

K-12 EDUCATION

Differences in Student Arrest Rates Widen When Race, Gender, and Disability Status Overlap



Report to Congressional Committees

July 2024

GAO-24-106294

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GAO Highlights

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July 2024

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Differences in Student Arrest Rates Widen When Race, Gender, and Disability Status Overlap

Why GAO Did This Study

The Departments of Education and Justice are responsible for enforcing certain federal civil rights laws that prohibit discrimination in K-12 schools based on characteristics such as race, sex, and disability, including regarding police interactions with students.

The House committee report for the Departments of Labor, Health and Human Services, Education, and Related Agencies Appropriations Bill, 2023, includes a provision for GAO to review the role of policing in schools, including the effect on students of different races. This report addresses (1) what Education's data show about the extent to which different student groups are arrested in K-12 schools and (2) whether police presence in schools is associated with student arrests.

GAO analyzed two federal Education datasets for the two most recent school years before the pandemic (2015–2016 and 2017–2018) and 2019–2020. GAO also visited three school districts, selected for factors such as high rates of arrests; reviewed federal laws and regulations; and interviewed federal officials and representatives of national education and civil rights groups.

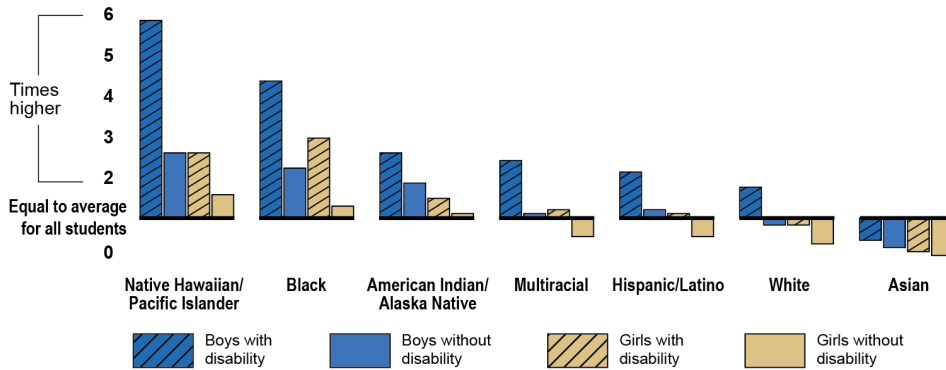
What GAO Recommends

GAO is making three recommendations that Education: (1) collect arrest and referral data, by race, for students with disabilities who receive services under Section 504; (2) disclose the limitations of its 2021–2022 arrest data; and (3) clearly inform school districts about future changes to arrest and referral data in its civil rights data collection. Education generally agreed with these recommendations.

What GAO Found

GAO's analysis of the Department of Education's data collected from nearly every U.S. school district found that students' race and ethnicity, gender, and disability status were all prominent with respect to rates of arrest and referrals to police, especially when the characteristics intersected. Specifically, in school year 2017–2018, the most recent year of data prior to the pandemic, Native Hawaiian/Pacific Islander, Black, and American Indian/Alaska Native students were arrested at rates that were two to three times higher than White students. For boys who had a disability, the differences in arrest rates widened further.

Arrest Rates for K-12 Student Groups Compared to National Average for All K-12 Students, School Year 2017–2018



Source: GAO analysis of Department of Education, Civil Rights Data Collection, school year 2017-2018 (restricted-use data). | GAO-24-106294

Note: For more details, see fig. 3 in GAO-24-106294. “With disability” refers to students that receive services under the Individuals with Disabilities Education Act.

Education’s guidance explains that when race, gender, and disability status intersect, students might experience discrimination due to the combination of protected characteristics. Yet, Education does not collect arrest and referral data by race for students receiving services only under Section 504 of the Rehabilitation Act of 1973, as amended. Section 504 prohibits discrimination on the basis of disability by recipients of federal funding. Education officials said to date, they believe the burden on districts outweighs the benefit; however, they also said they always reevaluate what data they collect and will reconsider collecting such data for the 2025-2026 data collection. Having this data is important; as GAO’s analysis shows, the intersection of particular characteristics affects student arrest rates. Also, Education modified the arrest definition for school year 2021–2022, but did not tell districts about the new definition before they collected the data. This raises the risk that districts used the old definition, which could affect data quality. Disclosing data limitations also aids those that use the data.

Arrest rates more than doubled in schools with police present compared to similar schools without police, according to GAO’s analysis. Among the 51 percent of schools with police present at least once a week, GAO found that arrests were more common when the police were involved in student discipline.

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Abbreviations

ATT	average treatment effect on the treated
civil rights data	Civil Rights Data Collection
Education	Department of Education
IDEA	Individuals with Disabilities Education Act
IEP	Individualized Education Program
Justice	Department of Justice
LEP	limited English proficiency
OCR	Office for Civil Rights
school crime survey	School Survey on Crime and Safety
SY	school year

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July 8, 2024

The Honorable Tammy Baldwin
Chair
The Honorable Shelley Moore Capito
Ranking Member
Subcommittee on Labor, Health and Human Services, Education, and Related Agencies
Committee on Appropriations
United States Senate

The Honorable Robert Aderholt
Chair
The Honorable Rosa DeLauro
Ranking Member
Subcommittee on Labor, Health and Human Services, Education, and Related Agencies
Committee on Appropriations
House of Representatives

In recent years, there has been considerable public debate about the role of police in schools and the balance between protecting students and staff from harm versus negative effects such as how certain students have sometimes been treated differently by police. Concerns about inequitable treatment have led some school districts to reduce police presence in schools while concerns about student safety, such as school shootings, have led others to increase police presence in schools.

The Departments of Education and Justice are responsible for enforcing several federal civil rights laws that prohibit discrimination, including discrimination against students in K-12 schools based on students' race, color, national origin, sex, and disability. This responsibility extends to police involvement and interactions with students while they are attending school. Education and Justice use several strategies to enforce these civil rights laws, including providing schools and districts technical assistance and issuing guidance and resource documents. The agencies also investigate complaints of discrimination in K-12 schools. As of May 2024, Education had multiple ongoing investigations involving policing in schools.

In one recently completed investigation, Education found that a school district in California engaged in disparate treatment that violated Title VI of the Civil Rights Act of 1964 by disciplining Black students more frequently and more harshly than similarly situated White students.¹ The district also placed school police and campus security officers only at schools with larger shares of Black students. Education identified concerns regarding a pattern of disparate disciplinary actions involving school police that imposed greater harm to Black students, including:

¹Department of Education, Office for Civil Rights, *Letter to the Victor Valley Union High School District*, 09-14-5003 (2022).

- Black students disproportionately receiving law enforcement citations that required them to appear in juvenile court, sometimes for minor infractions, such as littering; and
- Black students being disproportionately pepper sprayed.

Education also found that Black students were harmed and lost learning time because the district's discipline repeatedly removed them from school, and the district had been aware of the foreseeable harm for many years.

More recently, a 2024 Justice investigation concluded that a school district in Florida engaged in disability discrimination under relevant federal law.² Justice stated that "the district routinely relied on suspensions and referrals to law enforcement to respond to students' disability-related behaviors that it could have addressed through proper behavioral interventions and supports." It also said the district's "lack of any policies or training on when to call [police] and how to address disability-related behaviors [and lack of documentation of law enforcement interactions] led to unfettered discretion for school staff to call school security guards and school resource officers."

The committee report accompanying the House bill for the Departments of Labor, Health and Human Services, Education, and Related Agencies Appropriations Bill, 2023 includes a provision for us to study the role of policing in schools, including the impact on students of different races. This report addresses (1) what Education's data show about the extent to which different student groups are arrested in K-12 schools and (2) whether the presence of police in schools is associated with arrests of students.

What are Referrals to Law Enforcement and School-Related Arrests?

For the 2017–2018 school year used in our analysis, Education used the following definitions.

A **referral to law enforcement** is an action by which a student is reported by school officials, for example, to any law enforcement agency or official, including a school police unit (police), for an incident that occurs on school grounds, during school-related events, or while taking school transportation, regardless of whether official action is taken. Citations, tickets, and court referrals are examples of referrals to law enforcement (police).

A **school-related arrest** is a referral that results in an arrest of a student for any activity conducted on school grounds, during off-campus school activities (including while taking school transportation), or due to a referral by any school official. All school-related arrests are considered referrals to law enforcement (police).

Education updated the definition of arrest for school year 2021–2022, as discussed later in this report.

Source: Department of Education, Civil Rights Data Collection, definitions for school year 2017–2018. | GAO 24 106294

To compare the rates at which different subgroups of K-12 students are arrested nationwide, we analyzed Education's school year (SY) 2017–2018 Civil Rights Data Collection (civil rights data).³ This is a mandatory data collection from nearly every public school and district that includes data on the number of students that were referred to the police and subsequently arrested.⁴ Almost all districts reported arrest and referral data for the years we reviewed with two notable exceptions. The New York City Public Schools and Chicago Public Schools—two of the largest school districts in the nation—have had long-term challenges with data reporting. New York City Public Schools has not reported complete arrest data since Education began collecting data

²Department of Justice, Civil Rights Division, Educational Opportunities Section, *Letter to the Pasco County School District*, DJ 169-17M-11 SS:NP:MA:AS:AE (2024).

³This term is also abbreviated as CRDC in appendix II.

⁴Student referrals to police are counted as such when a student is reported to police for an incident that occurs on school grounds, during school-related events, or while taking school transportation, regardless of whether official action is taken. School-related arrests are a form of referral and are also tracked separately. In this report, we use the term "arrests" to mean "school-related arrests." We reviewed both referrals and arrests in our analysis of the role of policing in public K-12 schools.

from all districts in SY 2011–2012. Chicago Public Schools has not reported arrest data since SY 2015–2016.⁵ Collectively, 21 districts, including the New York City and Chicago districts, did not report complete data in SY 2017–2018. Students in these districts accounted for less than 3 percent of all students enrolled in K-12 schools. Because these missing data account for such a small portion of students, we determined the data to be sufficiently reliable for this national-level analysis.⁶ See the text box later in this report for more detail about data collection challenges for New York City and Chicago.

In November 2023, Education released its most recent civil rights data for SY 2020–2021, but we did not use that year in our analysis because it was the first full school year coinciding with the COVID-19 pandemic, and as such, anomalous. In-person enrollment was low as many students attended school remotely due to the pandemic. In addition, in-person enrollment varied by race, with White students more likely to attend school in person than Black, Hispanic/Latino, and Asian students, according to Education.⁷ Our review of Education publications of these data also found that the number of arrests in SY 2020–2021 declined 84 percent from SY 2017–2018. Education warned against comparing the data from SY 2020–2021 to previous years given these limitations.

To determine whether the presence of police in schools is associated with arrests and referrals of students, we conducted a regression analysis. For the regression, we used Education’s civil rights data and nationally representative data from the School Survey on Crime and Safety (school crime survey) collected by Education’s National Center for Education Statistics both for the 2015–2016 and 2017–2018 school years (the latest available comparable data for both data sets at the time of our review).⁸ We conducted our regression on a sample of these data in which we matched schools with police to similar schools without police. This helped us ensure that differences in arrest and referral rates were not driven by differences in other measurable school characteristics, such as the presence of gang activity.⁹

Separately, we analyzed school crime survey data for both SY 2017–2018 and SY 2019–2020 to determine the prevalence and roles and responsibilities of school police, including their involvement with discipline. We were able to use SY 2019–2020 data from the school crime survey because most of that year was not affected by the pandemic. We reviewed documentation about the system Education used to produce data, and with this information and our interviews, we determined that the school crime survey data were sufficiently reliable for comparing schools to each other within each school year.

⁵Both districts told us they could not report student arrest data because the local police collected the arrest data and either did not share it with the school district or did not capture student details. Although Chicago Public Schools reported arrest data prior to SY 2017–2018, officials from the district told us they had used a proxy that was not an exact measure of student arrests. Both districts said they have taken steps to report arrest data by SY 2023–2024.

⁶In addition to missing data, Education and Justice have found instances where districts underreported arrests and referrals to police.

⁷Department of Education, Institute of Education Sciences, “Highlights from the 2021 NAEP Monthly School Survey,” accessed Mar. 7, 2024, <https://ies.ed.gov/schoolsurvey/mss-report/>.

⁸This term is also abbreviated as SSOCs in appendix II.

⁹See appendix II for more information about the propensity score matching and regression analysis.

To provide insight on how schools use police and how arrests are carried out in the context of a school environment, we visited a nongeneralizable sample of three school districts in California, Maryland, and Texas. We judgmentally selected these districts from a list of 74 districts that met our criteria, which included factors such as having school police and overall high rates of arrests or referrals to police compared to other districts. We excluded 23 school districts from our initial list of 74 because, at the time of our selection, Education told us it had ongoing investigations in these districts that included a policing component. This left us with a list of 51 districts. From these, we selected three districts based on factors such as variation in district size, student demographics, and rates of student arrests. Within each selected district, we visited two schools—one with a high arrest rate and one with a low rate.

For both objectives, we reviewed documents from Education and Justice and interviewed officials about completed investigations of school and school district actions related to student arrests and referrals of students to police. We also interviewed representatives of 12 stakeholder organizations that included educational organizations, disability rights groups, and those representing school police and knowledgeable stakeholders who have examined student arrest rates. See appendix I for more detailed information on our scope and methodology and appendix II for technical information about our regression models.

