prior to the implementation multiple changes to detention practices, including a new detention screening instrument, in February of 2021. We then conduct a separate analysis for the years after the introduction of the new screening instrument (2021 and 2022). Summaries and key figures for each of these analyses can be found on pages 8 and 9, respectively.

Overall, our analysis of data prior to 2021 shows that, over the course of the previous decade, substantial racial disparities existed throughout the entire detention process. These documented disparities cannot be explained by confounding characteristics, such as demographics, characteristics of the offense, or prior histories of involvement with the system.

[1] Although we cannot completely rule out the existence of other confounders for which we do not have data, such as information gathered by decision makers at the time of their interaction with youth, our analysis accounts for an extensive list of characteristics, which includes the most important confounders.
[2] We restrict our analysis to detention outcomes during each youth's first contact with the juvenile justice system. This choice reflects our desire to minimize the chance that other confounding characteristics related to prior contacts with the juvenile justice system contaminate our comparison. By focusing on first contacts only, we are able to conduct our analysis knowing that any difference in outcomes between groups cannot be explained by youths' history of prior involvement with the system.

We find that most of the differences in admissions and formal detentions stemmed from differences in the rates at which Black, Latino/a, and white youth were transferred to the Juvenile Detention Center (JDC) following an arrest. These initial disparities were then carried forward to the following steps in the process, starting with initial admissions to detention and extending all the way to formal detentions in hearings.

There are encouraging signs when we look at the most recent data. A preliminary analysis of detention decisions for boys in 2021 and 2022 finds no evidence of disparities in multiple detention outcomes, including admissions to detention and formal detentions. The results of our analysis of the disparities under current practices (2021–2022) stand in contrast with the substantial disparities we found in our analysis of data from the previous decade (2010–2020). Our analysis does not allow us to attribute these changes to any specific change in policy. However, the analysis of the recent data does provide a preliminary, yet suggestive, picture of the state of racial disparities in detention under current policies.

Despite these improvements in most outcomes, our results suggest that Black youth may still be more likely to be taken to the detention center following an arrest. Our analysis of data for 2010–2020 also found that most disparities started at this step of the process. Implementing policies and procedures that would reduce the unnecessary transfer of youth who are not eligible for detention may disproportionately benefit Black and Hispanic youth.

Although our analysis showed encouraging signs, the lack of disparities in most key decisions does not indicate equal representation of Black, Latino/a, and white youths. In fact, during 2022, Black youths accounted for 46% of admissions to detention, while white youths accounted for less than 9%. The results of our analysis show that this disproportionate representation of Black youth is no longer exacerbated by the decisions made during the detention process. However, because Black youth are more likely to be arrested and referred to the juvenile justice system to begin with, Black youth are overrepresented among youths admitted to detention. Thus, deeper, structural disparities still lead to substantial disproportionalities in detention outcomes.

Racial differences in key detention outcomes, 2010-2020

Our analysis of data prior to 2021 shows that, even after accounting for offense characteristics, a wide range of sociodemographic characteristics, and detention screening scores, large disparities between youth of color and white youth remained. As shown in the figures below, during this period, Black and Latino/a boys and girls were far more likely to be screened for detention, to be admitted to detention, and to be formally detained during their first contact than comparable white youths.

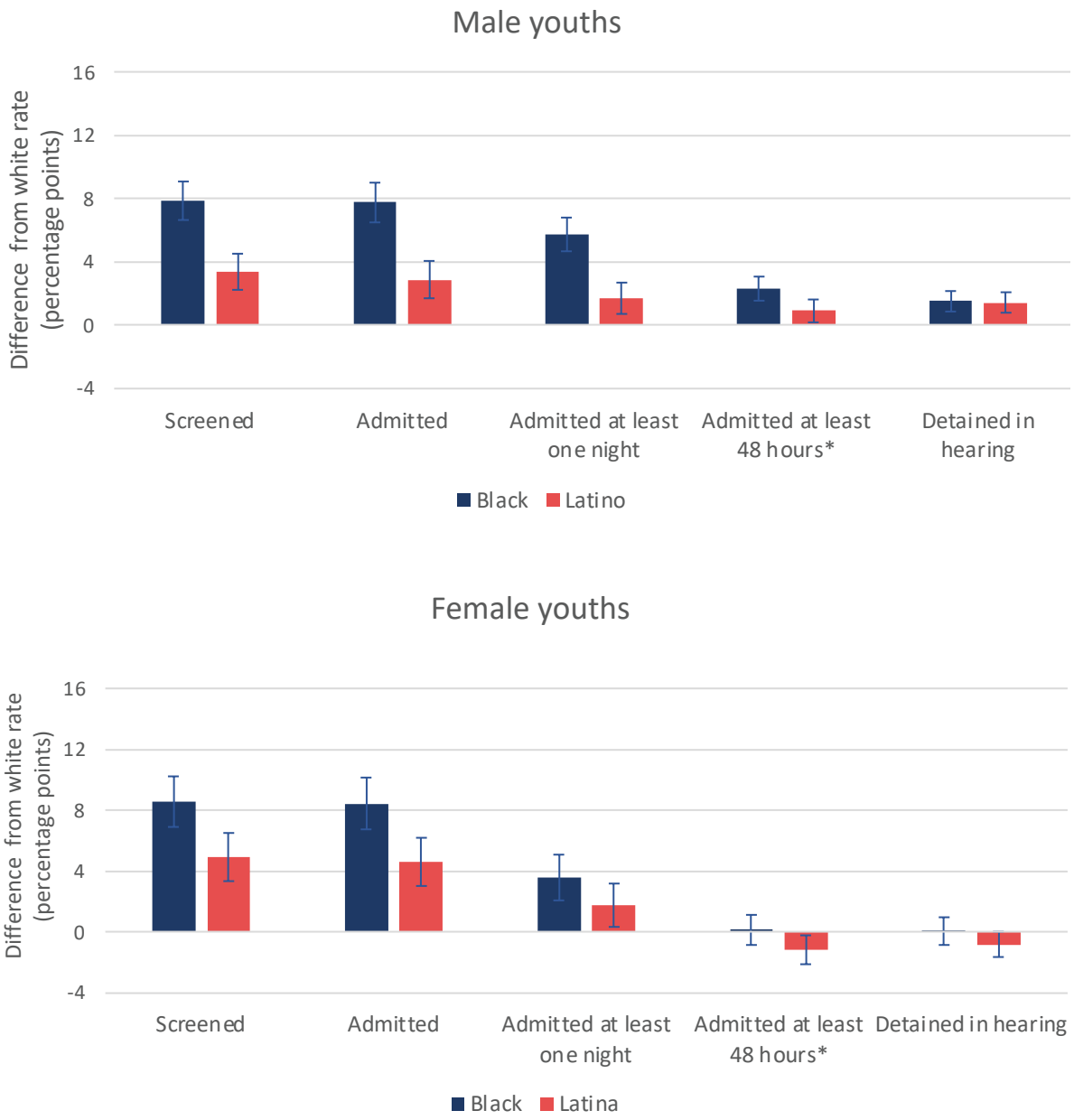
We find that most of the differences in admissions and formal detentions stemmed from differences in the rates at which Black, Latino/a, and white youth were transferred to the Juvenile Detention Center (JDC) following an arrest. Upon formal screening at the JDC, most youths were not recommended for—but were nevertheless admitted to—detention, typically for just a couple of nights. Thus, disparities in the initial decisions in the detention process can carry over to other decision points and reverberate through the entire system. Our results also suggest that, during this period, even if disparities were not created during the detention hearing process, hearings did not remediate the existing disparities on who was admitted and later required a detention hearing.[3]

Throughout our analysis, the estimated Black-white differences in detention outcomes are systematically larger than the Latino/a-white differences. This is true both for boys and for girls. Thus, while our results document important disparities between Latino/a and white youth, the extent to which disparities are experienced is not the same for Black and Latino/a youth.

[3] When it comes to formal detention, we find different patterns between boys and girls. In fact, even if Black girls are, on average, more likely to be formally detained than white girls, our analysis shows that these differences disappear once we account for other existing differences between these two groups of girls.

Figure 1: Conditional differences in key detention outcomes, 2010–2020†

Black-white and Latino/a-white differences in outcome rates
Differences account for a wide range of confounding factors



Note: These graphs show the difference in the rates of five key detention outcomes between Black and white youth (navy) and Latino/a and white youth (red), by sex (top panel for males, bottom panel for females). The differences in rates account for differences in alleged offense characteristics, demographics, referral characteristics, and RAI scores between groups of youth.

Baseline rates (rates for white youths) are different for each of the outcomes.

Each bar shows the 95% confidence interval for the estimated conditional difference.

† Includes all first contacts between January 1, 2010, and January 31, 2021. We present this period as 2010–2020 to simplify the exposition.

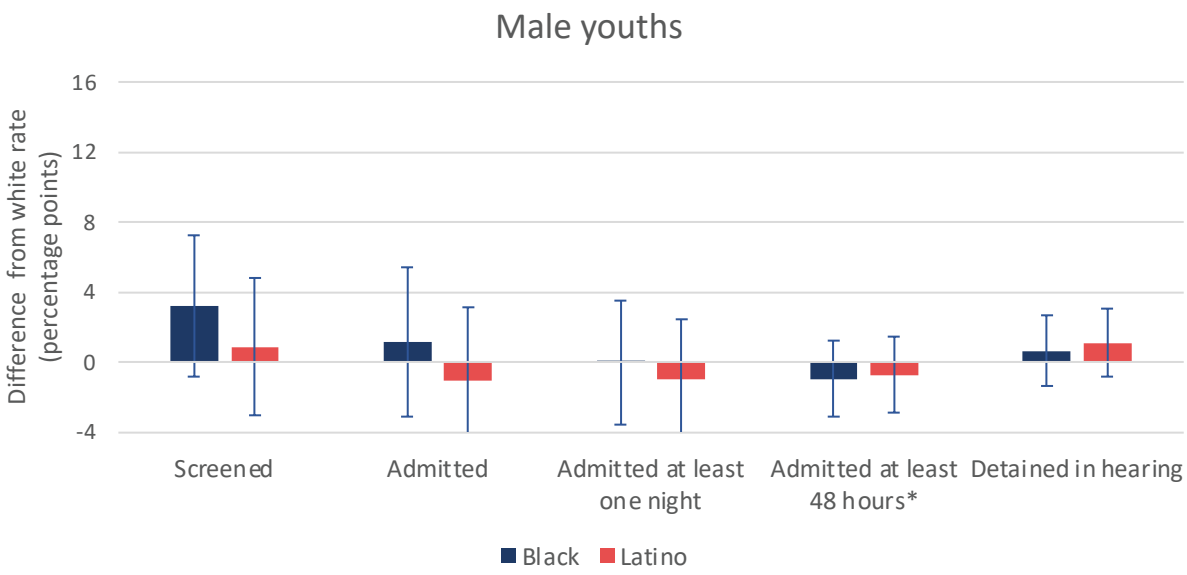
This figure appears as Figure 4 in the full report.

Racial differences in key detention outcomes, 2021-2022

We then conduct a separate analysis using data of contacts that occurred after the implementation of the new screening instrument (2021 and 2022). Given the shorter time period, our statistical analysis has much smaller sample sizes, so we take these results as only preliminary. However, our results suggest that most detention decisions are currently made in a much more equitable manner. After accounting for all available confounders, differences may still exist in the rates at which different groups of youth are transferred to the JDC. However, we find no evidence of differences in the rates at which Black, Latino/a, and white boys are admitted to detention or formally detained in hearings.[4, 5]

Figure 2: Conditional differences in key detention outcomes, 2021-2022††

Black-white and Latino-white differences in outcome rates
Differences account for a wide range of confounding factors



Note: This graph shows the difference in the rates of five key detention outcomes between Black and white male youth (navy) and Latino and white male youth (red). The differences in rates account for differences in alleged offense characteristics, demographics, referral characteristics, and DSI scores between groups of youth. Baseline rates are different for each of the outcomes.

Each bar includes the 95% confidence interval for the estimated conditional difference.

†† Includes all first contacts between February 1, 2021, and December 31, 2022. We present this period as 2021–2022 to simplify the exposition.

* "Admitted at least 48 hours" is defined as having a release at least two business days after admission.

This figure appears as Figure 5 in the full report.

[4] Because of the aforementioned small sample sizes, we cannot conduct a proper analysis for girls.
[5] Auxiliary estimates suggest that Latino-white differences had already disappeared by the second part of the previous decade.

1 INTRODUCTION

Detention, the practice of holding youth in secure facilities between the time of their arrests and court hearings, is a commonly used tool in juvenile justice systems across the United States, with almost 200,000 cases involving detention each year. Although the volume of detentions has steadily decreased in recent years—from a staggering 318,000 to 180,000 cases between 2009 and 2019—this reduction has essentially mirrored the generalized decrease in delinquency referrals during the same period. In fact, the share of cases involving detention has remained stable over the last 15 years. Roughly, one out of every four cases referred to juvenile courts in the United States involves detention.[1]

Racial disparities in detention decisions have been widely documented. Every year, national statistics consistently show that the cases of Black and Latino/a youth are more likely to involve detention than white youths' cases.[2] [3] The Harris County juvenile justice system is no exception to these national trends. For instance, between 2018 and 2022, 28.4% of Black youths' cases and 27.3% of Latino/a youths' cases involved any pre-adjudicated detention, compared with 24.1% for white youth. During this period, detention stays for youth of color were also substantially longer than those for white youth. For example, the average number of days in a detention stay for Black youths was 21 days, while the average stay lasted only 10 days for white youths.

However, these observed differences in detention outcomes may also capture differences in other characteristics of youths' cases. For example, screening procedures routinely use information about the alleged offense, prior adjudications, and existing warrants to determine the need for secure detention. Therefore, any aggregate differences in these or other characteristics between Black and white youth, for instance, will be reflected in the gap in detention rates between these two groups of youths.

In this report, we use rich data from the Harris County Juvenile Probation Department (HCJPD) to account for multiple confounding characteristics when comparing detention rates along racial lines. Although we cannot completely rule out the existence of other confounders for which we do not have data, such as information gathered by decision-makers during their interaction with youth, our analysis accounts for an extensive list of characteristics, including the most important confounders.

Furthermore, recognizing that detention outcomes are a result of multiple specific decisions by different actors, our analysis also disaggregates the detention process into multiple steps. Identifying which of these steps create or exacerbate racial disparities is necessary if the goal is to implement interventions to address these disparities. For instance, policy decisions informed by knowledge of racial disparities that stem from a screening instrument's design are completely different from those that would follow if most of the racial disparities originate in detention hearings.

Our analysis uses individual-level data for the roughly 45,000 boys and girls who became involved with the juvenile justice system in Harris County between 2010 and 2022.[4] We restrict our analysis to detention outcomes during each youth's first contact with the juvenile justice system.[5] [6] This choice reflects our desire to minimize the chance that other confounding characteristics related to prior contacts with the juvenile justice

[1] Hockenberry and Puzzanchera (2021).
[2] For brevity, we refer to non-Hispanic white youths simply as white youths. Likewise, we use the term Black youths to denote non-Hispanic Black youths. Please see the data appendix for more on how these categories are defined in the data.
[3] National statistics available through the National Juvenile Court Data Archive. For 2019 (most recent) statistics, see Juvenile Court Statistics 2019 (Hockenberry and Puzzanchera, 2021).
[4] Analyzing data over such an extended period allows us to provide a long-term look at disparities in detention outcomes, as well as to identify potential changes and improvements over time.
[5] We also focus on admissions to detention that begin at the time of referral, which constitute the typical detention case.
[6] First contacts account for roughly 60% of contacts each year and have similar detention rates to subsequent contacts. However, subsequent contacts involve a selected group of youth and detentions in these contacts are typically longer. Thus, our analysis of first contacts does not necessarily represent all detention decisions made in the Harris County juvenile justice system.

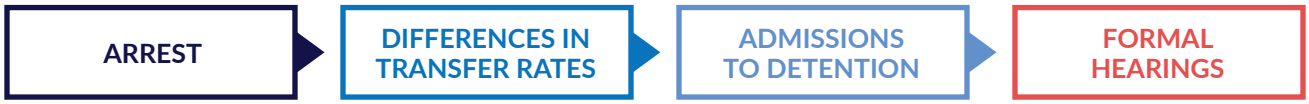
system contaminate our comparison. By focusing on first contacts only, we can conduct our analysis knowing that any difference in outcomes between groups cannot be explained by youths' history of prior involvement with the system.

Recently, HCJPD and other juvenile justice stakeholders engaged in a concerted effort to reduce the use of detention and the racial disparities in its use. This effort involved multiple changes to detention practices, including the implementation of a new detention screening instrument in 2021. Thus, we divide our analysis into two parts. Our initial analysis uses data from youths who became involved with the system between 2010 and 2020 (before the implementation of the new screening instrument). We then conduct a separate analysis for the years after the introduction of the new screening instrument (2021 and 2022). The analysis of the recent data does provide a preliminary, yet suggestive, picture of the state of racial disparities after these changes were implemented.

Our analysis of data prior to 2021 shows that, even after accounting for offense characteristics, a wide range of sociodemographic characteristics, and detention screening scores, large disparities between youth of color and white youth remained. During this period, Black and Latino/a boys and girls were far more likely to be screened for detention, to be admitted to detention, and to be formally detained during their first contact than comparable white youths.[7] We find that most of the differences in admissions and formal detentions stemmed from differences in the rates at which Black, Latino/a, and white youth were transferred to the Juvenile Detention Center (JDC) following an arrest. Upon formal screening at the JDC, most youths were not recommended for—but were nevertheless admitted to—detention, typically for just a couple of nights. Thus, disparities in the initial decisions in the detention process can carry over to other decision points and reverberate through the entire system. Our results also suggest that, during this period, even if disparities were not created during the detention hearing process, hearings did not remediate the existing disparities on who was admitted and later required a detention hearing.[8]

As mentioned, we conduct a separate analysis using data from contacts that occurred after the implementation of the new screening instrument. Given the shorter time period, our statistical analysis has much smaller sample sizes, so we take these results as preliminary. However, our results suggest that most detention decisions are currently made in a much more equitable manner. After accounting for all available confounders, differences may still exist in the rates at which different groups of youth are transferred to the JDC. However, we find no differences in the rates at which Black, Latino/a, and white boys are admitted to detention or formally detained in hearings.[9]

[7] Throughout our analysis, the estimated Black-white differences in detention outcomes are systematically larger than the Latino/a-white differences. This is true both for boys and for girls. Thus, while our results document important disparities between Latino/a and white youth, the extent to which disparities are experienced is not the same for Black and Latino/a youth.
[8] When it comes to formal detention, we find different patterns between boys and girls. In fact, even if Black girls are, on average, more likely to be formally detained than white girls, our analysis shows that these differences disappear once we account for other existing differences between these two groups of girls.
[9] Because of the aforementioned small sample sizes, we cannot conduct a proper analysis for girls.



Overall, our analysis shows that, over the course of the previous decade, substantial racial disparities existed throughout the entire detention process for youth in their initial contact with the juvenile justice system. These documented disparities cannot be explained by confounding characteristics, such as characteristics of the offense or prior histories of involvement with the system. The disparities began with the decision of who is transferred to the detention center and extend all the way to formal detentions in hearings. However, there are encouraging signs when we look at the most recent data. A preliminary analysis of detention decisions for boys in 2021 and 2022 finds no evidence of disparities in multiple detention outcomes, including admissions to detention and formal detentions. Nevertheless, despite these improvements in most outcomes, our results still suggest that Black youth are more likely to be taken to the detention center following an arrest than white youth are. Therefore, implementing policies and procedures that would reduce the unnecessary transfer of youth who are not eligible for detention would disproportionately benefit Black and Latino/a youth.

2 THE DETENTION PROCESS

The process that may lead to a youth's detention involves multiple steps and decision-makers. Understanding and differentiating between those steps is crucial if our goal is to identify the specific instances in which racial disparities are created or exacerbated. Thus, we begin with a summarized description of the key nodes in the process leading to a potential detention.

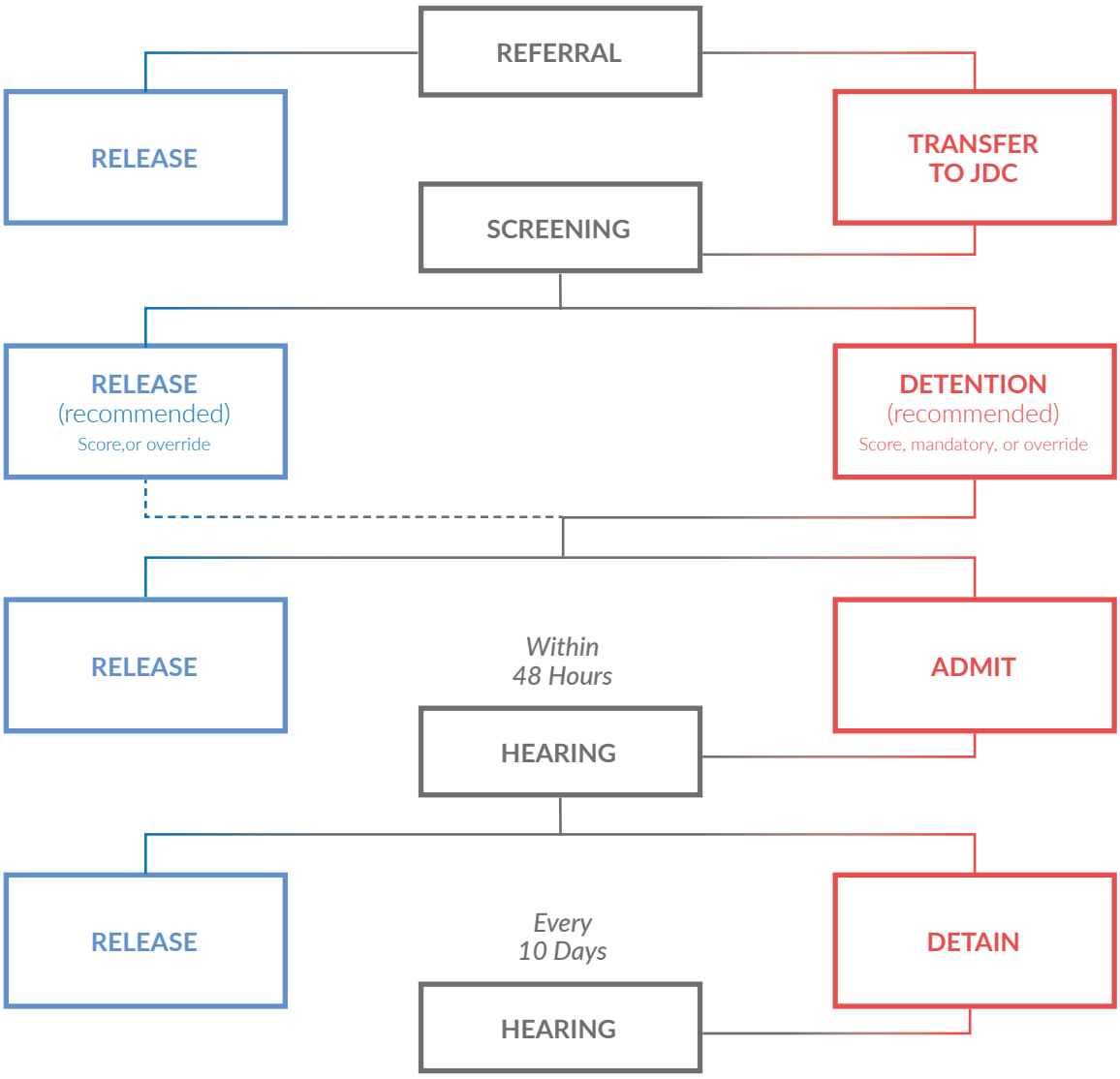
In our analysis, we focus on admissions to detention that begin at the time of referral, which constitute the typical detention case. Youth may also be detained, prior to adjudication, at any time between the time of referral and the time of disposition. For instance, a judge may order the detention of a youth before a hearing to ensure that he or she attends that hearing. Nevertheless, we abstract here from those types of detentions. This choice allows us to focus on a representative set of cases with a uniform stream of decisions (depicted in Figure 1). Furthermore, the process we describe in this section applies to every youth who was ever involved with the system.

The first step in the process that may lead to a youth's detention occurs right around the time of referral (top of the diagram in Figure 1). At this point, the law enforcement officer must determine whether to take (transfer) the youth to the Juvenile Detention Center (JDC) in downtown Houston. To make this decision, the officer may consult with the District Attorney's Office (DAO) and the Juvenile Probation Department (HCJPD). As described below, youth transferred to the JDC are assessed using a screening instrument. Thus, when deciding whether to transfer the youth to the JDC, the officer and other parties may conduct an informal screening to determine the likely outcome of the formal screening. Crucially, for the purpose of our analysis, these informal screenings are not recorded in the data.

Upon arrival to the JDC, HCJPD staff conduct a formal screening using the applicable screening instrument at the time (middle of diagram in Figure 1). Throughout most of the period analyzed in this report, HCJPD used a screening tool known as the Risk Assessment Instrument (RAI). Only recently (February 2021), the RAI was replaced with the Detention Screening Instrument (DSI), developed by HCJPD in collaboration with the Annie E. Casey Foundation as part of the Juvenile Detention Alternative Initiative (JDAI). To maintain consistency, and because calculated risk scores are included in our econometric analysis, we conduct separate analyses for the period before and after the implementation of the DSI.

Figure 1: Decisions leading to pre-adjudicated detentions

Simplified representation of the process



NOTE: This diagram illustrates the key decision nodes in the process that may lead to a detention. Blue boxes indicate outcomes leading away from detention, while red boxes indicate outcomes leading toward detention. The red line connecting a recommendation of release (after screening) and the next node (the decision of whether to release or admit to detention) represents cases in which the decision (release/admit) does not follow the screening recommendation. This will be a crucial pathway in our analysis. See the text for more details.

The RAI, and more recently the DSI, calculates a score based on a series of questions about the alleged offense(s) and information about prior referrals and other instances of involvement with the system. In our analysis, however, we focus only on youth on their first contact, who therefore have no history of prior involvement. Thus, in the specific cases we analyze, the RAI and DSI produced a score based solely on characteristics of the current alleged offense(s), such as the number of alleged offenses and their seriousness, as well as demographic information.[10] The limited and specific nature of the information required to produce the RAI and DSI scores will allow us to calculate a hypothetical score for every youth, even for those who were not formally screened at the time of referral, and use it in our econometric analysis.

[10] During the period of our analysis, an additional internal policy existed that guided HCJPD staff to give a score of 15 points, essentially mandating detention, when the alleged offense included evading arrest using a motor vehicle.

To determine whether a youth should be admitted to detention, the screening instruments set a series of thresholds. Crucially, a score of 15 points or more leads to a recommendation of secure detention. However, Juvenile Probation Officers (JPOs) have some discretion to override the RAI or DSI recommendation based on other specific circumstances, such as when the offense involved significant violence towards the victim, or when there was no parent or guardian to assume responsibility for the youth.[11] Furthermore, a few specific situations, such as an "Offense involving the use, exhibition or possession of a firearm," led to mandatory detentions under the RAI. In the DSI, these circumstances will lead to a detention recommendation for the majority of screened youths through their impact on the screening score.

In principle, youth should only be admitted to detention when they score above the 15-point threshold, when the characteristics of their offense or prior history triggered a mandatory detention, or when special circumstances prompted the JPO to override the RAI or DSI recommendation. Exceptional circumstances, such as when parents or guardians are not immediately available to pick up the youth, may also prompt short admissions to detention. However, the data show that youth are regularly admitted to detention despite not meeting any of these stipulated conditions.

Once admitted, a youth cannot stay in detention for more than 48 hours—counted only during business days—without a detention hearing (bottom of diagram in Figure 1). In a detention hearing, a magistrate judge (or sometimes a District Court judge) reviews the case and evidence and determines whether the circumstances warrant a detention. If the magistrate decides that the youth should remain in detention, the youth is then considered to be formally detained.[12] In this case, a new hearing must be scheduled no more than 10 days later to determine whether the youth should remain detained or be released.

Based on this description, we define five key outcomes to summarize the detention process, starting at the time of referral and ending at the (potential) first detention hearing:

1. **Screened (equivalent to being transferred to the JDC)**
2. **Admitted to detention**
3. **Admitted to and spending at least one night in detention**
4. **Admitted to and spending at least two business days (48 hours) in detention**
5. **Formally detained in hearing**

Figure 2 shows the share of all youth with each of these outcomes, by sex. Panel A shows the rates between 2010 and 2020 (before the replacement of the RAI with the DSI). Following a referral, roughly 30% of youth were transferred to the JDC and formally screened. Notably, the data suggest that almost every youth who was screened was also admitted to detention.

Some of these admissions were very short. As mentioned above, these short stays likely reflect cases in which the youth needed to be formally processed after being transferred to the detention center because specific circumstances prevented their immediate release (such as parents not being immediately available). However, the bulk of admissions still involved spending the night in the detention center, with 18% of all referred girls and 21% of boys (74% and 75% of those admitted, respectively) spending at least one night in detention. Nevertheless, most youths were released within a few days of their admission. Only 7% of all females and 10% of all males have stays long enough to require a detention hearing (two business days). Consistently, only a fraction of youth admitted to detention were later formally detained. During their first contact, only 5% of all girls and under 7% of all boys were formally detained in a detention hearing.