We conducted this performance audit from November 2022 to July 2024 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

Student Referrals to Police and Arrests Data

Education’s Office for Civil Rights (OCR) administers the Civil Rights Data Collection. This data collection effort is a longstanding and important aspect of Education’s overall strategy for administering and enforcing the civil rights laws for which the office is responsible. The civil rights data collection is a mandatory survey of all public K-12 school districts and schools, and OCR generally collects it biennially. However, due to the COVID-19 pandemic, OCR did not conduct the planned 2019–2020 collection. Instead, it collected data for SY 2020–2021. As of May 2024, OCR had not publicly released the data for SY 2021–2022. It plans to resume its normal biennial schedule starting with the SY 2023–2024 collection.

Arrests in Schools, 2017–2018

In school year 2017–2018, about 2 percent of elementary schools, 17 percent of middle schools, and 23 percent of high schools reported at least one arrest of a student.

Arrest rates increased as students moved from elementary to secondary school:

- Two in 10,000 elementary students
- Sixteen in 10,000 middle school students
- Twenty-three in 10,000 high school students

In the same year, about 12 percent of elementary schools, 43 percent of middle schools, and 47 percent of high schools reported at least one referral of a student.

Rates of referral to police also increased at higher grades:

- Eight in 10,000 elementary students
- Seventy-one in 10,000 middle school students

- Ninety in 10,000 high school students

Source: GAO analysis of Department of Education, Civil Rights Data Collection, school year 2017–2018. | GAO-24-106294

OCR defines school-related arrests and referrals for the purposes of the civil rights data collection (see sidebar). According to Education, in SY 2017–2018, about 230,000 students (0.5 percent of all students) were referred to police for incidents that occurred at school. Almost a quarter of those students were arrested (just over 0.1 percent of all students). Arrest and referral rates both rise in higher grades (see sidebar).

Although a small percentage of students are referred and arrested, these students may also face additional punitive consequences, such as suspension or expulsion from school, or be sent to the juvenile or adult justice system. This is sometimes called the school-to-prison pipeline.

Police in Schools

School police are police officers with arrest authority that are assigned to work in collaboration with a school. Some officers have specific training to work in schools and are often referred to as “school resource officers.” For the purposes of this report, we refer to both types of officers as “school police.” School districts can hire police officers directly or through a contractual agreement with the local police or sheriff’s office. Some school districts operate their own police force, and have their own police station, that serves all schools in that district. These district police forces can employ full-time police officers, including officers considered school resource officers as well as patrol officers and detectives. A study by Justice found that in 2019, there were about 25,000 police officers working as school resource officers in the United States. Just under 20 percent of those officers were employed directly by school districts.¹⁰

What Does an Arrest Look Like?

An arrest can either be a paper arrest or a physical arrest, according to school police we interviewed in three selected districts in California, Maryland, and Texas.



Paper Arrests (i.e., Process and Release)

A police officer completes arrest paperwork—which varies by state—at school. In Maryland, officials in one district said students receive a document with charges. In Texas, police in one school district said they also take students’ fingerprints and photos. Officials in all three districts told us that after completing paperwork, the police may send students back to class or home with parents. From here, students may be issued a citation to report to court at a later date. The school police we interviewed said most of their arrests took this form.

¹⁰U.S. Department of Justice, Bureau of Justice Statistics, Office of Justice Programs, *Law Enforcement Agencies that Employ School Resource Officers, 2019* (Washington, D.C.: Nov. 2022).



Physical Arrests

During a physical arrest, a police officer handcuffs the student and takes them to a police station or juvenile detention facility in a police car. School police we interviewed from all three districts said they do this as a last resort in situations in which the student is a danger to others.

Source: GAO interviews with school police; photos by GAO (left) and moodboard/stock.adobe.com (right). | GAO-24-106294

Education and Justice Guidance Related to Discipline

Referrals to police and school-related arrests are reported in the civil rights data as discipline incidents. OCR and Justice’s Civil Rights Division issue guidance and resource guides detailing schools’ responsibilities to address discrimination in schools, including with respect to discipline. In May 2023, Education and Justice jointly issued their Resource on Confronting Racial Discrimination in Student Discipline to support schools’ efforts to effectively confront the issue of race discrimination in student discipline. See table 1 for examples of guidance and resources.

Table 1: Examples of Guidance and Resources Related to Discipline and Policing in K-12 Schools from the Departments of Education and Justice

Department	Guidance or resource
Departments of Education and Justice, May 2023	Resource on Confronting Racial Discrimination in Student Discipline
Department of Education, July 2022	Supporting Students with Disabilities and Avoiding the Discriminatory Use of Student Discipline under Section 504 of the Rehabilitation Act of 1973
Department of Education, March 2023	Guiding Principles for Creating Safe, Inclusive, Supportive, and Fair School Climates
Department of Education, July 2022	Questions and Answers Addressing the Needs of Children with Disabilities and the Individuals with Disabilities Education Act’s (IDEA’s) Discipline Provisions
Department of Education, July 2022	Positive, Proactive Approaches to Supporting Children with Disabilities: A Guide for Stakeholders
Department of Education, October 2021	Referrals to Law Enforcement & School-Related Arrests Module

Source: GAO analysis of Departments of Education and Justice guidance and resources. | GAO-24-106294

Disparities in Arrest Rates Increased for Some Students as Race, Gender, and Disability Status Intersected, But Data Have Gaps

Native Hawaiian/Pacific Islander, Black, and American Indian/Alaska Native Students, Particularly Those with Disabilities, Experienced Highest Arrest Rates

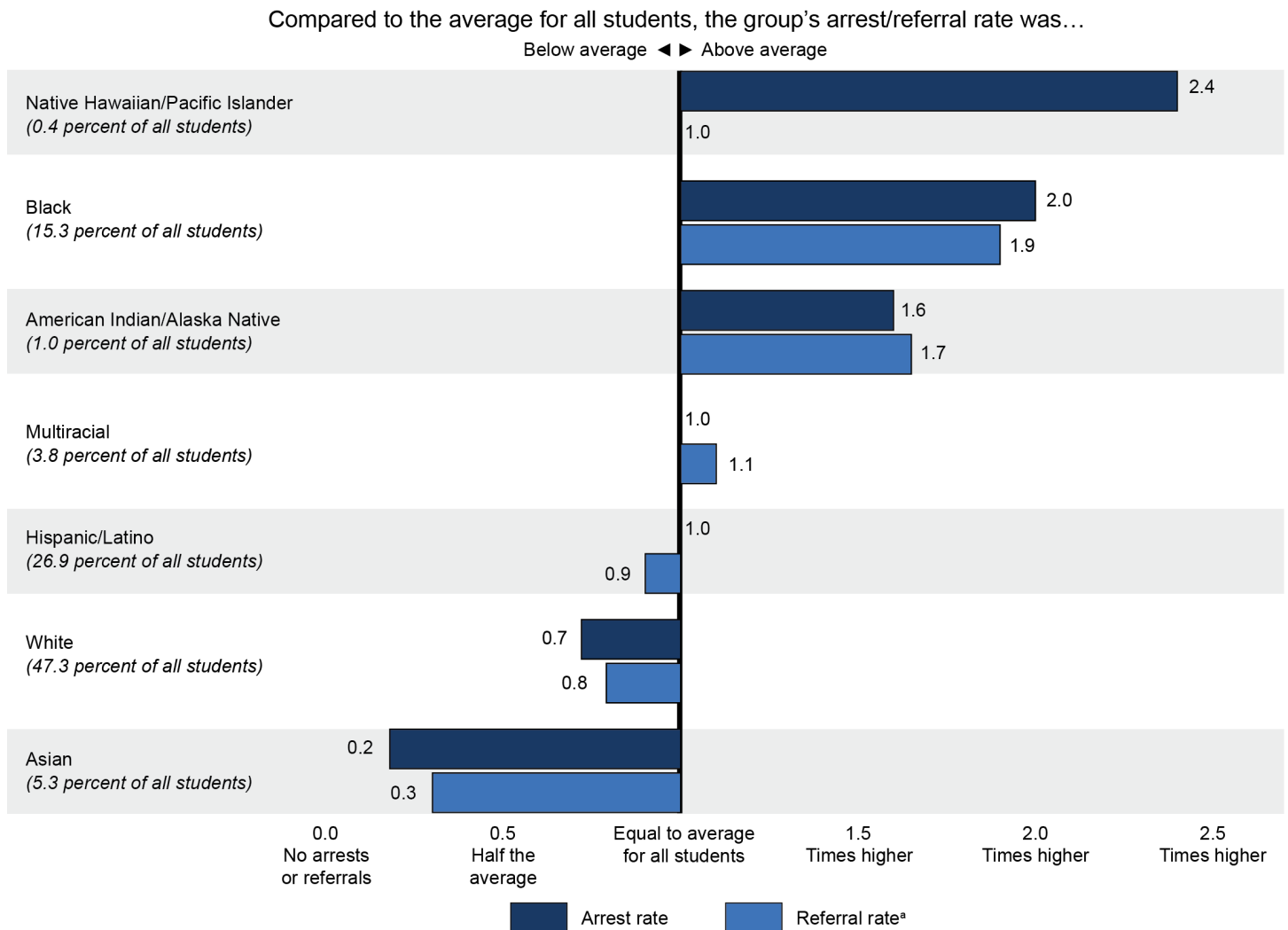
We found that students' race and ethnicity, gender, and disability status were all prominent characteristics when it came to rates of arrest and referrals to police. Specifically, Native Hawaiian/Pacific Islander, Black, and American Indian/Alaska Native students; boys; and students with disabilities had the highest arrest rates.¹¹ Further, when students belonged to more than one of these groups, they experienced even higher rates.

Race/Ethnicity

With respect to race, the arrest rates for Native Hawaiian/Pacific Islander, Black, and American Indian/Alaska Native students far exceeded the average for all students (see fig. 1). These three groups of students accounted for 17 percent of the student population but made up around 34 percent of students arrested, and each were arrested at rates two to three times higher than White students. Black students accounted for 15 percent of all students, with Native Hawaiian/Pacific Islander and American Indian/Alaska Native students collectively accounting for less than 2 percent of all students. Black and American Indian/Alaska Native students also had rates of referral to police that exceeded the average for all students.

¹¹Throughout this report, we use the same racial and ethnic categories as the Department of Education, and they are based on the 1997 U.S. Office of Management and Budget standards. These standards include seven racial and ethnic categories (American Indian or Alaska Native, Asian, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, White, and two or more races). For our analysis of different groups of students, we group students by the following categories: American Indian/Alaska Native, Asian, Black, Hispanic/ Latino, Native Hawaiian/Pacific Islander, White, and Multiracial.

Figure 1: Rates of Arrests and Referrals to Police for K-12 Students by Race/Ethnicity Compared to Average Rates for All K-12 Students, School Year 2017–2018



Source: GAO analysis of Department of Education, Civil Rights Data Collection, school year 2017-2018 (restricted-use data). | GAO-24-106294

Note: Rates by race and enrollment percentages exclude students with disabilities who receive services only under Section 504 of the Rehabilitation Act of 1973, as amended (around 3 percent of all students). The Department of Education does not collect arrest and referral data on these students by race and ethnicity.

^aA referral to police is an action by which a student is reported by a school official, for example, to any law enforcement agency or official, including a school police unit, for an incident that occurs on school grounds, during school-related events, or while taking school transportation, regardless of whether official action is taken. Citations, tickets, and court referrals are examples of referrals to police.

We found that state-level differences may contribute to Native Hawaiian/Pacific Islander students having an arrest rate far above average but a referral rate closer to average. The nationwide rates for Native Hawaiian/Pacific Islander students were driven substantially by Hawaii, as Hawaii enrolls 27 percent of that group and has a high arrest rate for all students, regardless of race. Hawaii had the highest overall student arrest rate in the United States and accounted for 75 percent of arrests of Native Hawaiian/Pacific Islander students nationally. However, Hawaii's referral rate ranked near the middle of states. The proportion of referrals to police that resulted in arrest varied widely across states, from 1 percent in Alaska to 89 percent in Hawaii. We did not investigate reasons for differences across states, such as differences in state-level policies

or data collection practices, and Education officials told us the agency did not have information on reasons for the high arrest rate in Hawaii.

Although OCR's SY 2017–2018 civil rights data do not include arrest data from the New York City and Chicago Public School districts, two of the largest school districts in the nation, publicly available data indicate that Black students made up a disproportionate share of arrests in those districts that year (see text box).¹²

Available Data about Arrests in New York City and Chicago

New York City Public Schools has not reported complete arrest data to the Civil Rights Data Collection since the Department of Education began collecting data from all districts in school year 2011–2012. Chicago Public Schools has not reported arrest data since school year 2015–2016. However, available local data and research shed light on the potential association between race and school-based arrests in these two school districts.

- In New York City Public Schools, Black students represented about 26 percent of the district's 1.1 million enrolled students in school year 2017–2018, according to data from the school district. The New York City Police Department publicly reports data on arrests in schools. According to our analysis of those data, about 61 percent of all people arrested in New York City Public Schools that year were Black.^a The data do not distinguish between students and nonstudents.
- In Chicago Public Schools, Black students represented about 37 percent of the district's approximately 370,000 enrolled students in school year 2017–2018, according to data from the school district. According to a University of Chicago analysis of Chicago Police Department data, about 81 percent of students arrested at school that year were Black.
- Both districts told us they could not report student arrest data to the Civil Rights Data Collection because the local police collected arrest data and either did not share it with the school district or did not capture student details. For example, Chicago Public Schools officials said the Chicago Police Department shares data on arrests at school addresses but does not track whether the people arrested were students.
- Both districts said they have taken steps to report arrest data by the 2023–2024 Civil Rights Data Collection. Officials from New York City Public Schools said the district had updated its data system to collect data on arrests that schools report. However, the officials noted their efforts may still not collect accurate arrest data because schools do not always know whether students were arrested. Chicago Public Schools developed a process to manually review police data to determine whether each arrest was of a student while at school or a school-related event. However, the officials said it is a labor-intensive process, so they are working to develop a structure and allocate staff time to implement it.