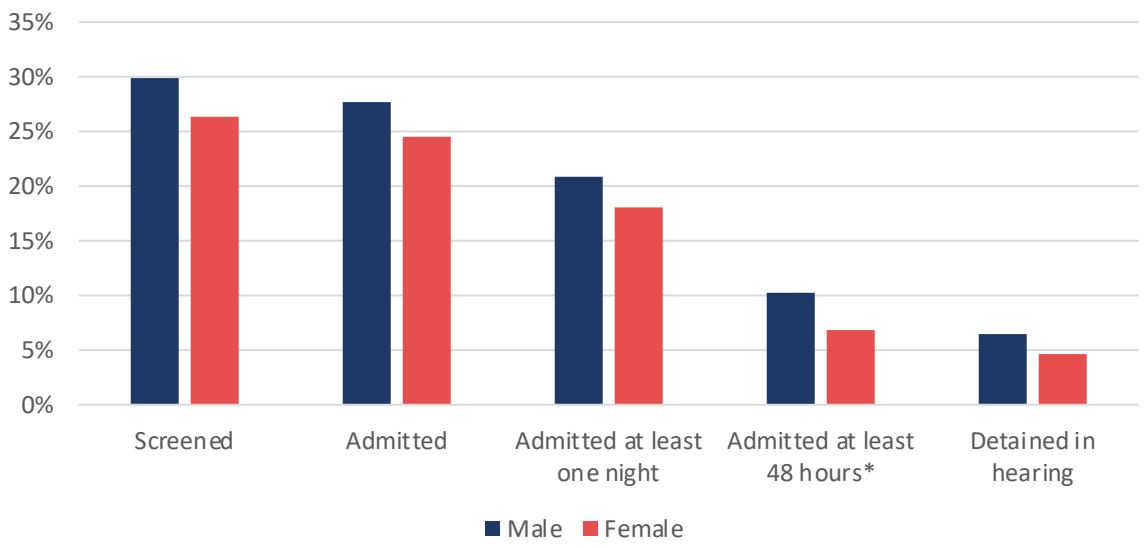
[11] The JPO's supervisor must authorize any override.

[12] The distinction between an admission to detention and a formal detention is an important one from a legal standpoint. However, from the point of view of the youth, the distinction becomes less relevant. Although being formally detained may carry additional weight – both symbolically and for the resolution of the case-, the youth's experience in a detention center is not changed by the fact that the admission has been legally sanctioned.

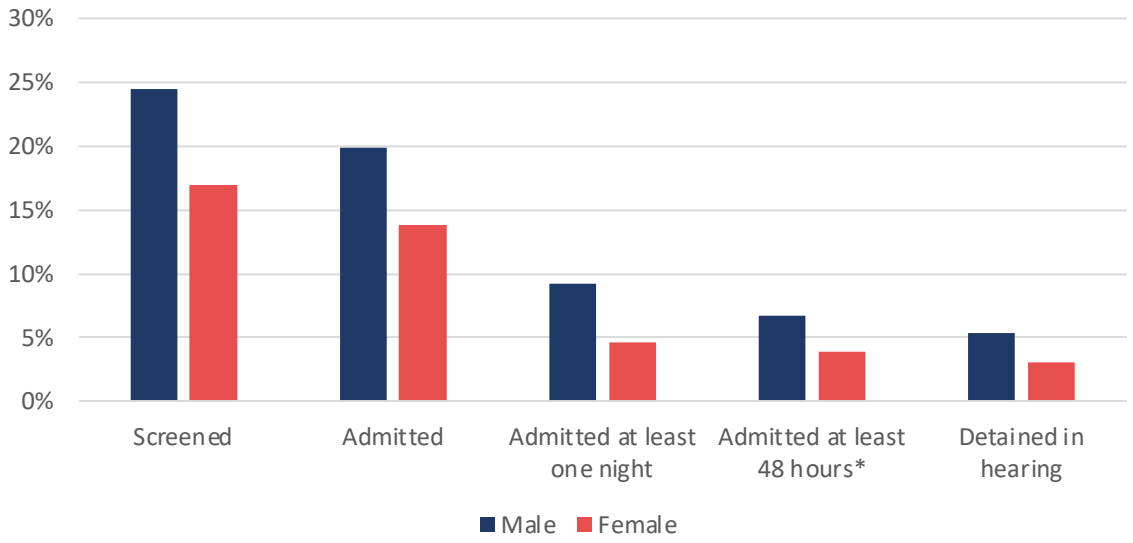
As shown, the rates at which youth were screened and admitted to detention are very similar. Many circumstances could explain why a screening would almost surely lead to an admission. For instance, if law enforcement officers conducted an informal screening and chose to only transfer youth for whom they are certain the screening instrument will recommend their detention upon formal screening, then it would be expected that most screenings result in admissions to detention. Nevertheless, the data do not support this explanation. For instance, between 2010 and 2020, only 32% of girls and 43% of boys who were screened were recommended for detention based on the three criteria described above (score, mandatory detention, or override). Thus, the majority of admission decisions were inconsistent with the result of the screening procedure. Overall, these statistics show that most youth who were admitted to detention had been actually recommended for release. This highlights the fact that the decision on whether to transfer a youth to the detention center is immensely consequential.

Figure 2: Key detention outcomes among youth in their first contact

Panel A: Rates for contacts between 2010 and 2020†



Panel B: Rates for contacts between 2021 and 2022††



This figure shows rates for five detention outcomes during the first contacts of all juveniles referred to the Harris County Juvenile Court, disaggregated by sex.
† Includes all first contacts between January 1, 2010, and January 31, 2021. We present this period as 2010-2020 to simplify the exposition.
†† Includes all first contacts between February 1, 2021, and December 31, 2022. We present this period as 2021-2022 to simplify the exposition.
* "Admitted at least 48 hours" is defined as having a release at least two business days after admission.

Panel B shows the rates for the same outcomes in 2021 and 2022 (after the implementation of the DSI). Several differences concerning Panel A are worth noting. First, there is a small decrease in the fraction of youths who are screened, as well as the fraction who are admitted. This decrease is more pronounced for girls than it is for boys. Second, there is now a small difference between the rate of screening and admission (first two bars). As mentioned above, the rates in Panel A exemplify how almost every youth who was screened (transferred to the JDC) was later admitted. Panel B shows that, over the last couple of years, that relationship is not as strong, though a vast majority of screened youth are still being admitted. Finally, the most notable change between Panels A and B is for the following two outcomes (spending at least one night, spending at least two business days). Rates, both for boys and girls, are much lower than they used to be. Rates for formal detentions remain similar, however, suggesting that changes in policies and procedures have led to a quicker release of youth who are not expected to be scheduled for a detention hearing.[13]

The differences between the rates of detention outcomes in Panels A and B also confirm the importance of conducting a separate analysis for the period before and after the implementation of the new screening instrument.

[13] A year-by-year look at the data supports the interpretation of a drastic change in procedures around the time of the implementation of the new screening instrument and other policy changes, rather than a gradual one.

3 METHODOLOGY: MEASURING RACIAL DISPARITIES IN THE DETENTION PROCESS

A simple comparison of rates in key detention outcomes for Black, Latino/a, and white youth captures much more than the potential disparate treatment of these groups of youth.[14] The multiple actors involved in each of the different steps of the detention process consider a wealth of information when making their decisions. Part of this is the result of the design of formal procedures, such as when characteristics of the alleged offense are included in the instruments used to screen for the need for secure detention. In other cases, this information may be used on a more informal basis. Therefore, because Black, Latino/a, and white youth may differ, on aggregate, with respect to many of the characteristics that influence detention decisions, then different rates in detention outcomes could be expected even if race or Latino/a ethnicity did not play a direct role in those decisions.

Thus, the racial disparities we estimate in this report try to account, to the extent possible, for existing differences in other characteristics that may influence detention decisions. Our econometric models account for all the information available in the data that may confound the estimated differences in the rates at which different groups of youth experience detention outcomes. To do this, we are able to exploit very rich data capturing each youth's case and background. Moreover, we also use the available data to calculate a screening instrument score (RAI or DSI, depending on the date) and obtain a hypothetical screening recommendation for every youth in our data, even for those who never received an actual screening. Thus, our estimates specifically account for:

- **the seriousness of the alleged offense(s) (e.g., second-degree felony)**
- **the type of the alleged offense(s) (e.g., against person or drug-related)**
- **the number of alleged offenses in the incident that prompted the referral**
- **the source of the referral (e.g., school vs. law enforcement)**
- **the youth's age**
- **with whom the youth lives (e.g., both parents, a relative)**
- **whether the youth is behind in school for his or her age**
- **PACT (Positive Achievement Change Tool) assessment results, when available**
- **RAI/DSI score (even for youth who were not formally screened)**

The results from our analysis can be interpreted as the differences between Black and white youth, and between Latino/a and white youth, for youth who are otherwise comparable along all of these characteristics, including their detention screening assessment. In other words, none of the racial gaps we report in our analysis can be attributed to differences in any of the characteristics listed above.

To distinguish these estimated gaps that account for other characteristics and simple comparisons of rates of outcomes between groups, throughout the rest of this report we refer to the estimated gaps as conditional gaps (or conditional differences). Conversely, we refer to simple comparisons as unconditional gaps.

Finally, we must note that despite the rich set of characteristics we control for, Black, Latino/a, and white youth may still differ with respect to other characteristics that we are unable to observe in the data. Thus, it is possible that the conditional gaps still contain some degree of bias. However, given the characteristics we are able to control for (e.g., offense) and the magnitude of the estimated gaps we present below, it is unlikely that any of the conclusions we present in this report are substantially affected by this potential bias.

For a more detailed description of the data, including how different variables are constructed, sample sizes, and a technical description of our methods, please see the Appendix.

[14] Our analysis excludes other racial and ethnic groups due to small sample sizes.

4 RACIAL DISPARITIES BETWEEN 2010 AND 2020

We begin our analysis by examining the detention decisions of all white, Black, and Latino/a youths who were involved with the Harris County juvenile justice system between January 1, 2010, and January 31, 2021. For simplicity, we refer to this period as 2010-2020. For reference, we first present unconditional (simple) comparisons of outcome rates below. We later estimate the conditional differences, accounting for all available confounders.

4.1 Unconditional comparisons of outcomes

Figure 3 compares the five detention outcomes for white, Black, and Latino/a youths. As it can be seen there, Black youth were overrepresented at each step of the way. For instance, Black boys are 12.5 percentage points more likely to be admitted or screened than white boys, and 4.5 percentage points more likely to be formally detained than white boys. As a point of comparison, 20.8% of white boys were admitted to detention and 3.8% were formally detained. Thus, these observed differences mean that Black boys were 60% more likely to be admitted and more than twice as likely to be formally detained that white boys.[15] These patterns are very similar for girls who, for example, were 13.7 percentage points more likely to be admitted to detention during their first contact than white girls were.

The data also show consistent differences in detention outcomes between Latino/a and white youth. However, the observed gaps are typically less than half of those between Black and white youth. Latino boys, for example, were 4.9 percentage points more likely to be admitted to detention than white boys and 2.4 percentage points more likely to be formally detained. In fact, the data do not show any difference between Latina and white girls when it comes to formal detentions (or admissions long enough to require a detention hearing). Thus, it is important to note that, despite the documented disparities between Latino/a and white youth, the extent to which disparities are experienced is not the same for Black and Latino/a youth.[16]

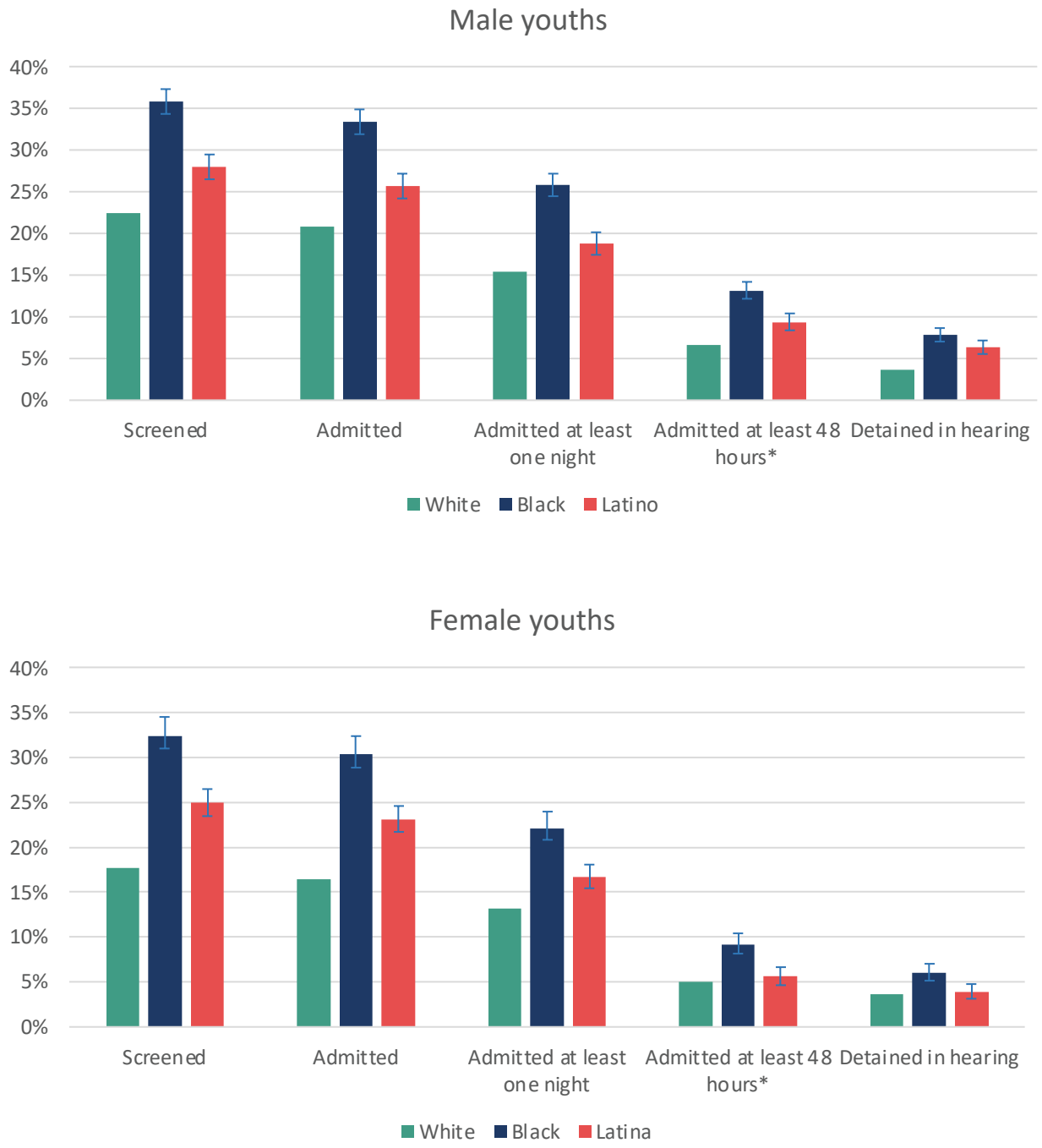
The gaps in detention outcomes depicted in Figure 3 provide an initial description of disparities in outcomes between Black, Latino/a, and white youth. However, as mentioned above, on average, Black, Latino/a, and white youth differ in many other characteristics that may affect detention outcomes. Thus, the unconditional gaps in detention outcomes shown in Figure 3 may be capturing some of these other differences. The analysis we present below aims to account for these differences when comparing outcomes for these groups of youth.

[15] To illustrate these relative representations, the 60% figure is obtained by dividing the 12.5 percentage point difference by the baseline rate of 20.8%: 12.5/20.8=59.8%

[16] It is possible that some Latino/a youths were categorized as white in the data. This may lead to a downward bias, understating the size of the observed differences with respect to white youths.