Sources: GAO analysis of information from the Department of Education, data from New York City Police Department, and interview responses from New York City Public Schools and Chicago Public Schools officials; New York City Public Schools (enrollment data); Chicago Public Schools (enrollment data); and University of Chicago Crime and Education Labs (report on school-based arrests). | GAO-24-106294

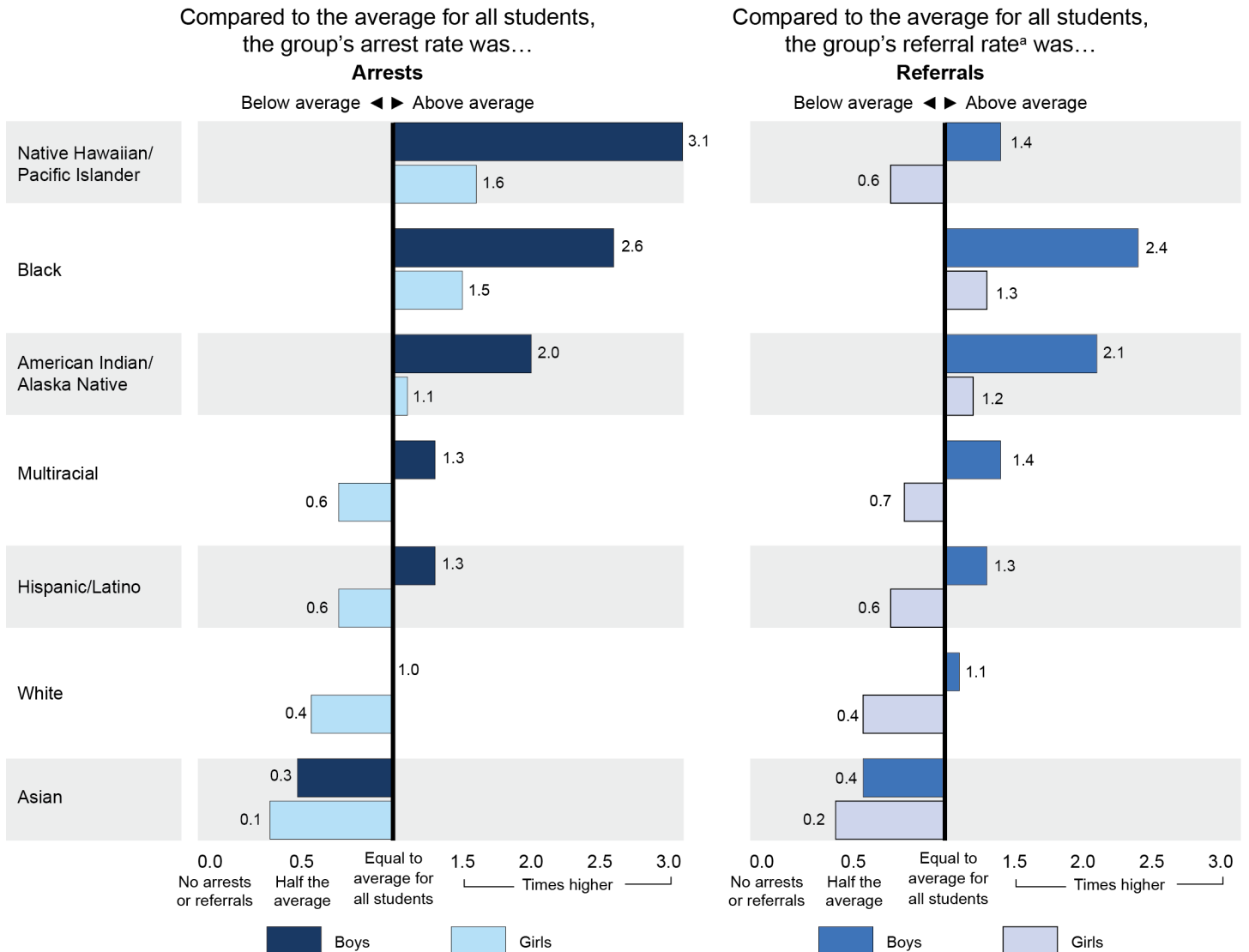
^aArrest data reflect the fourth quarter of 2017 and first two quarters of 2018. The New York City Police Department publishes data quarterly, rather than by school year. We counted arrests in which the individual's race was recorded as "Black" but did not count those who were "Black Hispanic" because New York City Public Schools has one "Hispanic" category in its enrollment data and does not disaggregate "Black Hispanic."

Gender and Race

With respect to gender, boys were arrested and referred to police around double the rate of girls. Within each racial group, boys had higher rates of arrest than girls (see fig. 2). Further, our analysis shows the compounding effects of the intersection between race and gender. Black boys were arrested at more than double the rate of White boys and six times the rate of White girls. However, when we analyzed data across race and gender, we found that some girls were arrested at higher rates than boys. Specifically, Native Hawaiian/Pacific Islander girls and Black girls were the only groups of girls that had higher arrest rates than most groups of boys.

¹²New York City Police Department, "School Safety Data," accessed Apr. 11, 2024, <https://www.nyc.gov/site/nypd/stats/reports-analysis/school-safety.page>. University of Chicago Crime and Education Labs, *CPS School-Based Arrests* (August 18, 2020), <https://drive.google.com/file/d/1mDdCd1-sdESoE2olVeqgEL8Ov27rjYfs/view>.

Figure 2: Rates of Arrests and Referrals to Police for K-12 Students by Race and Gender Compared to Average Rates for All K-12 Students, School Year 2017–2018



Source: GAO analysis of Department of Education, Civil Rights Data Collection, school year 2017-2018 (restricted-use data). | GAO-24-106294

Note: Rates by race exclude students with disabilities who receive services only under Section 504 of the Rehabilitation Act of 1973, as amended (around 3 percent of all students). The Department of Education does not collect arrest and referral data on these students by race and ethnicity.

^aA referral to police is an action by which a student is reported by a school official, for example, to any law enforcement agency or official, including a school police unit, for an incident that occurs on school grounds, during school-related events, or while taking school transportation, regardless of whether official action is taken. Citations, tickets, and court referrals are examples of referrals to police.

Disability, Race, and Gender

What Is an Individualized Education Program (IEP)?

An IEP outlines the special education and related services that an eligible student receives under the Individuals with Disabilities Education Act (IDEA). Under the IDEA, a child is evaluated and must have an IEP developed if the child has a disability under one or more of 13 disability categories, such as a specific learning disability, speech and language impairment, other health impairment, or autism, and who therefore needs special education and related services.

What Are 504 Services?

504 services include regular or special education and related aids and services that an eligible student receives under Section 504 of the Rehabilitation Act of 1973, as amended. Students may receive 504 services if they have a mental or physical impairment that substantially limits a major life activity. For example, services and aids may include accommodations for extended time on tests, modified textbooks or audio-video materials, or occupational or physical therapy.

Source: GAO analysis of documents from the Department of Education. | GAO-24-106294

With respect to disability status, students with disabilities who had an Individualized Education Program (IEP) were arrested and referred to police at more than double the rate of those without disabilities. Students with disabilities that received only 504 services were arrested and referred to police around 1.5 times the rate of those without disabilities. See table 2 for definitions of these groups and the sidebar for more information on IEPs and 504 services.

Table 2: Groups of Students with and without Disabilities in Our Analysis of the 2017–2018 Civil Rights Data Collection

Groups we analyzed	Students without disabilities	Students with disabilities that had an Individualized Education Program (IEP)	Students with disabilities that received only 504 services
Definition of group	Students who did not have an IEP or receive 504 services	Students who had an IEP, regardless of whether the students also received 504 services	Students who received 504 services but did not have an IEP
Size of group	42.3 million students (84 percent of all students)	6.5 million students (13 percent of all students)	1.4 million students (3 percent of all students)

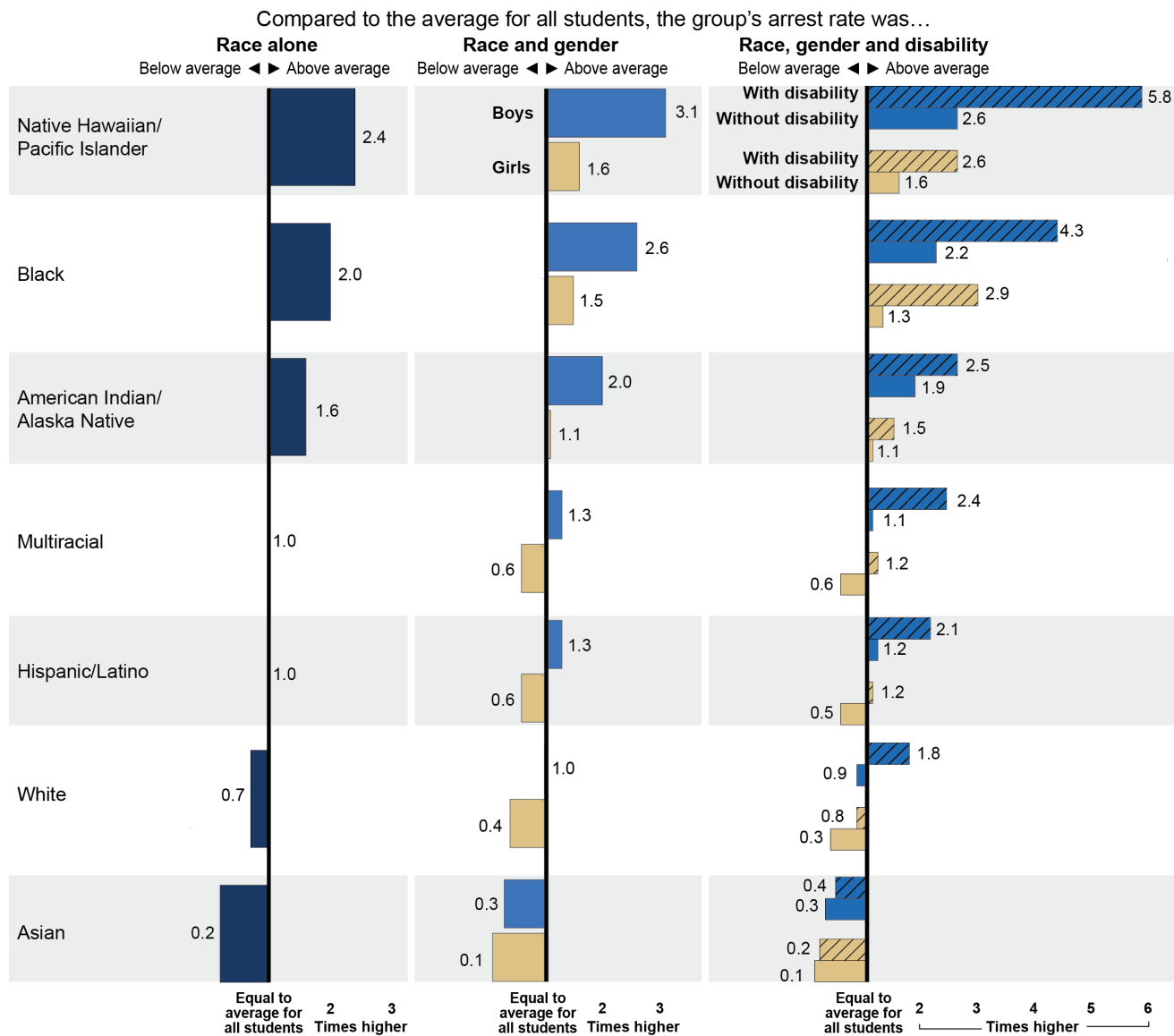
Source: GAO analysis of Department of Education, Civil Rights Data Collection, school year 2017–2018 (restricted use data). | GAO-24-106294

Note: Enrollment numbers exclude students in preschools, juvenile justice facilities, and Puerto Rico.

When we considered disability status alongside race and gender for racial groups that already have relatively high rates of arrests—that is, Native Hawaiian/Pacific Islander, Black, and American Indian/Alaska Native students—the rates were even higher when these students also had an IEP (see fig. 3).¹³ Further, within every racial group, boys with IEPs had higher arrest and referral rates than girls with IEPs. Finally, as figure 3 shows, students with IEPs were always arrested at higher rates than students without disabilities who were the same race and gender as they were. However, when comparing students in one racial group to students in another racial group, in some cases, students without disabilities had higher arrest rates than those with IEPs. For example, Black students without disabilities had higher rates of arrest than White students with disabilities who had an IEP.

¹³Data by race do not include students with disabilities who receive services only under Section 504 of the Rehabilitation Act of 1973, as amended.

Figure 3: Rates of Arrests and Referrals to Police for K-12 Students by Race, Gender, and Disability Status Compared to Average Rates for All K-12 Students, School Year 2017–2018



Source: GAO analysis of Department of Education, Civil Rights Data Collection, school year 2017-2018 (restricted-use data). | GAO-24-106294

Notes: “With disability” refers to students who have an Individualized Education Program (IEP) to receive services under the Individuals with Disabilities Education Act. This does not include students with disabilities who receive services only under Section 504 of the Rehabilitation Act of 1973, as amended, because the Department of Education does not collect arrest and referral data on these students by race.

Referral rates to police for each demographic group show similar patterns as arrest rates when compared to overall averages, except for Native Hawaiian/Pacific Islanders, who experience larger disparities in arrests than they do in referrals when compared to overall averages. For example, Black boys with an IEP are arrested and referred around four times the overall average. However, Native Hawaiian/Pacific Islander boys with an IEP are arrested at 5.8 times the overall average and referred at 2.4 times the average.

Our analysis of racial data for students with disabilities is limited to students with disabilities who have an IEP because Education does not currently collect data on the race of students who receive only 504 services and are arrested or referred. However, 2022 OCR guidance to schools discusses the issue of intersectional discrimination—discrimination due to the combination of protected characteristics such as race, gender, and

disability—as it relates to students with disabilities who receive 504 services.¹⁴ In that guidance, OCR recognizes that some instances of intersectional discrimination may stem from a decisionmaker acting on stereotypes specific to a subgroup of individuals, such as stereotypes about Black girls.¹⁵ Education has also reported that accurate and complete civil rights data are crucial for helping other federal agencies and states, school districts, and organizations make informed decisions.¹⁶ Moreover, Education’s 2023 Data Strategy, a roadmap for using and sharing agency data, includes a goal to improve data quality and accuracy.¹⁷ Including the 1.4 million students who receive only 504 services in its racial data would help Education meet this data goal.

Education officials said they determined that the burden on school districts to collect additional data on students’ race outweighed the benefit of having data on this additional student characteristic. However, they also said that they always reevaluate what data they will collect for subsequent collections and that Education publishes the draft data collections for public comment before finalizing them.¹⁸ Adding racial data on students receiving only 504 services to its arrest and referral data collection would give Education a more complete picture of arrests and referrals, and our analysis shows that considering the intersection of race, gender, and disability status is critical to fully understanding potential disparities.

Education Did Not Timely Notify Districts about Its New Definition of Arrest, Which May Impact the Quality of the 2021–2022 Civil Rights Data

New and Old Definitions of “School Related Arrest” in Civil Rights Data Collection

Old definition (used in SY 2017–2018): An arrest of a student for any activity conducted on school grounds, during off-campus school activities (including while taking school transportation), or due to a referral by any school official. All school-related arrests are considered referrals to law enforcement.

New definition (used in SY2021–2022): An arrest that occurs when a law enforcement officer takes a student into custody and intends to or appears to intend to seek charges against the student for a specific offense or offenses for any school-related activity. School-related activities include any activity conducted on school grounds, during off-campus school activities (in-person or remote), while taking school transportation, or due to a referral by any school official or that official’s designee. All school-related arrests are considered referrals to law enforcement, but not all referrals result in arrest.

Source: Civil Rights Data Collection school forms for school years (SY) 2017–2018, 2020–2021, and 2021–2022. | GAO-24-106294

In May 2023, Education notified school districts that it modified the definition of arrest for its SY 2021–2022 civil rights data.¹⁹ Although Education changed the definition to improve the accuracy of the data districts report, it did not communicate the definition change to school districts in a timely or clear manner. As a result, there is heightened risk that school districts used different definitions of arrest in their reported data for the 2021–2022 school year, which could affect data quality and accuracy. For data collections prior to the 2021–2022 school

¹⁴Department of Education, Office for Civil Rights, Supporting Students with Disabilities and Avoiding the Discriminatory Use of Student Discipline under Section 504 of the Rehabilitation Act of 1973 (Washington, D.C.: July 2022), accessed April 11 2024. <https://www2.ed.gov/about/offices/list/ocr/docs/504-discipline-guidance.pdf>.

¹⁵Section 504 of the Rehabilitation Act of 1973, as amended, prohibits discrimination on the basis of disability by recipients of federal funding.

¹⁶Department of Education, Office for Civil Rights, *Civil Rights Data Quality from Start to Finish* (Washington, D.C.: Nov. 2023), accessed April 11 2024, available at <https://civilrightsdata.ed.gov/publications>.

¹⁷Department of Education, Chief Data Officer, Office of Planning Evaluation and Policy Development, U.S. Department of Education Data Strategy (Washington, D.C.: 2023).

¹⁸Further, OCR states that when OCR receives a complaint alleging discrimination in the use of discipline under more than one law, OCR has the authority to investigate and, where appropriate, find a violation under any law in its jurisdiction.

¹⁹Education had not publicly released the SY 2021–2022 civil rights data as of May 9, 2024.

year (such as data from SY 2015–2016 and 2017–2018) Education defined “school-related arrest,” but it did not define the term “arrest” within that definition. See the sidebar for the old and revised definitions.

When Education modified the arrest definition, it did not provide districts sufficient time to revise their processes for collecting arrest data for the 2021–2022 school year. Specifically, Education shared the data collection form with the arrest definition for the SY 2021–2022 civil rights data collection in May 2023—a year after the school year had finished. As a result, districts did not have the new definition until after they had tracked arrests for the SY 2021–2022 using the older definition. Officials from one district told us they would need the definitions well in advance of the school year to implement Education’s changes in external data sharing agreements and data systems managed by contractors.

Education officials said this timing occurred because the agency must follow the process for updating federal forms under the Paperwork Reduction Act of 1980, and it received approval through this process in April 2023. However, Education did not initiate the approval process for the SY 2021–2022 form until November 2021 (i.e., after the start of SY 2021–2022), and it did not include the revised definition with its submission. Education began soliciting feedback from districts about how to change the definition in January 2022.

Further, Education did not clearly inform districts of the change, exacerbating the challenges brought about by the timing, so districts may have missed the information even if Education had given districts sufficient notice. Specifically, Education did not indicate that it had changed the arrest definition on the data collection form although it did so on a separate technical assistance document. Officials at all three districts we visited, and those we interviewed from New York City and Chicago school districts, said that they were unaware of the definition change in fall 2023. As the form is more than 100 pages, officials at one district said they could more easily identify changes if Education highlighted them on the form and indicated the sections with changes.

Without timely and clear notice of changes, school districts cannot be expected to have the information needed to report the data accurately. For example, officials in one district said Education’s change to the definitions of arrest meant that the district would either report data using the old definitions or would need to collect additional data retroactively. Even if districts were to collect data retroactively, they may not have information needed to do so accurately (e.g., they may not have data available to know whether an arrested student was taken into custody or not). Education relies on school districts and schools to accurately report civil rights data. Education uses this mandatory data collection in part to help ensure schools comply with civil rights laws, a key objective of the agency. To achieve agency objectives, federal standards for internal control state that management should externally communicate the necessary quality information.²⁰ By clearly identifying civil rights data changes on its website and sharing the information with school districts prior to the start of the school year for which they will be reporting data, Education will significantly improve the likelihood that districts will accurately collect and report data to a key civil rights enforcement tool.

Given that other federal agencies and states, school districts, and organizations use such data to make informed decisions, it is important that Education disclose known limitations in its arrest data. Federal standards for internal control state that data should faithfully represent what they purport to represent.²¹ By

²⁰GAO, *Standards for Internal Control in the Federal Government*, [GAO-14-704G](#) (Washington, D.C.: Sept. 10, 2014).

²¹[GAO-14-704G](#).

disclosing known limitations—for example, in the technical notes that accompany each Civil Rights Data Collection—Education would better ensure transparency and accurate interpretation of its data.

Nationwide, Student Arrest Rates Were More Than Twice as High in Schools Where Police Were Regularly Present

Regular Police Presence in Schools Was Associated with Higher Arrest Rates

We estimate that schools with a police officer present at least once a week had arrest rates that were more than double the rate (218 percent) of similar schools without police, according to our regression analysis.²² We also estimate that rates of referral to police were 1.37 times the rate (137 percent) of similar schools without the police.²³ The association between police presence and increased rates of student arrests and referrals to police held even after controlling for school characteristics that might also be associated with higher rates of arrests and referrals (see sidebar). For example, we controlled for presence of gang activity, school location, and a measure of school disorder.²⁴ See appendix II for more information about our regression methodology.

Where Were School Police Present in the 2017–2018 School Year?

In the 2017–2018 school year, school police were present in an estimated 51 percent (42,136) of schools across the nation. Schools with police presence ranged from an estimated 30 percent in the Pacific region (Alaska, California, Hawaii, Oregon, and Washington) to 74 percent in the East South Central region (Alabama, Kentucky, Mississippi, and Tennessee).

Source: GAO analysis of Department of Education, School Survey on Crime and Safety data, school year 2017–2018. | GAO-24-106294

Note: Using a 95 percent confidence interval, the margin of error for these estimates is within +/- 9 percentage points.

What Is Regression Analysis?

A regression is a statistical method that explores the relationship between two variables while controlling for other factors. Our regression explored whether an association exists between police presence in schools and school rates of student arrests and referrals to police. Our regression findings do not on their own imply causation. We also compared schools with police to similar schools without police through a matching process. Our matching process controlled for several known and measurable factors related to student arrests and referrals to police, such as crime level, geographic location, school size, and racial makeup of the school. Thus, while our regression analysis does not imply causation, it demonstrates a consistent association between schools with police and higher arrest rates compared to schools without police presence. Our regression used data from the Department of Education's 2015–2016 and 2017–2018 Civil Rights Data Collection and School Survey on Crime.

Source: GAO analysis of Department of Education Civil Rights Data Collection and School Survey on Crime and Safety, school years 2015–2016 and 2017–2018. | GAO 24 106294

²²The 95 percent confidence interval ranged from 147 percent to 323 percent (statistically significant at the 0.05 level). Across six different regression model specifications in our sensitivity checks, estimated arrest rates for schools with police ranged from 191 percent to 229 percent of the rates for similar schools without police, and the differences were statistically significant in each one. See appendix II for a detailed description of our regression analysis.

²³The 95 percent confidence interval ranged from 104 percent to 181 percent (statistically significant at the 0.05 level). Across six different regression model specifications in our sensitivity checks, estimated referral rates for schools with police ranged from 133 percent to 146 percent of the rates for similar schools without police, and the differences were statistically significant in each one. See appendix II for a detailed description of our regression analysis.

These data look specifically at full-time and part-time school police including law enforcement officers (police) and those officers specifically referred to as school resource officers. Schools without police include those that had no police or police present less than once a week. Our findings controlled for certain school-level characteristics that may be associated with student arrests by using doubly robust regression analysis of propensity score matched samples. We conducted several sensitivity analyses to ensure our results held under various statistical assumptions. However, any regression modelling cannot be certain to fully control for all factors that might drive police presence in schools or arrest rates. For more information about our analysis, see appendix II.

²⁴School disorder measures the reported frequency of student racial/ethnic tensions, student verbal abuse of teachers, disorder in classrooms, student acts of disrespect for teachers, and gang activity.

Like the findings from our regression analysis, our descriptive analysis of the School Survey on Crime and Safety (school crime survey) found that arrests of students were more common in schools with a police presence compared to schools without police. This was true both before and during the COVID-19 pandemic.²⁵ Specifically, for SY 2017–2018, we found that police arrested an estimated 29 percent of students (one or more arrests) compared to 8 percent of schools without police.²⁶ In SY 2019–2020, police arrested an estimated 26 percent of students compared to 7 percent of schools without police.²⁷

Site Visit Takeaway: School Police and School Discipline

In school years 2017–2018 and 2019–2020, about half of schools that had police also involved the police in student discipline.

School administrators and police in the three districts we visited said school discipline involves responding to students who break school rules while police respond to crimes. For example, one police chief said police do not respond when students violate dress codes or refuse to follow teachers' instructions.

Whether an incident is considered solely a behavior warranting school discipline or involves criminal behavior can be nuanced and involve professional judgment. For example, officials in one district said a fight is a school discipline incident when two students mutually instigate it and there are no injuries. However, if a single student instigates the fight or there are injuries, administrators call school police.

School administrators and district officials in all three school districts we visited said they did not use police to maintain student discipline, and school police in those districts agreed that school discipline was outside of their role. However, police at two of the six schools we visited in those three districts provided examples in which school staff had asked them to respond to disciplinary incidents, but police officers stated they declined to intervene.

Source: GAO site visit analysis. | GAO-24-106294

We also found that arrests were more common when school police were involved in student discipline. In SY 2017–2018, an estimated 36 percent of schools where police were involved in student discipline reported police arrested students compared to an estimated 21 percent of schools where police were not involved in discipline.²⁸ The SY 2019–2020 data show a similar difference when police are involved in discipline.²⁹ In our visits to three school districts, officials described examples of behaviors that would prompt police intervention versus school discipline—which can involve professional judgment—and the roles and responsibilities of police in schools (see sidebar and textbox).

Roles and Responsibilities of School Police

During our visits to three school districts, school officials described broad roles for police in schools. For example, school officials stated that police responsibilities include maintaining safety and building relationships with students and the community. Specifically, the daily roles of school police varied greatly and included traffic patrol, supervision during lunch and dismissal, and securing campus doors and premises as well as responding to imminent danger or instances of crime. Further, school officials told us that school police purposefully build relationships with students to improve students' perception of police. For example, officials at one school district stated that school police act as a guide by mentoring students.

²⁵According to Education, the pandemic did not impact the quality of the SY 2019–2020 school crime survey data, but Education advises caution when comparing estimates from SY 2019–2020 to other years. The 2019–2020 school crime survey was administered from February to October 2020. The survey instructed schools to respond about the school year to date, so schools that responded after March 2020 were impacted by the pandemic. Education compared responses from schools that responded before and after the pandemic began and did not find issues with data quality.

²⁶An estimated 29 percent of schools where police were present reported arresting students in SY 2017–2018 (with a 95 percent confidence interval ranging from 26 to 31) compared to an estimated 8 percent of schools where police were not present (7 to 10).

²⁷An estimated 26 percent of schools where police were present reported arresting students in SY 2019–2020 (with a 95 percent confidence interval ranging from 24 to 28) compared to an estimated 7 percent of schools where police were not present (5 to 9).

²⁸The school crime survey includes the variable “maintain student discipline” as an activity of school police. An estimated 36 percent of schools where police were involved in discipline reported arresting students in SY 2017–2018 (with a 95 percent confidence interval ranging from 33 to 39) compared to an estimated 21 percent of schools where police were not involved in discipline (19 to 24).