Figure 3: Rates in key detention outcomes

Simple comparisons between white, Black, and Latino/a youths, 2010–2020†



NOTE: These graphs provide a simple, unconditional, comparison of the rates of five key detention outcomes for white, Black, and Latino/a youths, by sex (top panel for males, bottom panel for females). Bars for Black and Latino/a youths include 95% confidence intervals for the difference with respect to the rate for whites.
† Includes all first contacts between January 1, 2010, and January 31, 2021. We present this period as 2010-2020 to simplify the exposition.
* "Admitted at least 48 hours" is defined as having a release at least two business days after admission.

[17] Please see Appendix B for a comparison of white, Black, and Latino/a youths with respect to some of the other characteristics we include in our analysis.

4.2 Racial disparities in detention outcomes

Figure 4 shows the conditional gaps in the same key outcomes that appeared in Figure 3. The results show that, even after controlling for all the available characteristics, racial disparities persist. The conditional difference between Black and white boys in the likelihood of being admitted to detention is 8.1 percentage points. This estimated difference is, roughly, 60% of the observed difference in outcomes reported in Figure 3. Thus, about 40% of the observed differences in admission rates can be attributed to differences in other characteristics, such as the specific circumstances of the offense.[18]

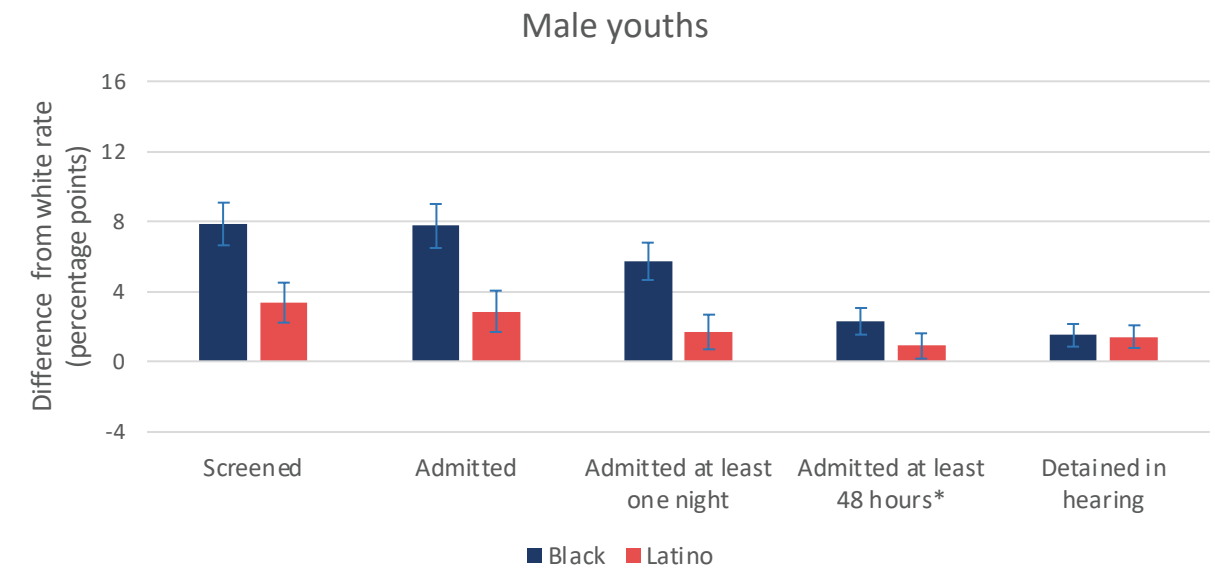
As we have described, the decision to transfer the youth to the JDC is immensely consequential, as it almost guarantees an admission to detention, regardless of the result of the screening. Figure 4 shows how this close connection translates into almost identical conditional differences in being screened and being admitted to detention. These disparities, however, persist along the steps that follow in the detention process. As a result, Black boys are more likely to stay in detention at least one night and to stay in detention enough time to require a detention hearing (two business days). Black boys are also far more likely to be formally detained than white boys are. In fact, the conditional gap in formal detention, 2.7 percentage points, represents a 70% higher likelihood of formal detention for Black boys, relative to the rate of white boys (3.8%). In comparison, the 8.1 percentage point difference in admission rate represents a 39% higher likelihood of admission. Thus, these results imply that a big part of the racial disparities stemmed from the decision of who was transferred to the JDC. These results also show that those disparities continued, and may have been exacerbated or amplified, by the time formal detention decisions were made in detention hearings.

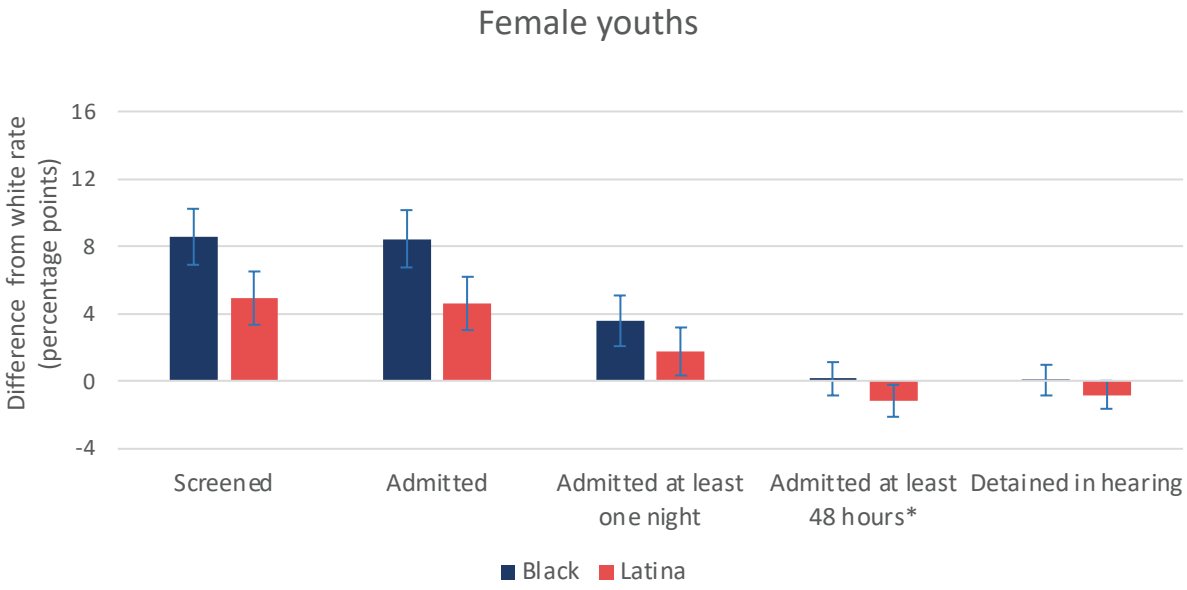
Just as suggested by the differences in rates in Figure 3, the estimated gaps between Latino and white boys are slightly less than half of those between Black and white boys. Latino/a boys were 3.7 percentage points (16%) more likely to be transferred to the JDC or screened, 3.3 percentage points (16%) more likely to be admitted, and 1.9 percentage points (51%) more likely to be formally detained than white boys were.

[18] The share of observed differences explained by the variables we control for varies by outcome, race, and sex. Roughly 40% of differences in admission rates can be explained by these variables for all races and both sexes. For the outcome of "admitted at least one night," between 50%–60% of differences are explained. For formal detentions in hearings, all of the differences disappear for girls, and between 45% and 65% are explained for boys.

Figure 4: Conditional racial differences in key detention outcomes

Black-white and Latino/a-white differences in outcome rates, 2010–2020





NOTE: These graphs show the difference in the rates of five key detention outcomes between Black and white youth (navy) and Latino/a and white youth (red), by sex (top panel for males, bottom panel for females). The differences in rates account for differences in alleged offense characteristics, demographics, referral characteristics, and RAI scores between groups of youth. Baseline rates (rates for white youths) are different for each of the outcomes, as shown in Figure 3.
Each bar shows the 95% confidence interval for the estimated conditional difference.
† Includes all first contacts between January 1, 2010, and January 31, 2021. We present this period as 2010–2020 to simplify the exposition.
* "Admitted at least 48 hours" is defined as having a release at least two business days after admission.

To understand the overall picture presented by the results in Figure 4, it is useful to illustrate what these results do not show. Consider, for instance, an alternative scenario in the screening process itself was a main source of disparities. In such a case, we would expect to observe disparities to increase as we move from looking at disparities in who was screened (column 1) to who was admitted (column 2). The data, however, are not consistent with a story of that kind, as the bulk of disparities seems to stem from the initial decision of whom to transfer to the detention center for screening. Likewise, the results in Figure 4 are not consistent with a scenario in which those initial disparities are mitigated by the time a detention hearing must occur, nor during detention hearings themselves. Thus, even if most disparities begin with the decision of which youth to transfer to the detention center, none of the subsequent decision nodes correct these disparities. In the end, substantial gaps continue all the way to formal detentions.

Some of these patterns are similar for girls. The conditional gaps, both for Black and for Latina girls, are similar in magnitude to the ones for boys. Nevertheless, rates for all of the key outcomes are slightly lower for girls than for boys. Thus, in relative terms, these conditional gaps are generally larger for girls than for boys. As an example, the conditional gap in admission to detention between Black and white girls is 8.6 percentage points (very similar to the corresponding gap for boys). However, relative to the rate for white girls, which is 16.7%, this 8.6 percentage point difference translates into a 52% higher likelihood of admission for Black girls.

One key difference between boys and girls is formal detention. For girls, the Black-white gap is only 0.6 percentage points and, statistically speaking, indistinguishable from zero. Consequently, as opposed to what happens with boys, disparities for girls have already disappeared by the time detention hearings need to be scheduled (two business days after the referral) and are therefore inexistent when we look at formal detentions. This is true for Latina girls as well. Indeed, for them, the conditional difference in formal detention is actually negative, although statistically indistinguishable from zero.

The conditional differences in key detention outcomes, shown in Figure 4, provide evidence of substantial gaps between youth of color and white youth throughout most of the detention process. For boys, by the time formal detentions are decided in detention hearings, disparities may even have been exacerbated. The opposite is true for girls. This highlights the importance of looking at all of these steps separately.

4.3 Screening and unjustified admissions

A key node in the detention process is the decision to transfer a youth to the detention center following an arrest. As we have noted, at this step, many youths whose screening results do not recommend detention are nevertheless admitted to detention. The results in Figure 4 show that racial disparities begin at this step and carry forward to all subsequent steps.

Table 1 explores this pattern of unjustified admissions—that is, admissions that do not correspond with the screening recommendation—in more detail. The first row shows the rates and conditional differences for unjustified admissions as a share of all youth who were referred. For instance, out of all referred white girls, 12% of them were admitted to detention even though the RAI screening recommended them for release.[19] The second row shows the same outcome—unjustified admissions—as a share of all youths who were transferred, screened, and recommended for release. As shown there, roughly 95% of white girls and boys who were screened and recommended for release were actually admitted (some for less than a day).

The results in Table 1 confirm what Figure 4 implied. Black and Latino/a youths are more likely to be unjustifiably admitted to detention. However, as the second row shows, these disparities do not stem from

[19] For reference, as shown in Figure 3, 16.4% of all referred girls were admitted to detention. Thus, nearly three out of every four admissions fall under our category of unjustified admissions.

differential decisions once youths arrive and are screened at the JDC. In other words, the data do not show any evidence that staff were more or less likely to admit a Black, Latino/a, or white youth upon screening (although the data clearly show that almost all youths were admitted even when they were recommended for release). Thus, the results in Table 1 confirm that the disparities stem from the decision on whom to transfer to the JDC.

Table 1: Conditional differences in unjustified admissions

	Females			Males		
	White rate	Black-white difference	Latina-white difference	White rate	Black-white difference	Latino-white difference
Reference group:						
All referred youths	0.117	0.072 *	0.048 *	0.124	0.061 *	0.030 *
Screened and recommended for release	0.947	-0.006	-0.016	0.957	-0.002	-0.017

NOTE: This table shows conditional differences in unjustified admissions (admissions to detention for youths whose screening results did not recommend detention). For reference, the rate for white youths is presented for each outcome.
* indicates the difference is statistically significant at the 5% level.

4.4 Digging deeper: Racial disparities in screening outcomes

As we have shown, most youth who were transferred to the JDC, and therefore received a formal screening, were admitted to detention, regardless of the outcome of the detention screening. Our analysis of "unjustified admissions" showed no evidence of disparities in decisions of admission once youths have been brought to the JDC for screening. Nevertheless, it is important to examine whether the detention screening itself produced results that contributed to racial disparities. It must be noted that the scoring part of the screening instrument should not show any conditional gaps between groups of youth, as those conditional gaps account for the kind of information used to obtain those scores (e.g., a score for a Black and a white youth with exactly the same offense should mechanically be the same). However, the mandatory and override criteria in the detention screening involve discretion from HCJPD staff. Here too, disparate treatment may exist. However, differences in these outcomes may also reflect differences in the circumstances that motivate them. For instance, if Black youth are more likely to use firearms, this will translate into a higher proportion of their cases involving mandatory detentions. Thus, the differences presented below should only be interpreted as potential nodes in which the screening process may lead to different outcomes for different groups of youth. transfer to the JDC.

Table 2: Unconditional and conditional differences in screening outcomes

		Black-white difference		Hispanic-white difference	
Outcome	white rate	unconditional	conditional	unconditional	conditional
Detention override	0.115	-0.056*	0.009	-0.045*	0.015
Mandatory detention	0.08	0.037*	0.032*	0.046*	0.024*

NOTES: This table shows unconditional and conditional differences in the three potential criteria for detention in the RAI screening. Due to small sample sizes for females, results are shown only for male youths.
* indicates the difference is statistically significant at the 5% level.

Table 2 shows two special outcomes related to the screening results, namely whether an override led to a detention and whether a mandatory detention was flagged. Due to small baseline rates in some of these outcomes for girls, we only present the results for boys. In the table, we include the proportion of white boys with each outcome (column 1), the observed difference for Black and Latino boys (columns 2 and 4), and the conditional difference for these two groups of boys (columns 3 and 5). As the table shows, there are some racial differences with respect to who receives an override. Black and Latino boys are actually less likely to receive an override than white boys. However, these disparities disappear once we control for all the observed characteristics of youths' cases.

On the other hand, the results in Table 2 show that Black and Latino boys are more likely to receive mandatory detentions. Because the leading cause for mandatory detention in our sample is the use or exhibition of a firearm, it is likely that differences in mandatory detentions simply capture a higher prevalence of firearm use among Black and Latino boys. Thus, in this particular case, conditional differences do not fully account for differences in other characteristics. Thus, it is not possible to distinguish if these differences are caused by differences in circumstances (e.g., prevalence of firearm use) or bias in the way those circumstances are recorded or interpreted.