²⁹An estimated 31 percent of schools where police were involved in discipline reported arresting students in SY 2019–2020 (with a 95 percent confidence interval ranging from 28 to 35) compared to an estimated 20 percent of schools where police were not involved in discipline (17 to 24).

Source: GAO interviews with school district officials, school administrators, and school police in three school districts. | GAO-24-106294

Conclusions

Education’s civil rights data are a critical tool for helping OCR, policymakers, researchers, schools, parents, and key stakeholders understand and address potential disparities in arrest and referral rates among various groups of students. Our analysis and Education’s own guidance recognize that students can experience even greater adverse consequences as their race, gender, and disability statuses overlap, but OCR does not collect sufficiently detailed data that could help it determine whether students receiving services under Section 504 of the Rehabilitation Act of 1973, as amended, are potentially being treated unfairly. Moreover, Education’s 2023 Data Strategy includes a goal to improve data quality and accuracy. Including the 1.4 million students served under Section 504 in its racial data would help Education meet this goal.

In addition, because OCR did not inform school districts about changes to its definition for school-based arrests in a clear or timely manner, there is heightened risk that school districts may have reported inconsistent arrest data for the SY 2021–2022 civil rights data collection. Having complete and accurate arrest data will better position OCR to fulfill its mission related to identifying and addressing potential discrimination in K-12 schools based on students’ race, color, national origin, sex, and disability status. Clearly communicating any changes to data on arrests and referrals to law enforcement and limitations in such data—in the same manner it discloses other limitations about its Civil Rights Data—will also aid the policymakers, researchers, educators, school officials, and others who use the data.

Recommendations for Executive Action

We are making the following three recommendations to Education:

The Secretary of Education should ensure that the Assistant Secretary of the Office for Civil Rights revise the Civil Rights Data Collection to collect arrest and referral data, by race, for students with disabilities served under Section 504 of the Rehabilitation Act of 1973, as amended. (Recommendation 1)

The Secretary of Education should ensure that the Assistant Secretary of the Office for Civil Rights take necessary steps to disclose the known limitation in its arrest data for the 2021–2022 school year Civil Rights Data Collection. This could include, for example, confirming and disclosing which definitions school districts used or noting that arrest data for that year is not comparable among districts. (Recommendation 2)

The Secretary of Education should ensure that the Assistant Secretary of the Office for Civil Rights clearly communicate any future changes to data on arrests and referrals to law enforcement in the Civil Rights Data Collection before the start of the school year for which districts are to collect data. (Recommendation 3)

Agency Comments and Our Evaluation

We provided a draft of this report to the Departments of Education and Justice for review and comment both provided technical comments, which were incorporated, as appropriate. Education also provided formal comments, which are reproduced in appendix III. Education generally agreed with all three recommendations. With respect to the first recommendation, Education said it would reconsider collecting data on students receiving services under Section 504 of the Rehabilitation Act of 1973, as amended, disaggregated by race when it seeks approval and obtains stakeholder feedback for the 2025-2026 data collection. It also said that reporting data given the small size of the population receiving Section 504-only services raises student privacy concerns. We agree that it is inappropriate to publicly release data with small counts that risk the disclosure of students identifying information. However, GAO's recommendation is to collect the data, not publicly report it. Education can and already collects data that it uses for its own purposes and does not release publicly. For example, Education maintains a restricted use version of the civil rights data, which is not made available to the public, and contains many data elements with small counts. Collecting race-disaggregated 504-only data, which also has small counts, is no different.

Education also said that, for the current data collections, it determined it had sufficient data that students with disabilities have higher rates of arrests and referral to police based on disaggregated race data for students with disabilities served under the IDEA and noted that the IDEA population is over four times larger than the 504-only students with disabilities. However, the nature of 504 disabilities compared to IDEA disabilities can be quite different. As we discuss in the report, students referred to law enforcement or arrested in schools may face punitive consequences, such as suspension or expulsion. In addition, collecting and proactively analyzing race-disaggregated data for students receiving 504 services—without publicly reporting small cell counts—is important to ensuring that students receiving services under Section 504 are protected from potential unfair treatment that can have lifelong consequences of the school-to-prison pipeline.

We are sending copies of this report to the appropriate congressional committees, the Secretary of Education, the Attorney General, and other interested parties. In addition, the report is available at no charge on the GAO website at <https://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-7215 or nowickij@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix IV.



Jacqueline M. Nowicki, Director
Education, Workforce, and Income Security Issues

Appendix I: Objectives, Scope, and Methodology

Overview

This report examines (1) what the Department of Education's data show about the extent to which different student groups are arrested in K-12 schools and (2) whether the presence of police in schools is associated with arrests of students.

To conduct this work, we analyzed two federal datasets that capture student arrests and referrals to police and the presence of school police in K-12 public schools. Specifically, we conducted descriptive and regression analyses using Education's national Civil Rights Data Collection (civil rights data) and nationally representative data from the School Survey on Crime and Safety (school crime survey). The civil rights data provide school-level data on the number of students who were referred to police and arrested, the demographic characteristics of these students, and the overall student populations of their schools. The school crime survey provides school-level data on schools' use of police and disciplinary problems such as gang activity. We assessed the reliability of the data by reviewing existing documentation about the data and performing electronic testing on required data elements from both datasets and determined they were sufficiently reliable for the purposes of our analyses. We analyzed the school crime survey data using the weights and sampling design information to account for the complex sample design. We expressed the precision of our sample's results with a 95 percent confidence interval, which gave the range that would contain the actual population value for 95 percent of the samples that could have been drawn. All regressions used a 95 percent confidence interval to determine statistical significance.

We also visited a nongeneralizable sample of six schools in three school districts (two per district) to learn more about the roles of school police, how schools collect data on referrals to police and arrests, and the benefits and challenges of having police on campus. These districts were located in California, Maryland, and Texas.

In addition, we interviewed representatives from 12 stakeholder organizations that included educational organizations, disability rights groups, and organizations representing school police as well as knowledgeable stakeholders who have examined student arrest rates. We selected these organizations for interviews based on their knowledge of schools' use of police, familiarity with the districts we visited, or experience in reviewing student arrest and referral data.

Lastly, we reviewed documents from Education and the Department of Justice and interviewed officials about the datasets used in this report. We reviewed guidance and resource documents and documents about completed investigations of schools' and school districts' actions related to referrals and arrests of students. We also interviewed officials at both agencies about these investigations.

Descriptive Analysis of Arrest and Referral Rates Using the Civil Rights Data Collection

To address the first objective regarding what Education’s data show about the extent to which different groups of students are arrested, we examined the restricted-use version of Education’s school year (SY) 2017–2018 Civil Rights Data Collection (civil rights data), a mandatory survey of all public K-12 school districts and schools. Although Education’s Office for Civil Rights (OCR) generally collects these data biennially, OCR skipped the planned 2019–2020 collection due to the COVID-19 pandemic and instead collected data for SY 2020–2021. OCR is currently collecting data for SY 2021–2022 and plans to resume its biennial data collection schedule with the SY 2023–2024 collection. The civil rights data provide school-level counts of the numbers of students enrolled in each school and the number referred to the police and subsequently arrested, disaggregated by demographic group. For SY 2017–2018, the survey used the following definitions:

- **School-related arrest:** An arrest of a student for any activity conducted on school grounds, during off-campus school activities (including while the student is taking school transportation), or due to a referral by any school official. All school-related arrests are considered referrals to law enforcement (police). In this report, we use the term “arrest” to mean “school-related arrest.”
- **Referral to law enforcement:** An action by which a student is reported to any law enforcement agency or official, including school police, for an incident that occurs on school grounds, during school-related events, or while taking school transportation, regardless of whether official action is taken. Citations, tickets, court referrals, and school-related arrests are considered referrals to police. In this report, we use the term “referral to police” to describe “a referral to law enforcement.”

To assess the reliability of these data, we examined the number of missing values and whether there were detectable patterns in missing values by student demographic groups or district size. Education built a series of logic checks into their data reporting system intended to reduce data entry errors. Out of more than 17,000 school districts, only 19 districts did not report arrest or referral data.¹ The majority of these districts had fewer than 1,000 students enrolled, and no district enrolled more than roughly 5,400 students. However, two large school districts have had long-term challenges with data reporting: the New York City and Chicago Public School districts, which did not report complete arrest data in SY 2017–2018. For example, all arrest variables for every school in New York City Public Schools are either missing or zero. New York City Public Schools has not reported complete arrest data since Education began collecting data from all districts in SY 2011–2012. Chicago Public Schools has not reported complete arrest data since SY 2015–2016.² These districts had 966,000 and 371,000 enrolled students, respectively.

Collectively, these two major metropolitan districts and the 19 districts with missing data accounted for less than 3 percent of all students enrolled in K-12 schools in SY 2017–2018.³ More than 95 percent of schools reported a complete set of arrest and referral variables. Among those that did not, there were no detectable

¹Every school in these districts has missing values for every arrest and referral count variable in the data.

²Both districts told us they could not report student arrest data to the civil rights data because the local police collected arrest data and either did not share it with the school district or did not capture student details. Although Chicago Public Schools reported arrest data prior to SY 2017–2018, officials from the district told us they had used a proxy that was not an exact measure of student arrests. Both districts said they have taken steps to report arrest data by the 2023–2024 civil rights data.

³In addition to missing data, Education and Justice have found instances in which districts underreported arrests and referrals to police.

patterns in the missing values. Because of this and the fact that the districts with missing data account for such a small portion of overall districts and enrollment, we determined the data to be sufficiently reliable for this analysis.

In November 2023, Education released its most recent civil rights data for SY 2020–2021, but we did not use these data because it was the first full school year during the COVID-19 pandemic and, therefore, anomalous. In-person enrollment was low as many students attended school remotely due to the pandemic. In addition, in-person enrollment varied by race, with White students more likely to attend school in person than Black, Hispanic/Latino, and Asian students, according to Education.⁴ Our review of Education reports also showed that the number of arrests in SY 2020–2021 declined 84 percent from SY 2017–2018.

We calculated arrest and referral rates as the percentage of all students, or all students within a demographic group, that experienced an arrest or referral to police. To do this, we divided arrest or referral counts for a specific group by the enrollment counts for that same group. The counts of arrests and referrals in the SY 2017–2018 civil rights data represent the number of students arrested or referred to police rather than the number of arrest or referral incidents. This means calculated rates do not account for any student arrested or referred multiple times.

Given the scope of this descriptive analysis, we excluded observations from preschools and juvenile justice facilities. The civil rights data collect all enrollment, arrest, and referral counts by three main demographic characteristics: gender, race and ethnicity, and disability status.

The main limitation of this analysis is that arrest and referral rates by race excluded students receiving disability services only under Section 504 of the Rehabilitation Act of 1973, as amended, because Education does not collect racial data on these students. Education collects arrest and referral counts by race only for students without disabilities and students with disabilities that receive services under the Individuals with Disabilities Act (IDEA). To calculate arrest and referral rates by race, we used the counts of students without disabilities and students with disabilities who received services under IDEA.

Descriptive Analysis of Police Presence Using the School Survey on Crime and Safety

In addition to the civil rights data, we analyzed Education’s School Survey on Crime and Safety (school crime survey). The school crime survey is a nationally representative survey of principals in K-12 public schools conducted biennially by the National Center for Education Statistics. The survey collects data from schools to estimate the number and duties of school police, disciplinary problems, disciplinary actions, and programs and policies. The crime and safety data are self-reported by approximately 4,800 principals or other administrators. Misreporting may be a source of measurement error, as it often is for self-reported data in general.

We analyzed the restricted-use data file of the survey for SY 2017–2018 and 2019–2020, the most recent data available at our time of analysis. The 2019–2020 survey was administered from February to October 2020 with schools instructed to respond about SY 2019–2020 to date. The COVID-19 pandemic might have affected

⁴Department of Education, Institute of Education Sciences, “Highlights from the 2021 NAEP Monthly School Survey” (Washington, D.C.), accessed March 7, 2024, <https://ies.ed.gov/schoolsurvey/mss-report/>.

schools that responded after March 2020, but Education compared responses before and after the pandemic began and did not find issues with data quality. While we cannot compare the data to pre-pandemic years, we found the data were reliable for comparing groups of schools within years. For these reasons, we determined that the SY 2019–2020 data were sufficiently reliable for our purposes.

Propensity Score Matching and Regression Analysis of School Police Presence Using Civil Rights and Crime and Safety Survey Data

To address the second objective regarding the association between police presence in a school and arrest and referral rates, we conducted a regression analysis on a nationally representative sample of schools matched across pertinent characteristics using Education’s nationally representative school crime survey, supplemented with civil rights data, both for SY 2015–2016 and 2017–2018. This analysis compared arrest and referral rates in schools with a police officer present at least once a week to those schools without police present, controlling for characteristics that could be associated with changes in arrest and referral rates, such as gang activity, neighborhood crime, and a measure of school disorder.⁵

We used propensity score matching to create a custom subset of the school crime survey data for the regression analysis. This method matched schools with and without police presence based on similarity of school characteristics to create a set of schools whose main difference is whether they have a police officer present at least once a week. Matching helped ensure that differences in arrest and referral rates were not due to differences in other school characteristics, such as the presence of gang activity. Appendix II provides full technical details on the propensity score matching and regression analysis.

Site Visits

To obtain information on how selected school districts and schools use school police and how arrests are carried out in the context of a school environment, we selected a nongeneralizable sample of three school districts to serve as illustrative examples. To select these school districts, we used civil rights data to sort school districts into categories based on rates of referrals of students to police and student arrests, among other factors, and identified an initial list of 74 districts. From that list, we judgmentally selected three districts in California, Maryland, and Texas.