5 RACIAL DISPARITIES BETWEEN 2021 AND 2022

5.1 Changes in practices and a new screening instrument

As mentioned, HCJPD developed and implemented a new screening instrument, the DSI (Detention Screening Instrument), in February 2021. The DSI was implemented concurrently with other changes as part of the JDAI (Juvenile Detention Alternatives Initiative), a collaboration between HCJPD and the Annie E. Casey Foundation aimed at reducing the unnecessary use of incarceration and eliminating the racial disparities in the use of these practices. To maintain consistency in the screening instrument, as well as other practices, the main analysis in the previous section excluded data for cases after the implementation of the DSI. In this section, we conduct a separate analysis of racial disparities using data for detention decisions happening after the implementation of the DSI.

The introduction of the DSI is only one of many changes implemented as a deliberate effort to change detention practices, all of which occurred within an explicit discourse of institutional change. Thus, when we analyze racial disparities in this recent period, we are not attempting to measure the effect of the implementation of the DSI. In fact, the new instrument alone can only affect the recommendation on whether a youth should be detained. However, as discussed in Section 2, between 2010 and 2020 almost every youth who was screened was later admitted, regardless of the screening instrument's recommendation. A majority of these youths ended up spending at least one night in detention. Thus, without further changes in procedures and practices, it is unlikely that the change of the screening instrument alone would have any effect on the disparities examined here. However, the data suggest clear changes in some of the decisions in the detention process. To illustrate this, Figure 5 plots the percentage of youth who were admitted and spent at least one night in detention over time.[20] There is a notable break in this outcome, with rates dropping from over 20% in 2020 and the years before to 5% in 2022.

In light of all these changes, we do not interpret the differences between the two analyses as a measure of the impact of the new instrument or any other specific policy change. Rather, we see the analysis in this section as a preliminary assessment of racial disparities in detention under the *current* set of policies and informal practices determining detention outcomes.

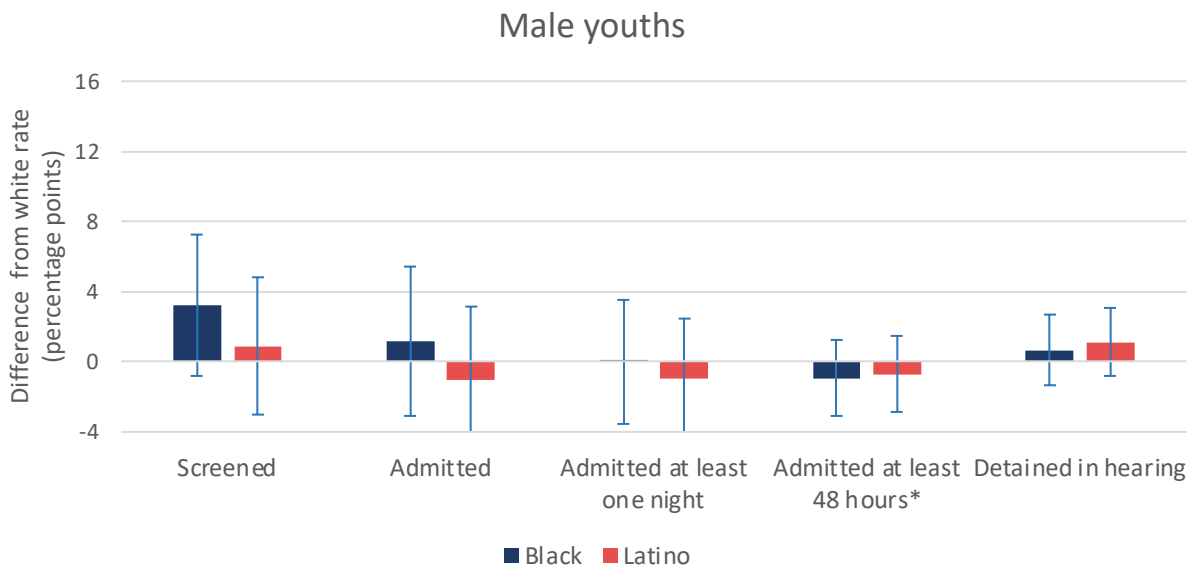
[20] Restricting to those who spent at least one night excludes youths who were admitted only temporarily awaiting their parents to come pick them up at

5.2 Current racial disparities in detention outcomes

Figure 5 shows the conditional gaps in key outcomes between 2021 and 2022 (since the implementation of the DSI). The limited amount of time (thus data) since the implementation of the DSI, together with the large decrease in rates for some of the detention outcomes (as shown in Figure 2), result in much smaller sample sizes for this analysis. In fact, we can only conduct the analysis for boys, as there are only a handful of white girls with some of the detention outcomes we analyze. Thus, the results from this analysis are less precise and rely on a relatively smaller number of cases. We interpret them as only preliminary.

Figure 5: Conditional racial differences in key detention outcomes

Black-white and Latino/a-white differences in outcome rates, 2021–2022††



NOTE: This graph shows the difference in the rates of five key detention outcomes between Black and white male youth (navy) and Latino and white male youth (red). The differences in rates account for differences in alleged offense characteristics, demographics, referral characteristics, and DSI scores between groups of youth. Baseline rates are different for each of the outcomes.
Each bar includes the 95% confidence interval for the estimated conditional difference.
†† Includes all first contacts between February 1, 2021, and December 31, 2022. We present this period as 2021–2022 to simplify the exposition.
* "Admitted at least 48 hours" is defined as having a release at least two business days after admission.

The results in Figure 5 show an encouraging picture. The estimated conditional Black-white differences in most outcomes are not only statistically insignificant, but also very close to zero in magnitude. Our preliminary analysis shows that during 2021 and 2022, no evidence exists of differences in the rates at which Black, Latino, and white boys were admitted to detention. This lack of disparities extends to all subsequent outcomes, including spending one night in detention, spending at least two business days in detention, and being formally detained in a hearing.

The data suggest that there might still be some racial disparities in the rates at which youths are transferred to the JDC. The estimate is smaller in magnitude than what we had found for the previous years and our statistical precision is also lower. However, given the importance of this step in our previous analysis, we caution against concluding that this outcome, too, shows no evidence of disparities. Overall, the decision of whom to transfer to the JDC appears to be one where improvements can still be made.

It is unclear if these encouraging signs would also extend to girls, for whom we are unable to conduct the analysis. On one hand, recent changes in practices should not have differential effects by sex. If this were the case, one should expect similar conditions for girls under the current set of procedures. On the other hand,

Figure 4 had shown that patterns were different for girls and boys. We expect to revisit this question once we have accumulated enough data to conduct the analysis for girls too.

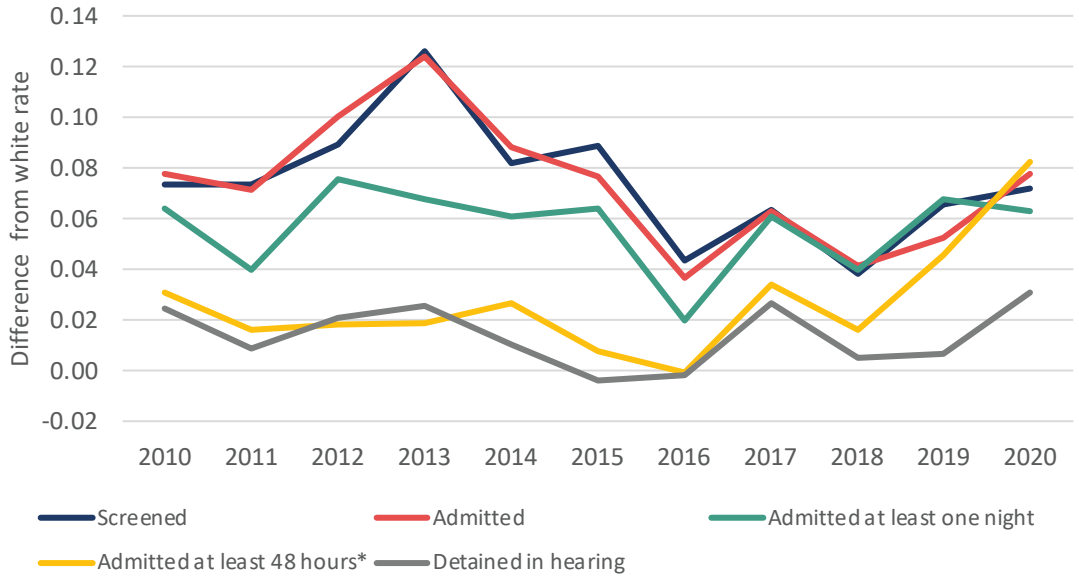
5.3 Exploring the timing of changes

The racial disparities for 2021 and 2022 differ from those we estimated for the 2010–2020 period, as presented in Section 4. As we have mentioned, we do not interpret these differences as measures of the impact of specific changes. Nevertheless, it is worth exploring whether these implied changes seem to have happened all at once or whether there is evidence of a slower change happening over several years.

Thus, to explore whether racial disparities in detention outcomes had already changed prior to 2021, in Figure 6 we plot yearly Black-white conditional differences in the same outcomes for boys between 2010 and 2020. Because each of the yearly rates is calculated with a smaller sample size, these estimates are noisier and year-to-year changes may simply capture normal variation in these outcomes. However, two suggestive patterns emerge. First, the second part of the decade had already shown a decline in most of the measured racial disparities. Second, within that second part of the decade, all outcomes appear to be either stable or showing some sign of increase (again, one should not put too much weight into small changes between two years). Nevertheless, the data do not suggest that these outcomes were decreasing consistently in the years leading to the implementation of the DSI and other concurrent policy changes.

Figure 6: Yearly conditional differences in key detention outcomes

Differences between Black and white male youths between 2010 and 2020†



NOTE: This graph shows the difference in the rates of five key detention outcomes between Black and white male youth, by year. The differences in rates account for differences in alleged offense characteristics, demographics, referral characteristics, and DSI scores between groups of youth. Baseline rates are different for each of the outcomes.
† Includes all first contacts between January 1, 2010, and January 31, 2021. We present this period as 2010-2020 to simplify the exposition.
* "Admitted at least 48 hours" is defined as having a release at least two business days after admission.

[21] For simplicity, and based on previous results, we only plot Black-white conditional differences. Similarly, due to small sample sizes, we do not plot differences for girls.

In light of the lower estimated differences towards the second part of the decade, Table 3 presents the estimated conditional Black-white and Latino/a-white differences in detention outcomes for the period of 2016-2020 (rather than 2010-2020). The starting year, 2016, is chosen arbitrarily to aggregate a five-year period and generate large enough sample sizes. We present estimates for Black-white and Latino-white conditional differences, for both boys and girls.

Two noteworthy facts arise from the results in Table 3. First, during the 2016–2020 period, there were no estimated Latino-white differences in any of the detention outcomes for boys. For girls, large differences remain in the rates at which Latinas were screened and admitted, but those differences disappear by the time we look at who spends at least one night in detention. Second, the estimated Black-white conditional differences for boys appear to be slightly smaller in magnitude than the ones presented in Figure 4. For girls, Black-white differences appear to remain unchanged.

Overall, the results in Figure 6 and Table 3 suggest that some improvements may have already started prior to 2021. In particular, Latino-white differences had already disappeared by this period. The results also suggest some small improvements in Black-white differences in the case of boys. However, these improvements do not amount to the large reductions implied by the results for the 2021–2022 period. Thus, the evidence in Figure 5 is more consistent with a recent change in detention practices, rather than a slow and gradual one. Nevertheless, as we have stressed throughout this report, our analysis does not allow us to attribute these changes to any specific change in practices or procedures.

Table 3: Conditional differences in detention outcomes

Estimated differences for the 2016–2020 period only

		Differences				Differences			
	White rate	Black-white		Latino-white	White rate	Black-white		Latino-white	
Screened	0.22	0.08	**	0.03	0.18	0.09	**	0.05	**
Admitted	0.21	0.08		0.03	0.16	0.08	**	0.05	**
Admitted at least one night	0.15	0.06		0.02	0.13	0.04	**	0.02	
Admitted at least 48 hours*	0.07	0.02	**	0.01	0.05	0.00		-0.01	
Detained in hearing	0.04	0.02	**	0.01	0.04	0.00		-0.01	

NOTES: This table shows differences in key detention outcomes that account for differences in available youth characteristics. For each outcome, the table shows the Black-white and Latino/a-white conditional differences using the same covariates as in the estimates presented in Figure 4. The table also shows the rate for white youths, for reference.
* "Admitted at least 48 hours" is defined as having a release at least two business days after admission.
** Indicates statistical significance at the 5% level.

6 DISCUSSION

We have rigorously analyzed racial disparities in detention during the initial contact of justice-involved youth. Our analysis used rich data for the roughly 45,000 youth who were involved with the Harris County Juvenile Justice System between 2010 and 2022. Because many changes in detention practices were introduced in 2021, we conducted separate analyses before and after these changes. In each of these analyses, we estimated Black-white and Latino/a-white gaps in multiple detention outcomes, implementing econometric tools to account for potential differences in many other characteristics between white, Black, and Latino/a youth. By doing this, we can be confident that the estimated gaps between groups of youth cannot be attributed to differences in these other factors, such as offense characteristics, sociodemographic variables, or detention screening scores. Furthermore, rather than focusing on a single measure of detention, we disaggregated the initial detention process into multiple outcomes. Their separate analysis allows us to identify specific nodes in the process where actions and interventions may help reduce or eliminate these disparities.

Our results show that, between 2010–2020, Black and Latino/a boys and girls were far more likely to be admitted to detention during their first contact than comparable white youth. For example, Black boys were 8.1 percentage points more likely to be admitted to detention than white boys, which translates into a 39% higher chance of being admitted, relative to the rate for white boys. Similarly, the difference between Black and white girls is 8.6 percentage points (51%). Thus, even after accounting for a rich set of other characteristics, Black youth were substantially overrepresented among youth admitted to detention.

Our analysis of the different nodes in the detention process shows that differences in admissions are very closely related to differences in the rates at which Black, Latino/a, and white youth are transferred to the detention center following an arrest. Nevertheless, the majority of transferred youth were not recommended for detention upon screening. Thus, the decision to transfer a youth to the detention center, made jointly by law enforcement, prosecutors, and HCJPD staff, was immensely consequential during this period. Implementing policies and procedures that would reduce this unnecessary transfer of youth who are not eligible for detention has the potential to disproportionately benefit Black and Latino/a youth.

During this period (2010–2020), disparities did not stop with the initial admission to detention. Black and Latino boys were more likely to stay at least one night in detention and to be formally detained in a hearing than comparable white boys. Thus, even if the bulk of estimated disparities seem to stem from the decision of who to transfer to the JDC, those initial disparities were not remediated (for boys) at any other subsequent decision point.

Encouragingly, we did not find similar disparities in formal detention for girls during the same period (2010–2020). Even if Black girls are, on average, more likely to be formally detained than white girls, our analysis shows that these differences disappear once we account for other existing differences between these two groups of girls. In fact, we did not find any disparities when we analyze who stays in detention for at least two business days. Thus, unlike the case of boys, initial disparities in admissions to detention disappeared in a couple of days. Our data do not allow us to determine whether this is due to releases before hearings or decisions made at detention hearings (or both).

We then analyzed the data for detention decisions made after the implementation of the new screening instrument (DSI) and other concurrent changes (2021–2022). Due to small sample sizes, we could only estimate the conditional differences for boys. Thus, we take these results as preliminary. However, the estimates suggest very encouraging signs. After accounting for a wide range of youth and case characteristics, our estimates did not show any difference in the rate at which white, Black, and Latino boys are being admitted to detention, spending at least one night in detention, spending at least two business days in detention, or are being formally detained in a hearing. Although imprecisely estimated, the data still suggest that differences for which youths get transferred to the detention center may remain.

As mentioned, we were unable to estimate differences in outcomes during the recent period for girls. Results for the 2010–2020 period suggested differential patterns for boys and girls. This fact, and the preliminary nature of the estimates for boys, underscore the importance of revisiting these estimates in a few years when more data have become available.

We interpret the estimates for the 2021–2022 period, with their encouraging signs, as an assessment of current detention practices. However, the differences concerning previous years should not be interpreted as a measure of the impact of the changes in practices that occurred around 2021. Multiple changes occurred simultaneously, including external factors such as COVID-19-related adjustments in practices and changes in delinquency trends, among many others.

Overall, our analysis shows that, over the course of the previous decade, substantial racial disparities existed throughout the entire detention process for youth in their initial contact with the juvenile justice system. An analysis of recent data, which reflects current practices, shows there are encouraging signs as we found no evidence in disparities in most outcomes. However, the patterns unveiled by our data analysis suggest that there is room for added improvement and vigilance to tackle the disparities that are generated early in the detention process, namely in the decision of whom to transfer to the detention center for screening.

The results of our analysis of the disparities under current practices are in stark contrast with the substantial disparities we found in our analysis of data from the previous decade. Although our analysis showed encouraging signs, the lack of disparities in most key decisions does not indicate equal representation of Black, Latino/a, and white youths. In fact, in 2022, Black youths accounted for 46% of admissions to detention, while white youths accounted for less than 9%. The results of our analysis show that this disproportionate representation of Black youth is no longer exacerbated by the decisions made during the detention process. However, because Black youth are more likely to be referred to the juvenile justice system to begin with, Black youth are overrepresented among youths admitted to detention. Thus, deeper, structural disparities still lead to substantial disproportionalities in detention outcomes.

As recent research has shown, detention may lead to negative consequences for many youths, including increased juvenile recidivism, increased likelihood of being arrested as an adult, and lower high school graduation rates.[22] Thus, beyond imposing unequal punishments and restrictions on youth based on their race and ethnicity, racial disparities in detention outcomes are also likely to exacerbate disparities in many other aspects of life. The results presented in this report aim at providing useful evidence that will help policymakers design and enact interventions to address these disparities.

[22] See Walker and Herting (2020) and Baron, Jacob, and Ryan (2022).

7 ACKNOWLEDGEMENTS

We are very grateful to Carla Glover and Desirae Gonzales of the Harris County Juvenile Probation Department for their dedicated work to provide us with accurate and timely data for this report. Our analysis would not have been possible without their tireless work to pull and organize the data used here. We are also immensely grateful for their assistance to contextualize the data and dig up internal documentation to characterize the decisions analyzed here.

We are also grateful to Kuan Chen for his careful, rigorous, and diligent research assistance.

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APPENDIX

1.1 Data

1.1.1 Sample and key variables

This report uses detailed referral data provided and assembled by the Data and Research division of the Harris County Juvenile Probation Department. The data include offense, disposition, detention, placement, and screening records for all referrals related to any youth involved with the Harris County juvenile justice system whose first referral occurred between 2010 and 2022. Thus, the data capture the entire universe of justice-involved youth during this period.

Race

In the data, race and ethnicity are captured in a single variable with the five categories: white, African American, Hispanic, Asian, and unknown. Due to small sample sizes, our analysis does not include youth categorized as Asian. We also drop youth with unknown race.

It is important to note, however, that the data captured in the race variable represents race as recorded at the time of referral. It is possible then that youth's identities do not correspond with the data. In particular, white-Latino/a youth may have been categorized as white. In fact, data reviews conducted as part of the JDAI have confirmed this to be a common problem with the data. Thus, our estimates for the conditional differences between white and Latino/a youths could be biased downwards, particularly during the earlier years of our analysis period.

Age

Although youth may be referred to the Juvenile Court starting at age 10, youth under 12 may receive differential treatment based on their age. Thus, our analysis is limited to youth whose first referral occurred between the ages of 12 and 16. In Texas, youth older than 17 are no longer under the jurisdiction of the Juvenile Court and are therefore handled by the adult criminal justice system.

Sample sizes

Our main analysis focuses on the period in which the RAI was used to screen for detentions. The RAI was replaced by the DSI in February 2021. Our sample for this period includes data for 41,228 youth. We also conduct a separate analysis with youths whose first contact occurred after the implementation of the DSI. Due to small sample sizes, we only use data for boys (N=2,460). Table A1 disaggregates the sample by period, sex, and race.

Table A1: Sample sizes by period, race, and sex

RAI period: January 1, 2010–January 31, 2021			
	Female	Male	Total
Black	4,769	10,752	15,521
Latino/a	4,896	13,238	18,134
White	2,607	4,966	7,573
Total	12,272	28,956	41,228
DSI period: February 1, 2021–December 31, 2022			
	Female	Male	Total
Black	432	1,124	1,556
Latino/a	349	1,110	1,459
White	96	226	322
Total	877	2,460	3,337

1.1.2 Key definitions

We define a ***contact*** as a group of one or more referrals (i.e., charges) that occur on the same date. To characterize offenses when a contact includes more than one referral, we use the most serious offense in that contact.

The detention outcomes analyzed in this report come from administrative detention records. Using these records, we identify all separate detention stays—non-consecutive periods in which the youth was in detention—associated with each contact. As we have described, we focus on detentions that occur at the time of referral. Under this restriction, each of the key outcomes used in this report is defined as follows:

Admissions to detention include any detention stay that began on the same date as the referral.

Admissions of at least one night are the subset of admission that end at least one day after their start date.

Admissions of at least two business days are the subset of admissions that end at least two business days after their start date. Business days exclude weekends and all holidays observed in Harris County.

Formal detentions are admissions for which the outcome of a detention hearing is recorded. Notably, the data do not capture whether a detention hearing took place, only when the outcome of a detention hearing was to order a detention (i.e., we do not observe when the outcome of the detention hearing was to order the youth's release).

Unjustified admissions are admissions for youth whose screening instrument (RAI or DSI) recommendation was either release or conditional release. The analysis of this outcome in Table 1 presents unjustified admissions as a share of all referred youth and as a share of all screened youth who were recommended for release or conditional release.

1.1.3 Matching of screening records

Screening records are associated with a youth, but not with any referral or contact in particular. Thus, to link screenings to referrals, we use the screening and referral dates. Specifically, we initially assign each screening to the closest referral. However, some assigned screenings do not have dates that are sufficiently close to the referral date. Thus, we only keep matches whenever the screening occurred within five days of the referral date (7.8% of linked referrals are more than five days apart) and we say that a youth was screened whenever we have a matched RAI (within five days). Out of these matched RAIs (i.e., within five days), more than 99% are linked to referrals within one day, with 93.3% linked to a referral on the exact same date.

1.1.4 Control variables

Our main estimates implement probit regression models (details below) in which we include a large set of covariates or control variables. Specifically, all of our regression models include:

- **Most serious offense category in contact (e.g., Misdemeanor A, Felony 1).**
- **Offense severity type for the most serious offense in contact (e.g., drug-related, against-person).**
- **Whether the contact includes more than one referral/offense.**
- **Referral source (schools, law enforcement).**
- **Age at time of referral.**
- **Indicator of being behind in school, defined based on the current grade and the expected grade for the age.**
- **Who the child lives with (e.g., mother only, both biological parents, grandparent).**
- **PACT risk level, which is a separate risk screening used on some youth. Includes an indicator of missing for youth for whom there was no PACT available in the corresponding referral.**
- **Hypothetical RAI or DSI score, depending on the date. We calculate this score based on recorded offenses.**
- **Hypothetical RAI or DSI recommendation based on calculated score and recorded mandatory detentions and overrides.**

1.2 Methods

To obtain estimates for the conditional differences in detention outcomes, we first estimate probit regressions. Formally, for each detention outcome and sex, we estimate models of the following kind:

$$P(DO_i=1 \mid X_i, race_i) = \Phi(X_i \beta + \gamma_B\, black + \gamma_H\, hispanic)$$

Where, DO_i is any of the detention outcomes analyzed in this report, X_i is a vector of control variables (listed above), and $black_i$ and $hispanic_i$ are binary indicators for youth i's race/ethnicity. The function Φ is the normal cumulative distribution function.

We define the conditional difference, CD, as the expected difference in the likelihood of the outcome between a Black (or Hispanic) youth and a white youth with identical characteristics (X_i). For example, for the Black-white conditional difference of detention outcome DO:

$$CD(DO) = E[P(DO_i=1 \mid X_i, race_i=black) - P(DO_i=1 \mid X_i, race_i=white)]$$

We obtain estimates of these conditional differences by calculating Average Partial Effects (APEs) using the estimates from the probit regressions. Again, for the case of Black-white conditional difference, we have:

$$\widehat{(CD)}\ (DO) = APE(DO) = \frac{1}{N}\sum_i \Phi(X_i \hat{\beta} + \hat{\gamma}_B) - \Phi(X_i \hat{\beta})$$

Where $\hat{\beta}$ and $\hat{\gamma}_B$ are the estimated parameters from the probit regression.

To examine the robustness of our estimates to our choice of probit regressions, we also obtained preliminary estimates for some of the conditional differences using propensity score matching (PSM) for a subset of our estimates. In the PSM models, we established comparisons between Black and white and Latino/a and white youth separately, using the same set of covariates in the estimation of the propensity score. The results from the preliminary PSM models were consistent with the ones presented in this report. Notably, the majority of our sample fell into the region of common support in the PSM models. Given the similarity in results, we use APEs based on probit regressions as our main method for simplicity and ease of computation. Furthermore, these models allow us to estimate both Black-white and Latino/a-white conditional differences within the same model.

2 FULL ESTIMATES

2.1 Conditional differences in detention outcomes

The tables below present the complete estimates from the probit models described in Section 1 of this appendix. Tables A2–A4 show the coefficients from the probit regressions, while Tables A5–A6 show the estimated APEs (our measure of conditional differences) presented in Figures 4 and 5.

Table A2: Coefficient estimates, females 2010-2020

	OUTCOME						
COVARIATE RACE X YEAR (REFERENCE=WHITE X 2010)	**YEAR**	**SCREENED**	**ADMITTED**	**ADMITTED** AT LEAST ONE NIGHT	**ADMITTED** AT LEAST 48 BUSINESS HOURS	**DETAINED** IN HEARING	**UNJUSTIFIED ADMISSION**
White X							
	2011	0.068 (0.128)	0.009 (0.127)	-0.012 (0.140)	-0.203 (0.228)	-0.604 (0.296)	0.124 (0.139)
	2012	0.228 (0.127)	0.168 (0.126)	0.125 (0.133)	-0.183 (0.202)	-0.133 (0.220)	0.276 (0.138)
	2013	0.156 (0.131)	0.060 (0.130)	0.041 (0.142)	-0.252 (0.251)	-0.566 (0.289)	0.287 (0.137)
	2014	0.153 (0.132)	0.098 (0.130)	0.109 (0.140)	-0.251 (0.211)	-0.225 (0.231)	0.198 (0.147)
	2015	0.247 (0.125)	0.177 (0.127)	0.066 (0.139)	-0.427 (0.213)	-0.144 (0.211)	0.286 (0.141)
	2016	0.233 (0.144)	0.172 (0.140)	-0.032 (0.160)	-0.192 (0.225)	-0.146 (0.246)	0.310 (0.150)
	2017	0.073 (0.161)	-0.038 (0.171)	-0.133 (0.197)	-0.199 (0.268)	-0.036 (0.271)	0.024 (0.184)
	2018	0.035 (0.150)	0.067 (0.141)	0.061 (0.152)	-0.141 (0.184)	-0.311 (0.225)	0.093 (0.165)
	2019	-0.084 (0.162)	-0.174 (0.168)	-0.329 (0.183)	-0.220 (0.225)	-0.581 (0.308)	-0.039 (0.183)
	2020	-0.170 (0.205)	-0.221 (0.204)	-0.520 (0.237)	-1.130 (0.446)	-1.257 (0.562)	0.007 (0.205)
Black X							
	2010	0.501 (0.104)	0.427 (0.103)	0.174 (0.112)	-0.019 (0.157)	-0.343 (0.196)	0.506 (0.118)
	2011	0.517 (0.110)	0.422 (0.108)	0.299 (0.116)	-0.282 (0.165)	-0.254 (0.182)	0.610 (0.121)
	2012	0.660 (0.111)	0.607 (0.108)	0.289 (0.117)	-0.170 (0.159)	-0.090 (0.178)	0.738 (0.123)
	2013	0.547 (0.116)	0.500 (0.113)	0.125 (0.123)	-0.341 (0.175)	-0.410 (0.200)	0.593 (0.127)
	2014	0.584 (0.112)	0.554 (0.109)	0.262 (0.119)	-0.033 (0.159)	-0.145 (0.182)	0.608 (0.125)
	2015	0.464 (0.115)	0.424 (0.111)	0.264 (0.120)	-0.134 (0.170)	-0.053 (0.186)	0.483 (0.129)
	2016	0.541 (0.116)	0.454 (0.115)	0.261 (0.125)	-0.017 (0.167)	-0.038 (0.187)	0.494 (0.129)
	2017	0.517 (0.120)	0.507 (0.116)	0.334 (0.126)	0.029 (0.165)	0.006 (0.190)	0.493(0.134)
	2018	0.503 (0.114)	0.451 (0.112)	0.211 (0.121)	-0.206 (0.166)	-0.372 (0.196)	0.537(0.127)
	2019	0.285 (0.118)	0.112 (0.119)	-0.175 (0.133)	-0.763 (0.198)	-1.144 (0.254)	0.299 (0.132)
	2020	0.118 (0.160)	0.025 (0.155)	-0.335 (0.172)	-1.075 (0.234)	-1.103 (0.250)	0.249 (0.165)
Latina X							
	2010	0.393 (0.104)	0.378 (0.102)	0.106 (0.112)	-0.452 (0.164)	-0.270 (0.169)	0.530 (0.116)
	2011	0.492 (0.109)	0.362 (0.108)	0.143 (0.120)	-0.512 (0.186)	-0.596 (0.210)	0.559 (0.120)
	2012	0.326 (0.110)	0.261 (0.107)	0.175 (0.116)	-0.421 (0.177)	-0.468 (0.209)	0.427 (0.121)
	2013	0.311 (0.116)	0.194 (0.115)	0.038 (0.125)	-0.350 (0.182)	-0.364 (0.196)	0.364 (0.128)
	2014	0.447 (0.115)	0.381 (0.113)	0.134 (0.125)	-0.437 (0.187)	-0.371 (0.197)	0.509 (0.126)
	2015	0.188 (0.119)	0.136 (0.116)	0.029 (0.127)	-0.532 (0.194)	-0.623 (0.228)	0.303 (0.129)
	2016	0.310 (0.119)	0.247 (0.129)	0.169 (0.117)	-0.309 (0.172)	-0.359 (0.202)	0.334 (0.134)
	2017	0.296 (0.121)	0.217 (0.121)	0.062 (0.132)	-0.361 (0.188)	-0.265 (0.194)	0.351 (0.135)
	2018	0.458 (0.115)	0.346 (0.114)	0.255 (0.125)	-0.183 (0.166)	-0.135 (0.189)	0.447 (0.130)
	2019	0.249 (0.114)	0.168 (0.112)	-0.081 (0.124)	-0.342 (0.172)	-0.828 (0.221)	0.259 (0.127)
	2020	0.002 (0.169)	0.030 (0.159)	-0.508 (0.183)	-1.269 (0.310)	-1.462 (0.292)	0.264 (0.170)