Using the civil rights data, we identified districts in all 50 states and the District of Columbia that had school police, total enrollment above the 75th percentile of all districts, and at least 10 schools to increase our likelihood of being able to select comparison schools (one with high rates vs. one with low rates). To select our list of 74 districts, we identified the districts that were among the top 10 for at least one of the following measures for all students, Black students, or Hispanic/Latino students:

- large number of students referred or arrested,
- high rate of students referred or arrested per 100 students, and
- high average number of students referred and arrested per school in the district.

⁵Schools without police include those that had no police or police present less than once a week.

We excluded 23 school districts from our list because at the time of our selection, Education told us that the agency had ongoing investigations in those districts that included a policing component. This left us with a list of 51 districts. From these, we selected three districts based on variation in size, school demographics, and rates of student arrests, which we measured using the SY 2017–2018 civil rights data.

Within each district, we selected two schools to visit: one with a high and one with a low arrest rate. During our interviews, we met with school officials and police and asked about the school environment, the roles of police, how police carry out arrests, and the scenarios under which a student would be arrested. We also asked school officials about how they collect data for the civil rights data and their interpretation of federal definitions of arrest and referral to police used in the civil rights data.

We conducted this performance audit from November 2022 to July 2024 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: Technical Appendix for Propensity Score Matching and Regression Analysis

We estimated the association between police presence in schools and school-wide rates of referrals and arrests by merging school-level survey data from the Department of Education’s School Survey on Crime and Safety (school crime survey) with administrative data from the Civil Rights Data Collection (civil rights data) for school years 2015–2016 and 2017–2018 to perform a doubly robust propensity score matched comparison analysis. We made this adjustment to account for other factors contained in the data, such as school characteristics and policies, so that our comparison of schools with and without police was more accurate. In other words, matching minimized the effects of potential confounding factors.¹ We used doubly robust estimation, which combines propensity score models and generalized linear regression. We chose this method because it generally results in statistically unbiased estimates. By comparing schools with police to similar schools without police in this way, we estimated the association of police presence in schools with two disciplinary outcomes: school-wide rates of referrals and rates of arrests.

The use of doubly robust propensity score matching in this context is important because an analysis using unadjusted observational data would inherit innate differences in characteristics and policies between schools with and without police. We analyzed school-level survey data that were observational in the sense that the school crime survey does not randomize police presence in schools (and students within schools). Because of this confounding when using unadjusted data, observed differences in arrest rates between schools with and without police may not have been attributable to the presence of a police officer itself, but rather to the systemic differences in characteristics and policies between schools with and without police. By using propensity score matching, we created a comparison group of schools without police that most closely resembles schools with police on a number of key school-level characteristics, programs, and policies.

We performed a regression analysis on the matched sample that compared student arrest and referral rates in schools with and without school police. This analysis produced the estimated association between school police and student arrest and referral rates at the school level. Our analysis used a robust set of control variables that helped to account for factors that could have explained differences in student arrest and referral rates between schools with and without police that remained after the matching process.

While our analysis controlled for factors that could overestimate or underestimate differences in arrests and referrals when making simple comparisons between schools with and without police, all regression models are subject to limitations. The results of our analyses are associational in nature and do not on their own imply a causal relationship. Additionally:

- Some variables related to arrests and police presence in schools were not available in the data for various reasons, such as the school-level unit of analysis, item nonresponse, unobservable characteristics, and potentially incomplete and underreported data on students arrested and referred in the civil rights data. In combination, these factors could introduce bias of unknown direction and magnitude into the analysis.

¹We excluded alternative schools, juvenile justice facilities, and special education schools from our analysis. For the purposes of this analysis, we consider police to be school resource officers who are also sworn law enforcement officers as defined in the school crime survey. In the school crime survey, police are considered present at a school if they are present at least once a week.

Additionally, the use of regression to generate propensity scores assumes a relationship between police presence and school characteristics that is structurally similar for all schools in the analysis. If this assumption is incorrect, the ability of our model to accurately predict police presence could be limited. To account for these limitations, we combined propensity score matching with an additional regression model of the outcomes to obtain “doubly robust,” approximately unbiased estimates, even if one of the models was incorrectly specified.²

- We used merged generalizable complex survey data, which are subject to both sampling and non-sampling errors. To account for the sampling error, we assessed the sensitivity of the complex survey design on our model of arrest rates. We used survey weights and 50 replicate jackknife weights to create an alternate set of propensity scores for use in generating an alternate matched dataset. We used both datasets to model arrest rates and saw no evidence of bias or loss of precision for the estimated association of police presence. In addition, when modeling arrest rates, we accounted for the complex survey design by incorporating the sampling weights in both matched datasets and used robust standard errors in the model. However non-sampling error may still be present, for example, due to errors in data processing.
- Lastly, we could only match a subset of schools with police that were similar to schools without police in our dataset. The matched analysis sample therefore may be subject to selection bias and produce estimates that do not generalize to broader populations of schools. Nevertheless, we were able to match more than 90 percent of the sampled schools in the school crime survey, and we also ensured the range of propensity scores after matching resembled the range prior to matching, with an average absolute difference of 0.0017 between schools with and without police.

Bias Analysis

Some schools in the school crime survey could not be merged with the civil rights data. These represented approximately 2.6 percent of the sampled schools in the school crime survey for both school years combined. Of the schools in the school crime survey for school years 2015–2016 and 2017–2018, 73 and 50 schools could not be matched, respectively. Additionally, several public school districts, including the New York City and Chicago Public Schools, did not report their arrest and referral data to the civil rights data for these years. Conceptually, we treated these both as missing data. Because these large public school districts are missing data on arrests and referrals, their omission could potentially bias findings. To determine the extent to which unmerged schools differed from merged schools, and similarly the extent to which schools with missing arrest data differed, we performed a bias analysis prior to conducting propensity score matching. We limited the analysis to schools that were in the school crime survey since we used a subset of these schools in the final analysis.

First, we performed a logistic regression that modeled the probability that a school in the school crime survey could not be merged with the civil rights data. This model controlled for non-missing factors, such as school characteristics and policies measured by the school crime survey. The model’s utility was questionable when

²David Lenis, Trang Quynh Nguyen, Nianbo Dong, and Elizabeth A. Stuart, “It’s all about balance: propensity score matching in the context of complex survey data,” *Biostatistics*, vol. 20, no. 1 (2019): 147–163, <https://doi.org/10.1093/biostatistics/kxx063>; Finbarr P. Leacy and Elizabeth A. Stuart, “On the joint use of propensity and prognostic scores in estimation of the average treatment effect on the treated: a simulation study,” *Statistics in Medicine*, vol. 33, issue 20 (2014): 3488–3508, <https://doi.org/10.1002/sim.6030>; and Donald B. Rubin, “The Use of Matched Sampling and Regression Adjustment to Remove Bias in Observational Studies,” *Biometrics*, vol. 29, no. 1 (1973): 185–203, <https://doi.org/10.2307/2529685>.

estimated separately by year likely due to having a small number of observations missing within years (and even fewer within each factor subclass). The regressions combining both years found statistically significant differences at the 0.05 level between missing versus non-missing schools for the percentage of special education students and school type. The percentage of students eligible for free or reduced-price lunch was also statistically significant at the 0.06 level.

For the schools with missing data on arrests and referrals, we also examined differences in estimated averages and standard errors for non-missing factors under two assumptions. First, we assumed that the missing data were missing completely at random by discarding the records from the analysis. Second, we assumed that the missing data were missing not completely at random and adjusted the calculation of standard errors using Taylor series variance estimation methods.³ The differences between estimates and standard errors under these two assumptions were small, suggesting that the data met the more conservative assumption (i.e., the missing data were missing completely at random).

Nevertheless, we controlled for the significant factors from the bias analysis when creating the matched comparison groups using logistic regression and when analyzing the outcomes in the final regression analysis using the matched data. Therefore, we assumed that the missing data were, at a minimum, likely to be missing at random within subclasses of the covariates and that the matching and regression analysis were sufficient adjustments for the missing data.

Propensity Score Matching

For the purposes of our analysis, schools with police are the “treatment” group of interest, and schools without police are the “control” or comparison group. We made the following causal assumptions when performing propensity score matching:

- **Stable unit treatment value assumption.** We assumed that schools did not interfere with each other (i.e., that police presence in one school does not affect the number of arrests for a different school) and that there is one way of having a police presence at school.
- **Consistency.** We assumed the potential arrests in schools with police were equal to the observed arrests if the school had a police presence.
- **Ignorability.** We assumed that given a set of observable factors that were not affected by police presence, potential arrests were independent of whether the school had police.
- **Positivity.** We assumed that schools with the same observed characteristics have a positive probability of having and not having a police presence.

In this application, the propensity score was the probability that a school had a police officer given a set of observed covariates, such as school-level characteristics and policies. We generated propensity scores using a generalized linear logistic regression model, controlling for observable characteristics and factors that were associated with the presence of police at a school. We selected characteristics and policies as controls by reviewing prior GAO work and other research and publications in the topic area. Table 3 provides the control

³SAS Institute Inc., “The SURVEYMEANS Procedure,” in SAS/STAT 15.1 User’s Guide (Cary, N.C.: 2018), 4000–232.

variables used in the logistic regression modeling of the probability of police presence at a school, including several composite or recoded variables from table 4.

Table 3: Outcome and Control Variables Used in the Logistic Regression to Generate Propensity Scores for Matching Analysis

Outcome	Control variables
Presence of sworn law enforcement officer (SSOCS: C0610)	School characteristics: School disorder, crime (SSOCS: C0562), school level, school type, school size
	School staff: Student to teacher ratio
	Student characteristics (percent of students out of total): Eligible for free or reduced-price lunch (SSOCS: C0524), students with Individualized Education Programs, male students, Hispanic/Latino and Black students, students with limited English proficiency ot
	School geography: State (SSOCS: FR_FIPST), locale
	School year

Source: GAO analysis of Department of Education’s Civil Rights Data Collection (CRDC) (restricted use data) and School Survey on Crime and Safety (SSOCS), school years 2015–2016 and 2017–2018. | GAO-24-106294

Table 4: Created Variables Used for Propensity Score Matching and Regression Analysis

GAO category	Variables from SSOCS or CRDC	Recoded value(s)
Total student enrollment	Total student enrollment: <ul style="list-style-type: none"> Female and male student enrollment (CRDC: TOT_ENR_F, TOT_ENR_M) Female and male pre-school enrollment (CRDC: TOT_PSEN_F, TOT_PSEN_M) Total enrollment (SSOCS: C0522) 	<ul style="list-style-type: none"> If not missing from CRDC: (Female and male student enrollment) – (female and male pre-school enrollment) If missing from CRDC: <ul style="list-style-type: none"> Total enrollment (SSOCS) For regression analysis, all enrollment counts were from CRDC and included preschool students
School level	Grades offered (CRDC: SCH_GRADE_ [##])	<ul style="list-style-type: none"> Elementary school only Middle school only High school only Combination of grade levels
School type	Type of school (SSOCS: C0564): <ul style="list-style-type: none"> Regular public school Charter school Has a magnet program for part of the school Exclusively a magnet school Other (specify) 	<ul style="list-style-type: none"> Regular public school Magnet school (exclusively or partially) Charter or other school
School size	Total student enrollment: <ul style="list-style-type: none"> Male enrollment (CRDC: TOT_ENR_M) Female enrollment (CRDC: TOT_ENR_F) Total enrollment (SSOCS: C0522) 	<ul style="list-style-type: none"> Small (1 to 450 students) Medium (451 to 650 students) Large (651 to 1,000 students) Extra large (more than 1,000 students)
School disorder	<ul style="list-style-type: none"> Student racial ethnic tensions (SSOCS: C0374) Student verbal abuse of teachers (SSOCS: C0380) Widespread disorder in classrooms (SSOCS: C0382) Student acts of disrespect for teachers (SSOCS: C0384) Gang activities (SSOCS: C0386) 	<ul style="list-style-type: none"> Regular (if at least one occurs daily or weekly) Rare (if at least one occurs monthly or occasionally) Never (if none occur)

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GAO category	Variables from SSOCS or CRDC	Recoded value(s)
Locale	Locale code (SSOCS: FR_LOC12)	<ul style="list-style-type: none"> • Town/rural • Suburban • Urban/city • Unknown
Percentage of students with Individualized Education Programs (IEPs)	Total enrollment for students with IEPs: <ul style="list-style-type: none"> • Female Individuals with Disabilities Education Act (IDEA) disability students (CRDC: TOT_IDEAENR_F) • Male IDEA disability students (CRDC: TOT_IDEAENR_F) 	
Percentage of students who are Hispanic/Latino and Black	Hispanic/Latino and Black student enrollment: <ul style="list-style-type: none"> • Female Hispanic/Latino students (CRDC: SCH_ENR_HI_F) • Male Hispanic/Latino students (CRDC: SCH_ENR_HI_M) • Female Black students (CRDC: SCH_ENR_BL_F) • Male Black students (CRDC: SCH_ENR_BL_M) 	
Percentage of students with limited English proficiency (LEP)	Total LEP student enrollment: <ul style="list-style-type: none"> • Female LEP students (CRDC: TOT_LEPENR_F) • Male LEP students (CRDC: TOT_LEPENR_M) 	
Percentage of students who are White	White student enrollment: <ul style="list-style-type: none"> • Female White students (CRDC: SCH_ENR_WH_F) • Male White students (CRDC: SCH_ENR_WH_M) 	
Student-to-teacher ratio	Total teachers: Teacher enrollment CRDC: SCH_FTETEACH_TOT)	

Source: GAO analysis of Department of Education, Civil Rights Data Collection (CRDC) (restricted use data) and School Survey on Crime and Safety (SSCOS), school years 2015–2016 and 2017–2018. | GAO-24-106294

We generated propensity scores using survey weights appropriate for the school crime survey complex sample design. We also generated a set of propensity scores that did not incorporate survey weights. We used each set of propensity scores to generate two matched samples. Our regression model of the outcome used both matched samples to assess any differences in results as part of the sensitivity analysis. Of the 4,827 observations that we could merge across school crime survey and civil rights data, 4,647 had complete data for the response and covariates—a difference of 180 observations.