		OUTCOME					
	FELONY	**SCREENED**	**ADMITTED**	**ADMITTED AT LEAST ONE NIGHT**	**ADMITTED AT LEAST 48 BUSINESS HOURS**	**DETAINED IN HEARING**	**UNJUSTIFIED ADMISSION**
OFFENSE CATEGORY (REFERENCE=FELONY 1)	Felony 2	0.460 (0.190)	0.275 (0.170)	0.246 (0.167)	-0.005 (0.152)	-0.279 (0.150)	0.330 (0.439)
	Felony 3	0.413 (0.185)	0.433 (0.167)	0.186 (0.163)	-0.308 (0.152)	-0.625 (0.155)	0.271 (0.445)
	Jail Felony	0.258 (0.196)	0.093 (0.179)	-0.060 (0.180)	-0.418 (0.179)	-0.626 (0.185)	0.336 (0.433)
	Misdemeanor A	-0.024 (0.319)	-0.097 (0.274)	-0.095 (0.272)	-0.653 (0.279)	-0.794 (0.309)	0.738 (0.515)
	Misdemeanor B	0.116 (0.323)	0.034 (0.279)	0.043 (0.278)	-0.437 (0.293)	-0.607 (0.327)	0.855 (0.520)
OFFENSE TYPE (REFERENCE= AGAINST PERSON)	Property	-1.097 (0.176)	-0.958 (0.155)	-0.850 (0.157)	-0.572 (0.176)	-0.552 (0.198)	-0.524 (0.294)
	Drug-related	-1.222 (0.242)	-1.075 (0.216)	-1.049 (0.221)	-0.731 (0.273)	-0.383 (0.297)	-0.401 (0.408)
	Weapon-related	0.821 (0.241)	0.775 (0.220)	0.848 (0.222)	1.557 (0.239)	1.262 (0.280)	0.447 (0.369)
	Other	-0.489 (0.180)	-0.368 (0.158)	-0.335 (0.159)	0.143 (0.175)	0.128 (0.194)	-0.005 (0.304)
MULTIPLE REFERRALS		0.337 (0.087)	0.142 (0.087)	0.115 (0.093)	0.103 (0.119)	0.221 (0.120)	0.154 (0.105)
REFERRAL SOURCE (REFERENCE=SCHOOL)	Law Enforcement	-0.845 (0.040)	-0.734 (0.038)	-0.728 (0.042)	-0.504 (0.062)	-0.862 (0.088)	-0.730 (0.041)
	Other	0.524 (0.087)	0.423 (0.086)	0.615 (0.086)	0.930 (0.095)	0.992 (0.094)	-0.071 (0.091)
AGE (REFERENCE=12)	13	0.026 (0.075)	0.005 (0.072)	0.071 (0.082)	0.174 (0.138)	-0.077 (0.146)	-0.028 (0.074)
	14	0.073 (0.070)	0.044 (0.067)	0.100 (0.077)	0.224 (0.130)	-0.064 (0.139)	-0.020 (0.070)
	15	0.076 (0.069)	0.053 (0.066)	0.135 (0.076)	0.302 (0.127)	0.053 (0.134)	-0.047 (0.068)
	16	0.107 (0.069)	0.072 (0.066)	0.136 (0.076)	0.416 (0.128)	0.224 (0.136)	-0.045 (0.068)
CHILD LIVES WITH: (REFERENCE= TWO PARENTS)	Mother Only	-0.063 (0.035)	-0.061 (0.035)	-0.045 (0.038)	-0.079 (0.059)	0.042 (0.068)	-0.078 (0.036)
	Father Only	-0.067 (0.063)	-0.081 (0.063)	-0.165 (0.076)	-0.050 (0.112)	0.125 (0.123)	-0.066 (0.065)
	Grandparents	0.109 (0.074)	0.129 (0.073)	0.121 (0.078)	0.042 (0.114)	0.155 (0.131)	0.078 (0.077)
	Other Relative	0.494 (0.126)	0.484 (0.121)	0.488 (0.125)	0.247 (0.161)	0.502 (0.177)	0.488 (0.112)
	All Other	0.263 (0.053)	0.217 (0.053)	0.342 (0.058)	0.226 (0.084)	0.359 (0.092)	0.189 (0.054)
BEHIND IN SCHOOL		0.325 (0.042)	0.301 (0.041)	0.284 (0.045)	0.305 (0.062)	0.291 (0.070)	0.240 (0.043)
PACT RISK LEVEL (REFERENCE=LOW)	Medium	0.792 (0.040)	0.728 (0.039)	0.730 (0.042)	0.641 (0.060)	0.830 (0.069)	0.656 (0.041)
	High	1.017 (0.086)	0.844 (0.082)	0.922 (0.082)	0.933 (0.094)	1.212 (0.098)	0.624 (0.084)
	No Pact Available	0.125 (0.039)	0.093 (0.039)	0.091 (0.045)	0.066 (0.085)	0.136 (0.085)	0.108 (0.041)
	RAI Score	0.071 (0.045)	0.079 (0.039)	0.101 (0.040)	0.087 (0.045)	0.059 (0.051)	0.172 (0.075)
RAI RECOMMENDATION (REFERENCE=RELEASE)	Conditional Release	0.266 (0.246)	0.083 (0.241)	-0.061 (0.257)	0.123 (0.330)	-0.467 (0.413)	-0.103 (0.251)
	Detain	0.521 (0.221)	0.100 (0.205)	0.183 (0.214)	0.850 (0.266)	0.756 (0.303)	-3.428 (0.307)
CONSTANT		-1.063 (0.560)	-1.048 (0.484)	-1.408 (0.484)	-1.912 (0.527)	-1.701 (0.586)	-2.518 (0.863)
PSEUDO R2		0.326	0.286	0.328	0.482	0.456	0.194
OBSERVATIONS		12272	12272	12272	12272	12272	12272
LOG-LIKELIHOOD		-4765.2	-4884.6	-3896.1	-1587.9	-1258.4	-4462.7

NOTES: This table shows coefficient estimates from the probit regressions described in section 1.2 of this appendix.
Each column corresponds with one of the key detention outcomes. Columns 1–5 show the five main outcomes analyzed throughout the report. Column 6 includes the outcome of unjustified admissions (relative to all referred youths), discussed in section 4.3.
Coefficients do not have a direct interpretation. For these, please see tables A5-A6 below.
Standard errors appear in parentheses under each estimate.

Table A3: Coefficient estimates, males 2010-2020

	OUTCOME						
COVARIATE RACE X YEAR (REFERENCE=WHITE X 2010)	**YEAR**	**SCREENED**	**ADMITTED**	**ADMITTED** AT LEAST ONE NIGHT	**ADMITTED** AT LEAST 48 BUSINESS HOURS	**DETAINED** IN HEARING	**UNJUSTIFIED ADMISSION**
White X							
	2011	0.102 (0.097)	0.072 (0.093)	0.083 (0.105)	0.302 (0.180)	0.711 (0.218)	0.060 (0.099)
	2012	0.102 (0.095)	0.063 (0.092)	0.044 (0.105)	0.343 (0.182)	0.445 (0.229)	0.115 (0.097)
	2013	-0.082 (0.099)	-0.137 (0.097)	-0.100 (0.113)	0.034 (0.203)	0.074 (0.274)	-0.102 (0.105)
	2014	0.151 (0.096)	0.075 (0.095)	0.067 (0.108)	-0.006 (0.183)	0.483 (0.220)	0.106 (0.099)
	2015	0.127 (0.099)	0.093 (0.097)	0.001 (0.113)	0.300 (0.191)	0.527 (0.229)	-0.002 (0.107)
	2016	0.309 (0.105)	0.262 (0.101)	0.263 (0.112)	0.679 (0.178)	0.964 (0.222)	0.073 (0.112)
	2017	0.254 (0.103)	0.217 (0.101)	0.238 (0.112)	0.520 (0.183)	0.678 (0.234)	0.092 (0.111)
	2018	0.641 (0.100)	0.581 (0.096)	0.606 (0.107)	0.726 (0.174)	0.955 (0.214)	0.458 (0.105)
	2019	0.275 (0.112)	0.196 (0.112)	0.187 (0.125)	0.368 (0.197)	0.295 (0.264)	0.103 (0.123)
	2020	-0.158 (0.150)	-0.208 (0.146)	-0.341 (0.169)	-0.755 (0.277)	-0.365 (0.333)	-0.115 (0.165)
Black X							
	2010	0.394 (0.079)	0.374 (0.077)	0.396 (0.086)	0.535 (0.146)	0.571 (0.188)	0.340 (0.082)
	2011	0.452 (0.080)	0.397 (0.077)	0.335 (0.086)	0.543 (0.146)	0.817 (0.189)	0.369 (0.082)
	2012	0.529 (0.081)	0.499 (0.078)	0.499 (0.087)	0.567 (0.148)	0.786 (0.192)	0.480 (0.083)
	2013	0.520 (0.080)	0.447 (0.077)	0.352 (0.087)	0.446 (0.148)	0.726 (0.186)	0.410 (0.083)
	2014	0.465 (0.082)	0.408 (0.080)	0.397 (0.089)	0.420 (0.152)	0.668 (0.192)	0.389 (0.084)
	2015	0.500 (0.083)	0.419 (0.081)	0.385 (0.090)	0.512 (0.150)	0.636 (0.191)	0.402 (0.085)
	2016	0.511 (0.082)	0.450 (0.080)	0.392 (0.088)	0.730 (0.146)	1.050 (0.186)	0.366 (0.086)
	2017	0.516 (0.086)	0.435 (0.083)	0.489 (0.092)	0.733 (0.152)	0.937 (0.191)	0.325 (0.089)
	2018	0.740 (0.084)	0.646 (0.081)	0.653 (0.090)	0.789 (0.151)	0.995 (0.187)	0.548 (0.087)
	2019	0.524 (0.086)	0.389 (0.084)	0.471 (0.093)	0.635 (0.157)	0.414 (0.201)	0.186 (0.093)
	2020	0.279 (0.106)	0.094 (0.105)	-0.030 (0.118)	0.124 (0.181)	0.145 (0.219)	0.032 (0.114)
Latino X							
	2010	0.266 (0.077)	0.230 (0.074)	0.111 (0.085)	0.240 (0.150)	0.521 (0.189)	0.285 (0.078)
	2011	0.277 (0.079)	0.222 (0.076)	0.117 (0.086)	0.177 (0.147)	0.566 (0.188)	0.288 (0.080)
	2012	0.309 (0.079)	0.251 (0.076)	0.218 (0.086)	0.316 (0.149)	0.715 (0.187)	0.295 (0.081)
	2013	0.312 (0.080)	0.240 (0.078)	0.096 (0.088)	0.276 (0.150)	0.830 (0.187)	0.262 (0.083)
	2014	0.246 (0.081)	0.174 (0.078)	0.225 (0.088)	0.482 (0.148)	0.909 (0.188)	0.153 (0.084)
	2015	0.273 (0.081)	0.204 (0.079)	0.253 (0.088)	0.348 (0.151)	0.776 (0.188)	0.177 (0.085)
	2016	0.313 (0.082)	0.237 (0.080)	0.255 (0.089)	0.579 (0.147)	0.937 (0.187)	0.177 (0.086)
	2017	0.284 (0.083)	0.209 (0.081)	0.219 (0.090)	0.555 (0.149)	0.975 (0.189)	0.145 (0.087)
	2018	0.611 (0.080)	0.516 (0.077)	0.559 (0.086)	0.784 (0.145)	0.973 (0.185)	0.405 (0.083)
	2019	0.371 (0.084)	0.247 (0.082)	0.244 (0.091)	0.524 (0.152)	0.421 (0.197)	0.133 (0.090)
	2020	0.250 (0.099)	0.099 (0.098)	-0.038 (0.111)	0.022 (0.175)	0.079 (0.213)	0.134 (0.106)
OFFENSE CATEGORY (REFERENCE=FELONY 1)	Felony 2	-0.183 (0.081)	-0.047 (0.066)	-0.068 (0.063)	-0.218 (0.057)	-0.410 (0.054)	0.444 (0.161)
	Felony 3	-0.143 (0.092)	0.014 (0.075)	-0.092 (0.073)	-0.347 (0.068)	-0.459 (0.068)	0.603 (0.170)
	Jail Felony	-0.313 (0.086)	-0.151 (0.071)	-0.223 (0.071)	-0.449 (0.072)	-0.510 (0.075)	0.539 (0.166)
	Misdemeanor A	-0.489 (0.115)	-0.425 (0.096)	-0.344 (0.097)	-0.791 (0.105)	-0.643 (0.118)	0.913 (0.212)
	Misdemeanor B	-0.417 (0.118)	-0.375 (0.099)	-0.318 (0.101)	-0.892 (0.119)	-0.736 (0.139)	1.017 (0.214)