We matched each school with police by selecting a control school without police that had the closest propensity score to the treated school within the same state. We limited matches to those whose caliper, or absolute difference in propensity score, was less than 0.3. Because of the imbalance between the number of schools with and without police (3,115 vs. 1,532, respectively), we did not have enough control schools in the overlapping propensity score region to provide one matched control school per treated school. Therefore, each school with police was matched to a school without police with the closest propensity score, regardless of whether the latter control school was matched to a different school with police. This method allowed us to match control schools to more than one treated school, or to “match with replacement.” Matching in this way allowed us to estimate the average association of having police in schools, among schools with police presence, known as the average treatment effect on the treated (ATT). Table 5 shows how often we reused control schools during the matching process. We could not match some schools with police to any schools without police due to nonoverlapping propensity scores or zero matches within the desired caliper. The

matched samples had 824 matched groups of treatment and control schools with an absolute difference in propensity score of 0.06 or less, yielding a total absolute difference of 29. The 824 matched groups represented 2,889 treated schools and 824 control schools for a total of 3,713. Overall, we successfully matched approximately 90 percent of schools with police.

Table 5: Distribution of the Number of Times Control Schools Were Used in Matching

Number of matched groups	Mean	Standard deviation	Minimum	25th Percentile	Median	75th Percentile	Maximum
Propensity score estimated with sampling weights							
824	4.5	5.4	2	2	3	4.5	70
Propensity score estimated without sampling weights							
817	4.5	5.8	2	2	3	5	55

Source: GAO analysis of matched sample using Department of Education Civil Rights Data Collection (restricted use data) and Survey on Crime and Safety data, school years 2015-2016 and 2017-2018. | GAO-24-106294

Because we did not perform one-to-one matching without replacement, we used matched observation weights when assessing covariate balance and analyzing outcomes. Additionally, since we matched with replacement and could not match all treated schools, we applied ATT weights:

$$w_{gj}^{ATT} = \begin{cases} 1 & \text{for treated units in the } g^{th} \text{ matched set} \\ \frac{N_{gt}}{N_{gc}} & \text{for control units in the } g^{th} \text{ matched set} \end{cases}$$

Where:

1. w_{gj}^{ATT} = the ATT weight after matching for the j^{th} school in the g^{th} matched set
2. N_{gt} = the number of treated schools in the g^{th} matched set
3. N_{gc} = the number of control schools in the g^{th} matched set

The sum of the ATT weights for the matched control schools is equal to the total number of matched treated schools (2,889).

We calculated a final weight to assess covariate balance and estimate the population ATT that incorporated the complex school crime survey design. We calculated this weight by multiplying the school crime survey sample weight by the ATT weights. The distributions of propensity score between the treatment and control groups were extremely similar after applying the final weights, with an average difference of 0.0017, as shown in table 6.

Table 6: Propensity Score Distribution Before and After Matching, Estimated with and without School Crime Survey Sampling Weights

	Number of schools	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum	Mean difference (treated - control)
Before matching									
Propensity score estimated with sampling weights									
Treatment	3,115	0.73	0.19	0.07	0.62	0.78	0.89	0.99	0.25
Control	1,532	0.49	0.23	0.04	0.28	0.49	0.67	0.98	
Propensity score estimated without sampling weights									
Treatment	3,115	0.76	0.20	0.07	0.65	0.82	0.91	0.99	0.26
Control	1,532	0.49	0.23	0.03	0.30	0.50	0.69	0.98	
After matching									
Propensity score estimated with sampling weights									
Treatment	2,889	0.73	0.19	0.07	0.61	0.78	0.89	0.99	0.14
Control (unweighted)	824	0.59	0.21	0.07	0.45	0.60	0.77	0.98	
Control (weighted)	2,889	0.73	0.36	0.07	0.61	0.78	0.88	0.98	0.0017
Propensity score estimated without sampling weights									
Treatment	2,898	0.75	0.20	0.07	0.64	0.81	0.91	0.98	0.15
Control (unweighted)	817	0.61	0.21	0.08	0.46	0.62	0.77	0.98	
Control (weighted)	817	0.75	0.36	0.08	0.63	0.80	0.90	0.98	0.0029

Source: GAO analysis of matched sample using Department of Education Civil Rights Data Collection (restricted use data) and Survey on Crime and Safety data, school years 2015-2016 and 2017-2018. | GAO-24-106294

To determine the quality of the matching, we assessed the similarity of the matched schools with and without police, as shown in table 7. We did this by assessing the covariate balance of the matched schools in two ways:

- We compared the distribution of school characteristics for schools we could match. This ensured that the matched schools with and without police were extremely similar across the characteristics we controlled for in the matching analysis. For categorical characteristics, the largest percentage-point differences were for large schools (5), high schools (3.9), elementary schools (3.4), and schools with low levels of crime (3.6). For the continuous characteristics, the largest differences were for the highest percentage of students receiving services under the Individuals with Disabilities Education Act (IDEA) (58), the smallest and largest percentage of male students (20 and 26), and the highest student-to-teacher ratio (15). All other differences were below 5 percentage points.
- We also compared the distribution of characteristics for schools with police that we could match. This ensured that the matched schools with police were extremely similar to the sample of schools in the school crime survey (which generalize to the larger population of schools). The differences between the matched schools with police and the schools with police in the school crime survey were all less than 3 percentage points. The largest absolute differences were for primary schools (2.2) and schools in urban/city areas (1.6).

Table 7: Distribution of School Characteristics Used in Matching Analysis

School characteristic	Police presence in school?				
	Matched sample		Absolute difference	School Crime and Safety Survey sample	
	No	Yes		Yes	Absolute difference
Percent of students eligible for free or reduced-price lunch					
Minimum	1	0	1	0	0
25th percentile	34	36	2	36	0
Median	54	56	2	56	0
Mean	57.1	56.7	0.4	56.8	0.1
75th percentile	82	79	3	79	0
Maximum	100	100	0	100	0
Percent of students with an Individualized Education Program					
Minimum	0	0	0	0	0
25th percentile	9	9	0	9.0	0
Median	12	12	0	12.0	0
Mean	12.4	12.9	0.4	12.8	0
75th percentile	15	16	1	16.0	0
Maximum	100	42	58	42.0	0
Percent of students who are Hispanic/Latino or Black					
Minimum	0	0	0	0	0
25th percentile	9	9	0	9	0
Median	29	26	3	26	0
Mean	37.9	37.1	0.7	37.1	0
75th percentile	61	64	3	64	0
Maximum	100	100	0	100	0
Percent of students who are English learners					
Minimum	0	0	0	0	0
25th percentile	1	1	0	1	0
Median	3	3	0	3	0
Mean	8.9	9	0.1	8.9	0.2
75th percentile	11	11	0	11	0
Maximum	100	100	0	100	0
Percent of students who are male					
Minimum	20	0	20	0	0
25th percentile	50	50	0	50	0
Median	51	51	0	51	0
Mean	51.4	51.4	0	51.4	0
75th percentile	53	53	0	53	0
Maximum	74	100	26	100	0
Student-to-teacher ratio					

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School characteristic	Police presence in school?				
	Matched sample			School Crime and Safety Survey sample	
	No	Yes	Absolute difference	Yes	Absolute difference
Minimum	5	2	3	0	2
25th percentile	12	13	1	13	0
Median	15	15	0	15	0
Mean	15.6	15.6	0.1	15.6	0
75th percentile	18	18	0	18	0
Maximum	78	63	15	63	0
School crime					
High	4.1	5.6	1.5	5.8	0.2
Moderate	17.8	19.9	2.1	19.8	0.1
Low	78.1	74.5	3.6	74.4	0.1
School disorder					
Never	9	8.8	0.2	8.7	0
Rarely	76.7	75.8	0.9	75.6	0.2
Regularly	14.4	15.5	1.1	15.7	0.2
School type					
Charter or other type	2.0	2.2	0.2	3.5	1.3
Magnet program (partial or exclusive)	2.2	3.1	0.8	3.1	0.1
Regular public school	95.8	94.7	1	93.4	1.3
Locale					
Town/rural	43.8	41.7	2.1	41.4	0.3
Suburban	36.3	35.4	0.9	34.2	1.3
Urban/city	19.9	22.9	3	24.5	1.6
School level					
Primary school	51.7	48.4	3.4	46.1	2.2
Middle school	25.3	23.8	1.4	23.1	0.8
High school	21.2	25.1	3.9	25.8	0.7
Combination of grade levels school	1.9	2.7	0.9	2.6	0.2
School size					
Small (1 to 450 students)	36.3	33.3	3	33.8	0.5
Medium (451 to 650 students)	27.9	27.1	0.8	26.4	0.7
Large (651 to 1,000 students)	17.9	22.9	5	22	0.9
Extra large (more than 1,000 students)	17.9	16.7	1.3	17.8	1.1

Source: GAO analysis of Department of Education’s Civil Rights Data Collection (restricted use data) and School Survey on Crime and Safety, school years 2015–2016 and 2017–2018. | GAO-24-106294

Note: Weighted distribution of schools, in percentage points. These statistics are descriptive in nature and are meant to show covariate balance in the matched sample. Therefore, they do not generalize to the larger population of schools.

Our results are limited to the population of schools with police for whom we could obtain a sufficiently close matched comparison school without police. Since we were able to match more than 90 percent of sampled schools in the school crime survey, we believe the resulting matched sample of schools generalizes to the

larger population of schools and isolates the effect of police presence on student arrests and referrals. However, the results may not resemble what we might have obtained for the original target population of schools with police, to the extent that percentage of male students and students receiving services under IDEA, crime level, school size, and school type are systematically associated with student arrests. However, the schools we could match exhibited good covariate balance overall, and we consider these differences to be small enough for the purpose of our analysis to make the results reliable.

Regression Analysis Using Matched Data

We conducted negative binomial regression analysis using the propensity score matched data to estimate the association between selected school-level characteristics—such as police presence in a school—and school-wide arrest and referral rates. We developed models for two main outcome variables: student arrest counts and student referral counts. The models included controls for school level, school type, locale, perceived crime in the school’s neighborhood, gang activity, school disorder, and the demographic makeup of the school. We also controlled for the state where a school was located during the matching process.

We used a negative binomial regression model because our outcomes of interest were count variables, and overdispersion was present in the data.⁴ In a negative binomial regression, an exposure variable may be specified to transform outcome counts into rates, which, in our models, were school enrollment counts. We transformed the estimated model parameters to calculate ratios of student arrest rates between schools that did and did not have police present (i.e., incidence rate ratios). Our estimation sample was matched using propensity scores generated by the regression specified in table 3, which ignored the school crime survey design. For the negative binomial model, we weighted the matched sample using the school crime survey sample weight multiplied by applied the ATT weights from the matching process above, which incorporated complex survey selection weights. The models expressed the natural log of expected arrest and referral rates as a function of a linear combination of school characteristics, which included our treatment and control variables, such that:

$$\ln\left(E(Y|SLEO_s, \vec{Z}_s)\right) = \beta_0 + \beta_1 SLEO_s + \vec{\beta} \vec{Z}_s + \ln(t_s)$$

Where:

1. Y = arrest or referral count in school s
2. t_s = enrollment count in school s (exposure variable)
3. β_1 = weighted treatment regression coefficient
4. $\vec{\beta}$ = vector of weighted control regression coefficients
5. $SLEO_s$ = indicator for presence of a sworn law enforcement officer at least once a week in school s
6. \vec{Z}_s = a vector of school-level characteristics in school s

⁴Overdispersion is a measure of model fit that occurs when the variance of the count variable is larger than the Poisson distribution. We tested for overdispersion using the alpha statistic in Stata, where alpha = 0 suggests no overdispersion. For the arrest model, the alpha statistic was 2.27 with a p-value ≤ 0.01 . For the referral model, the alpha statistic was 1.60 with a p-value ≤ 0.01 .

We selected the controls used in the models based on a review of relevant literature, the availability of data, and controls used during the matching process.⁵ There were three large categories of control variables present in the literature: student body characteristics, school characteristics, and policy variables such as mandatory reporting for specific types of crimes.

We included multiple student body and school-level characteristics, discussed in detail below. Our main limitation in terms of control variables was our inability to directly control for specific policies that would impact arrests and referrals. However, some of our control variables likely accounted for some of this variation. We indirectly controlled for state-level policies, such as minimum age restrictions on arrests, and other factors that vary across states, by matching exactly on state during the matching process. This meant there was an equal proportion of observations from each state in both the treatment and control group, negating the use of state-fixed effects. We indirectly controlled for local-level policies by including indicators for locale and may have also accounted for some variation in policies among large cities, suburbs, and rural areas.

The other main limitation to our control variable selection is that the data used in this analysis were reported at the school level. This prevented us from observing and controlling for individual student characteristics associated with an individual student's probability of arrest or referral. Rather, we controlled for student body characteristics, discussed in more detail below.

Additionally, school-level counts of arrests and referrals were measures of students rather than incidents. Therefore, the counts used in our model represented the number of students who had at least one arrest or referral, rather than the total number of all arrests or all referrals. As a result, our estimates did not account for any student who was arrested or referred multiple times.