		OUTCOME					
	FELONY	SCREENED	ADMITTED	ADMITTED AT LEAST ONE NIGHT	ADMITTED AT LEAST 48 BUSINESS HOURS	DETAINED IN HEARING	UNJUSTIFIED ADMISSION
OFFENSE TYPE (REFERENCE= AGAINST PERSON)	Property	-0.800 (0.066)	-0.748 (0.060)	-0.633 (0.062)	-0.474 (0.073)	-0.393 (0.084)	-0.293 (0.112)
	Drug-related	-0.970 (0.105)	-0.870 (0.096)	-0.812 (0.106)	-0.731 (0.151)	-0.457 (0.162)	-0.200 (0.162)
	Weapon-related	0.614 (0.086)	0.560 (0.079)	0.808 (0.081)	1.322 (0.087)	1.270 (0.099)	0.013 (0.142)
	Other	-0.543 (0.067)	-0.487 (0.060)	-0.473 (0.061)	-0.237 (0.068)	-0.260 (0.074)	-0.022 (0.118)
MULTIPLE REFERRALS		0.122 (0.038)	-0.020 (0.039)	-0.002 (0.042)	-0.029 (0.057)	0.114 (0.058)	0.017 (0.045)
REFERRAL SOURCE (REFERENCE=SCHOOL)	Law Enforcement	-0.590 (0.022)	-0.525 (0.021)	-0.521 (0.024)	-0.327 (0.036)	-0.578 (0.047)	-0.504 (0.023)
	Other	0.350 (0.051)	0.329 (0.050)	0.438 (0.052)	0.687 (0.060)	0.830 (0.060)	0.143 (0.055)
AGE (REFERENCE=12)	13	0.078 (0.045)	0.052 (0.044)	0.098 (0.050)	0.170 (0.075)	0.175 (0.087)	0.051 (0.046)
	14	0.047 (0.043)	0.014 (0.041)	0.134 (0.047)	0.263 (0.071)	0.278 (0.081)	-0.031 (0.044)
	15	0.091 (0.042)	0.050 (0.040)	0.160 (0.046)	0.324 (0.069)	0.384 (0.078)	0.003 (0.043)
	16	0.087 (0.042)	0.022 (0.040)	0.136 (0.046)	0.346 (0.069)	0.464 (0.078)	-0.027 (0.043)
CHILD LIVES WITH: (REFERENCE= TWO PARENTS)	Mother Only	-0.097 (0.021)	-0.075 (0.021)	-0.082 (0.023)	-0.084 (0.033)	0.026 (0.038)	-0.047 (0.022)
	Father Only	-0.049 (0.037)	-0.043 (0.036)	-0.019 (0.040)	-0.052 (0.057)	-0.073 (0.067)	0.004 (0.038)
	Grandparents	0.056 (0.048)	0.086 (0.047)	0.113 (0.051)	0.103 (0.066)	0.105 (0.076)	0.087 (0.049)
	Other Relative	0.406 (0.087)	0.400 (0.086)	0.314 (0.089)	0.312 (0.113)	0.204 (0.136)	0.366 (0.085)
	All Other	0.168 (0.037)	0.185 (0.037)	0.258 (0.040)	0.208 (0.058)	0.361 (0.062)	0.173 (0.038)
BEHIND IN SCHOOL		0.205 (0.024)	0.178 (0.024)	0.139 (0.026)	0.111 (0.037)	0.183 (0.040)	0.195 (0.025)
PACT RISK LEVEL (REFERENCE=LOW)	Medium	0.614 (0.024)	0.545 (0.024)	0.529 (0.026)	0.334 (0.035)	0.496 (0.039)	0.541 (0.026)
	High	0.933 (0.052)	0.806 (0.050)	0.826 (0.051)	0.559 (0.061)	0.834 (0.060)	0.771 (0.049)
	No Pact Available	0.150 (0.024)	0.074 (0.024)	0.056 (0.027)	-0.085 (0.043)	0.068 (0.049)	0.170 (0.025)
	RAI Score	0.043 (0.017)	0.023 (0.015)	0.040 (0.016)	0.020 (0.018)	0.040 (0.021)	0.144 (0.029)
RAI RECOMMENDATION (REFERENCE=RELEASE)	Conditional Release	0.248 (0.072)	0.086 (0.073)	0.179 (0.077)	0.464 (0.099)	0.362 (0.113)	-0.201 (0.078)
	Detain	0.893 (0.102)	0.709 (0.096)	0.864 (0.099)	1.426 (0.129)	0.992 (0.153)	-2.865 (0.148)
CONSTANT		-0.500 (0.206)	-0.459 (0.180)	-1.046 (0.187)	-1.921 (0.230)	-2.837 (0.277)	-2.573 (0.353)
PSEUDO R2		0.305	0.257	0.329	0.516	0.468	0.132
OBSERVATIONS		28956	28956	28956	28956	28956	28956
LOG-LIKELIHOOD		-12290.4	-12683.2	-9922.9	-4640.4	-3671.5	-10994.7

NOTES: This table shows coefficient estimates from the probit regressions described in section 1.2 of this appendix.
Each column corresponds with one of the key detention outcomes. Columns 1–5 show the five main outcomes analyzed throughout the report. Column 6 includes the outcome of unjustified admissions (relative to all referred youths), discussed in section 4.3.
Coefficients do not have a direct interpretation. For these, please see tables A5–A6 below.
Standard errors appear in parentheses under each estimate.

Table A4: Coefficient estimates, males 2010-2020

		OUTCOME					
COVARIATE RACE X YEAR (REFERENCE=WHITE X 2010)	**YEAR**	**SCREENED**	**ADMITTED**	**ADMITTED** AT LEAST ONE NIGHT	**ADMITTED** AT LEAST 48 BUSINESS HOURS	**DETAINED** IN HEARING	**UNJUSTIFIED ADMISSION**
White X	2022	0.085 (0.237)	-0.123 (0.227)	-0.370 (0.303)	-0.114 (0.328)	0.182 (0.474)	-0.098 (0.233)
Black X	2021	0.351 (0.202)	0.041 (0.187)	0.023 (0.198)	-0.302 (0.277)	0.214 (0.389)	0.262 (0.187)
	2022	0.155 (0.199)	-0.077 (0.182)	-0.437 (0.207)	-0.142 (0.264)	0.313 (0.388)	-0.127 (0.189)
Hispanic X	2021	0.127 (0.201)	-0.139 (0.187)	-0.108 (0.197)	-0.267 (0.260)	0.377 (0.371)	0.123 (0.189)
	2022	0.093 (0.196)	-0.167 (0.182)	-0.442 (0.205)	-0.160 (0.264)	0.328 (0.383)	-0.161 (0.187
OFFENSE CATEGORY (REFERENCE=FELONY 1)	Felony 2	1.052 (0.235)	0.671 (0.209)	0.406 (0.218)	0.235 (0.212)	0.021 (0.215)	0.339 (0.248)
	Felony 3	1.079 (0.250)	0.618 (0.217)	0.660 (0.244)	0.170 (0.250)	-0.318 (0.305)	0.221 (0.281)
	Jail Felony	0.780 (0.255)	0.344 (0.232)	0.502 (0.255)	-0.134 (0.312)	-0.286 (0.332)	0.029 (0.292)
	Misdemeanor A and B	2.147 (0.299)	1.141 (0.256)	1.034 (0.285)	0.552 (0.312)	0.442 (0.334)	0.473 (0.352)
OFFENSE TYPE (REFERENCE= AGAINST PERSON)	Property	-0.229 (0.122)	-0.192 (0.123)	-0.196 (0.172)	-0.051 (0.282)	0.010 (0.292)	-0.306 (0.125)
	Drug-related	-0.928 (0.266)	0.135 (0.201)	-0.052 (0.206)	-0.403 (0.268)	-0.854 (0.298)	0.356 (0.235)
	Weapon-related	-0.250 (0.105)	-0.206 (0.105)	-0.119 (0.147)	-0.333 (0.283)	-0.414 (0.251)	-0.357 (0.109)
MULTIPLE REFERRALS		-0.013 (0.126)	-0.478 (0.134)	-0.112 (0.141)	-0.376 (0.176)	-0.189 (0.176)	-0.022 (0.118)
REFERRAL SOURCE (REFERENCE=SCHOOL)	Law Enforcement	-1.002 (0.097)	-0.842 (0.093)	-0.507 (0.124)	-0.591 (0.179)	-0.770 (0.246)	-0.872 (0.108)
	Other	-0.029 (0.460)	0.148 (0.416)	0.178 (0.443)	0.807 (0.549)	0.957 (0.561)	0.180 (0.429)
AGE (REFERENCE=12)	13	0.066 (0.202)	0.033 (0.192)	-0.279 (0.240)	-0.091 (0.349)	-0.544 (0.346)	0.157 (0.211)
	14	-0.096 (0.190)	-0.091 (0.180)	-0.337 (0.220)	-0.675 (0.337)	-1.023 (0.321)	0.048 (0.198)
	15	-1.029 (0.213)	-0.530 (0.186)	-0.656 (0.224)	-0.748 (0.331)	-1.067 (0.320)	-0.127 (0.213)
	16	-0.992 (0.212)	-0.558 (0.187)	-0.818 (0.226)	-1.030 (0.324)	-1.239 (0.312)	-0.153 (0.215)
CHILD LIVES WITH: (REFERENCE= TWO PARENTS)	Mother Only	-0.301 (0.090)	-0.303 (0.090)	-0.137 (0.115)	-0.035 (0.150)	-0.001 (0.168)	-0.289 (0.092)
	Father Only	-0.332 (0.147)	-0.310 (0.148)	-0.265 (0.183)	0.174 (0.226)	0.258 (0.241)	-0.347 (0.158)
	Grandparents	0.186 (0.171)	0.005 (0.179)	0.422 (0.193)	0.195 (0.253)	0.336 (0.268)	0.203 (0.162)
	Other Relative	0.284 (0.222)	0.114 (0.212)	0.334 (0.260)	0.373 (0.378)	0.486 (0.356)	0.092 (0.224)
	All Other	-0.812 (0.152)	-0.588 (0.140)	-0.003 (0.178)	0.030 (0.249)	0.150 (0.262)	-0.546 (0.148)
BEHIND IN SCHOOL		0.236 (0.102)	0.204 (0.099)	0.221 (0.118)	0.368 (0.159)	0.502 (0.164)	0.099 (0.102)
PACT RISK LEVEL (REFERENCE=LOW)	Medium	0.619 (0.107)	0.603 (0.101)	0.368 (0.118)	0.786 (0.164)	0.918 (0.196)	0.421 (0.108)
	High	0.902 (0.173)	0.866 (0.165)	0.726 (0.178)	1.065 (0.223)	1.270 (0.221)	0.623 (0.166)
	No Pact Available	0.366 (0.094)	0.226 (0.095)	-0.250 (0.131)	0.166 (0.172)	0.433 (0.205)	0.259 (0.099)
	RAI Score	0.211 (0.025)	0.108 (0.014)	0.096 (0.015)	0.143 (0.018)	0.131 (0.019)	0.041 (0.019)
DSI RECOMMENDATION (REFERENCE=RELEASE)	Conditional Release	-0.328 (0.201)	-0.106 (0.177)	0.230 (0.216)	-0.009 (0.256)	0.141 (0.295)	0.008 (0.192)
	Detain	-0.192 (0.329)	-0.005 (0.265)	0.176 (0.301)	-0.157 (0.368)	-0.216 (0.405)	-1.173 (0.334)

	OUTCOME						
	FELONY	**SCREENED**	**ADMITTED**	**ADMITTED** AT LEAST ONE NIGHT	**ADMITTED** AT LEAST 48 BUSINESS HOURS	**DETAINED** IN HEARING	**UNJUSTIFIED ADMISSION**
CONSTANT		-2.112 (0.342)	-1.433 (0.318)	-1.788 (0.374)	-2.251 (0.461)	-2.586 (0.578)	-1.146 (0.371)
PSEUDO R2		0.449	0.361	0.369	0.581	0.591	0.156
OBSERVATIONS		2460	2460	2460	2460	2460	2460
LOG-LIKELIHOOD		-754.9	-778.6	-477.5	-250.2	-208.0	-732.4

NOTES: This table shows coefficient estimates from the probit regressions described in section 1.2 of this appendix.
Each column corresponds with one of the key detention outcomes. Columns 1–5 show the five main outcomes analyzed throughout the report. Column 6 includes the outcome of unjustified admissions (relative to all referred youths), discussed in section 4.3.
Coefficients do not have a direct interpretation. For these, please see tables A5–A6 below.
Standard errors appear in parentheses under each estimate.

Table A5: APEs (conditional differences), 2010-2020

Females, 2010-2020

		Black-white difference		Hispanic-white difference	
Outcome	White mean	Estimate	Standard Error	Estimate	Standard Error
Screened	0.1772	0.0855	0.0085	0.0493	0.0081
Admitted	0.1642	0.0845	0.0086	0.0461	0.0082
Admitted at least one night	0.1316	0.0360	0.0076	0.0178	0.0074
Admitted at least 48 business hours	0.0506	0.0016	0.0051	-0.0120	0.0049
Detained in hearing	0.0368	0.0005	0.0045	-0.0083	0.0044
Incorrectly admitted	0.1174	0.0736	0.0078	0.0486	0.0074

Males, 2010-2020

		Black-white difference		Hispanic-white difference	
Outcome	White mean	Estimate	Standard Error	Estimate	Standard Error
Screened	0.2249	0.0785	0.0063	0.0337	0.0059
Admitted	0.2088	0.0776	0.0064	0.0288	0.0060
Admitted at least one night	0.1538	0.0575	0.0055	0.0170	0.0052
Admitted at least 48 business hours	0.0669	0.0233	0.0039	0.0091	0.0037
Detained in hearing	0.0371	0.0153	0.0034	0.0143	0.0033
Incorrectly admitted	0.1236	0.0610	0.0057	0.0302	0.0053

NOTES: This table shows APEs, calculated as described in section 1.2 of this appendix. The top panel shows results for females and the bottom one for males. Each row corresponds with each of the columns in tables A2 (females) and A3 (males). For each outcome, column 1 shows the rate for white youths. Columns 2 and 3 show the estimate and standard error for the Black-white APE (conditional difference). Columns 4 and 5 show the estimate and standard error for the Latino/a-white APE (conditional difference).

Table A6: APEs (conditional differences), 2021-2022

Males, 2010-2020

		Black-white difference		Hispanic-white difference	
	White mean	Estimate	Standard Error	Estimate	Standard Error
Screened	0.2168	0.0323	0.0206	0.0089	0.0201
Admitted	0.1947	0.0114	0.0218	-0.0103	0.0213
Admitted at least one night	0.0929	0.0000	0.0181	-0.0098	0.0177
Admitted at least 48 business hours	0.0752	-0.0095	0.0111	-0.0071	0.0110
Detained in hearing	0.0487	0.0067	0.0103	0.0113	0.0100
Incorrectly admitted	0.1195	0.0173	0.0202	0.0028	0.0199

NOTES: This table shows APEs, calculated as described in section 1.2 of this appendix. Due to small sample sizes, results are shown only for males. Each row corresponds with each of the columns in Table A4. For each outcome, column 1 shows the rate for white youths. Columns 2 and 3 show the estimate and standard error for the Black-white APE (conditional difference). Columns 4 and 5 show the estimate and standard error for the Latino/a-white APE (conditional difference).

2.2 Accuracy of calculated screening scores

As mentioned throughout this report, a crucial covariate in our estimates is the RAI score. Including this information allows us to compare youth who, according to the tool de-signed to assess the need for detention, should have received equal treatment through-out the first stages of the detention process. We calculate the RAI scores for youth who were not screened using available data and scoring guides for the RAI. Table A7 below compares our calculated RAI scores to the actual RAI scores for the subset of youth who were screened.

Table A7: Comparison of true and calculated RAI scores

Table A7: Comparison of true and calculated RAI scores

	N	%
Match	9722	81.6%
Score mismatch	2185	18.4%
Scores and recommendation mismatch	911	7.7%

As shown, we cannot accurately replicate the score of all the youth in our sample who were actually screened (youth who have an RAI score). Although we cannot replicate the exact score for 18.4% of youth, only 7.7% of the cases involved a mismatch in the outcome of the RAI screening process (the recommendation). We examined detailed, case-by-case, data for these cases and found no substantial differences across race or sex. The only patterns we could identify were Jail Felonies were more likely to have a mismatch than other offenses. We further examined mismatches in collaboration with HCJPD's Data and Research team. Based on this analysis, we are confident that the observed discrepancies are the result of normal errors in scoring when the actual screening was performed.