To account for differences in broad age groups, we controlled for a series of indicators for school level. Since the civil rights data did not define school level, we used information on the grade levels for which a school reported having enrolled students (pre-K through 12th) to categorize schools as an elementary school, middle school, high school, or combination (i.e., schools that report students enrolled in a combination of grades that does not fit into one of the other categories). We controlled for reported school type, including magnet, charter, and traditional (neither magnet nor charter) schools, to account for differences in student population and administration. To account for differences in population density, education systems, and police force size, we controlled for school location, including rural, suburban, or urban areas. We accounted for school-level demographic makeup by including a control for whether less than 50 percent of enrolled students were White and a control for whether less than 50 percent of enrolled students were male. Additionally, we controlled for the percentage of enrolled students who were eligible for free and reduced-price lunch and the percentage of enrolled students with an Individual Education Program. Finally, we accounted for school climate by controlling

⁵Laurie A. Walker, Kirsten Bokenkamp, and Turquoise Skye Devereaux, "Impact of School Resource Officer and/or Security Guard Presence on Native American Referrals and Arrests in Montana's Schools," *Affilia: Feminist Inquiry in Social Work*, vol. 37, no. 1 (2022): 62–78, <https://doi.org/10.1177/0886109920985158>; Michael Heise and Jason P. Nance, "To Report or Not to Report: Data on School Law Enforcement, Student Discipline, Race, and the 'School-to-Prison Pipeline'," *UC Davis Law Review*, vol. 55, no. 209 (2021): 209–268; Michael Heise and Jason P. Nance, "Defund the (School) Police? Bringing Data to Key School-to-Prison Pipeline Claims," *Journal of Criminal Law and Criminology*, vol. 111, no. 3 (2021); Tara Stevens, Lucy Barnard-Brak, and Jesseca Jackson, "School Resource Officers' Roles Differ in the Prediction of Nonviolent and Serious Violent Incidents," *School Psychology Review*, vol. 50, no. 2-3 (2021): 330–343, <https://doi.org/10.1080/2372966X.2021.1886837>; Emily M. Homer and Benjamin W. Fisher, "Police in schools and student arrest rates across the United States: Examining differences by race, ethnicity, and gender," *Journal of School Violence*, vol. 19, no. 2 (2020): 192–204, <https://doi.org/10.1080/15388220.2019.1604377>; and Jason P. Nance, "Students, Police, and the School-to-Prison Pipeline," *Washington University Law Review*, vol. 93, no. 919 (2016): 919–987.

for perceived crime in the school neighborhood, how frequently certain disorderly conduct was a problem at a school, and whether there was a gang presence at the school.⁶ While our analysis could indicate the causal effect of police presence on arrests and referrals, the associations could also indicate an omitted factor that we could not include in our model that leads schools with higher potential for arrests and referrals to invite police onto campus.

Table 8 below provides the results of our regressions in incidence rate ratios. These represent the estimated rates of arrests and referrals for schools with certain characteristics, such as having school police present at least once a week, relative to schools with different characteristics, such as not having school police present at least once a week. An incidence rate ratio greater than one indicates a higher or positive association between the listed school characteristic and a school’s arrest and referral rates, and a value less than one indicates a lower or negative association. The point estimates quantify the proportional difference in rates between groups. For example, an estimated incidence rate ratio of 2.9 for the presence of gang activity indicates that gang activity at school is associated with arrest rates 2.9 times higher than schools without gang activity, holding all other variables in the model constant.

Table 8: Regression Results

Variable label	Estimated arrest incidence rate ratio (standard error)	Estimated referral incidence rate ratio (standard error)
School police present at least once a week	2.1778*** (0.4388)	1.3732*** (0.1937)
Middle school (compared to elementary school)	11.9464*** (3.8594)	5.1741*** (1.0490)
High school (compared to elementary school)	23.5914*** (7.9439)	9.2522*** (1.7534)
Combination of grade level school (compared to elementary school)	6.9979*** (2.6846)	4.8406*** (1.3174)
Charter school (compared to traditional school)	0.2760** (0.1345)	0.4353** (0.1724)
Magnet school (compared to traditional school)	0.7850*** (0.2805)	0.8720*** (0.2239)
Presence of gang activity (yes/no)	2.8866*** (0.9699)	1.2604*** (0.2137)
Presence of crime in school neighborhood = some (compared to never)	0.2551** (0.1069)	0.6994*** (0.2223)
Presence of crime in school neighborhood = often (compared to never)	0.2980** (0.1311)	0.8313*** (0.2430)
School disorder = some (compared to never)	1.9797*** (0.5830)	1.4797*** (0.4550)

⁶We identified five variables that measured widespread school disorder. These were reported on a five-point Likert scale that measures how frequently certain events occurred, ranging from “happens daily” to “never happens.” These events included student racial/ethnic tensions, widespread disorder in classrooms, student verbal abuse of teachers, student acts of disrespect for teachers other than verbal abuse, and gang activities. Next, we collapsed this to a three -point scale combining the groups “happens daily” and “happens at least once a week” into the group “regularly,” the groups “happens at least once a month” and “happens on occasion” into the group “rarely,” and maintained “never happens” as its own group. We used this updated scale to construct our final index of school disorder, which equaled 1 if all events never happened, 2 if at least one event occurred rarely and none occurred regularly, and 3 if at least one event occurred regularly.

Appendix II: Technical Appendix for Propensity Score Matching and Regression Analysis

Variable label	Estimated arrest incidence rate ratio (standard error)	Estimated referral incidence rate ratio (standard error)
School disorder = often (compared to never)	4.0296*** (1.4244)	2.5687*** (0.9350)
Suburban (compared to rural)	0.8661*** (0.2369)	1.1171*** (0.1940)
Urban (compared to rural)	1.1408*** (0.3734)	1.4787*** (0.3769)
School enrollment less than 50 percent White students	1.2310*** (0.3277)	0.9081*** (0.2140)
School enrollment less than 50 percent male students	1.0136*** (0.2149)	0.9781*** (0.1518)
Percent of students with an Individualized Education Program	2.2904 (4.1343)	23.0442 (28.8816)
Percent of students with free or reduced-price lunch	0.8957** (0.4051)	2.5764** (1.0787)
Constant	0.0001 (0.0000)	0.0002* (0.0001)
Number of schools	3,537	3,577
Alpha	2.2626*** (0.1163)	1.5892*** (0.0842)

Legend:

* = significantly different from zero at 90 percent confidence level

** = significantly different from zero at the 95 percent confidence level

*** = significantly different from zero at the 99 percent confidence level

Source: GAO analysis of matched sample using Department of Education Civil Rights Data Collection (restricted use data) and Survey on Crime and Safety data, school years 2015-2016 and 2017-2018. | GAO-24-106294

Notes: The standard errors are reported in parentheses.

Regressions are weighted by the ATT weight from matching. Robust standard error is used in both models. Regressions also include year-fixed effects to account for multiple years of data.

We assessed our final models by performing several checks, including systematically estimating different model specifications, using different model functional forms, and estimating our final models on the unmatched data and a differently matched sample. To test the robustness of our final models to control variable choice, we estimated the models with different combinations and operationalizations of the controls. We consecutively added additional control variables to observe changes in the model estimates. We also tested different operationalizations of certain controls, such as the controls for the racial and ethnic makeup of the student body. We attempted to include interaction terms to account for variation in officer characteristics, but these checks were not feasible due to issues with intercorrelations among the covariates.

In total, we tested six different combinations of control variables, with the sixth being our final model that supported findings in the body of this report and reported in Table 8. Across these specifications, the coefficient on school police presence had the same directionality and statistical significance as in the final model. The estimated incidence rate ratios for the presence of school police ranged across the six alternative models from 1.9094 to 2.2903 for arrests and 1.3265 to 1.4605 for referrals. Tables 9 and 10 list the five alternative and final model specifications and summarize the differences between estimated incidence rate ratios between each alternative model and our final model.

Table 9: Differences in Estimated Incidence Rate Ratios across Alternative Model Specifications: Arrests

Variable label	Alternative model specifications					Final
	1	2	3	4	5	
School police present (standard error)	2.2338 (0.4764)	1.9094 (0.4453)	2.2903 (0.4145)	2.1638 (0.4357)	2.1871 (0.4332)	2.1778 (0.4388)
High school	–	✓	✓	✓	✓	✓
Combination of grade levels school	–	✓	✓	✓	✓	✓
Charter school	–	✓	✓	✓	✓	✓
Magnet school	–	✓	✓	✓	✓	✓
Presence of gang activity	–	✓	✓	✓	✓	✓
Middle school	–	–	✓	✓	✓	✓
Perceived crime in home neighborhood	–	–	✓	–	–	–
Classroom disorder	–	–	✓	–	–	–
Perceived crime in school neighborhood	–	–	–	✓	✓	✓
School disorder	–	–	–	✓	✓	✓
Suburban	–	✓	✓	✓	✓	✓
Urban	–	✓	✓	✓	✓	✓
Percent enrollment Asian students	–	–	–	–	✓	–
Percent enrollment Black students	–	–	–	–	✓	–
Percent enrollment Hispanic/Latino students	–	–	–	–	✓	–
Percent enrollment American Indian/Alaskan Native or Native Hawaiian/Pacific Islander students	–	–	–	–	✓	–
Percent enrollment multiracial students	–	–	–	–	✓	–
Percent enrollment male students	–	–	–	–	✓	–
Enrollment less than 50 percent White students	–	–	–	–	–	✓
Enrollment less than 50 percent male students	–	–	–	–	–	✓
Percent of students receiving services under the Individuals with Disabilities Act	–	–	–	–	✓	✓
Percent of students with free or reduced-price lunch	–	–	–	–	✓	✓

Legend:– = variable not included in column model ✓ = variable included in column model

Source: GAO analysis of matched sample using Department of Education Civil Rights Data Collection (restricted use data) and Survey on Crime and Safety data, school years 2015-2016 and 2017-2018. | GAO-24-106294

Note: All coefficients statistically significant at the 99 percent confidence level.

Table 10: Differences in Estimated Incidence Rate Ratios across Alternative Model Specifications: Referrals

Variable label	Alternative model specifications					Final
	1	2	3	4	5	
School police present (standard error)	1.4605 (0.2522)	1.3265 (0.2029)	1.3950 (0.2040)	1.3713 (0.1965)	1.4062 (0.1852)	1.3732 (0.1937)
High school	No	Yes	Yes	Yes	Yes	Yes
Combination of grade levels school	No	Yes	Yes	Yes	Yes	Yes
Charter school	No	Yes	Yes	Yes	Yes	Yes
Magnet school	No	Yes	Yes	Yes	Yes	Yes
Presence of gang activity	No	Yes	Yes	Yes	Yes	Yes
Middle school	No	No	Yes	Yes	Yes	Yes
Perceived crime in home neighborhood	No	No	Yes	No	No	No
Classroom disorder	No	No	Yes	No	No	No
Perceived crime in school neighborhood	No	No	No	Yes	Yes	Yes
School disorder	No	No	No	Yes	Yes	Yes
Suburban	No	Yes	Yes	Yes	Yes	Yes
Urban	No	Yes	Yes	Yes	Yes	Yes
Percent enrollment Asian students	No	No	No	No	Yes	No
Percent enrollment Black students	No	No	No	No	Yes	No
Percent enrollment Hispanic/Latino students	No	No	No	No	Yes	No
Percent enrollment American Indian/Alaskan Native or Native Hawaiian/Pacific Islander students	No	No	No	No	Yes	No
Percent enrollment multiracial students	No	No	No	No	Yes	No
Percent enrollment male	No	No	No	No	Yes	No
Enrollment less than 50 percent White students	No	No	No	No	No	Yes
Enrollment less than 50 percent male students	No	No	No	No	No	Yes
Percent of students receiving services under the Individuals with Disabilities Act	No	No	No	No	Yes	Yes
Percent of students with free or reduced-price lunch	No	No	No	No	Yes	Yes

Legend: No = variable not included in column model. Yes = variable included in column model

Source: GAO analysis of matched sample using Department of Education Civil Rights Data Collection (restricted use data) and Survey on Crime and Safety data, school years 2015-2016 and 2017-2018. | GAO-24-106294

Note: All coefficients statistically significant at the 99 percent confidence level.

We estimated the degree of linear correlation among all pairs of covariates in our final model. Highly correlated control variables could reduce the computational feasibility and accuracy of standard error estimators, which would affect the model’s ability to detect statistically significant effects. We estimated a pairwise correlation matrix, which gave us estimates of amounts of correlation between all pairs of variables in our final models. A correlation of zero means no linear correlation, and a correlation of one means perfect linear correlation. Most correlation coefficients for variables in our final models were less than 0.1 in absolute value or were not statistically different than zero. Those coefficients that were statistically significant were mostly below 0.5 in absolute value; any above this threshold were not concerning due to the nature of the variables. For example, middle school and high school designations were highly correlated, as were traditional, magnet, and charter school designations, since the definition of one category is inherently dependent on the others.

We assessed the sensitivity of our estimates to the models’ underlying assumptions by estimating each of our six models using both an ordinary least square and a negative binomial functional form. Overall, the ordinary least square estimates were slightly smaller in magnitude than those estimated with a negative binomial. They also had the same directionality and similar statistical significance levels, suggesting little sensitivity to model assumptions.

After identifying a final negative binomial model for reporting, we assessed the sensitivity of the resulting estimates to the matching process by fitting the models to the (original) unmatched school and crime data in addition to another matched sample. This second matched sample used a set of propensity scores that were estimated using a logistic regression model, which accounted for the school and crime survey design. There were no statistically significant differences between the estimated incidence rate ratio under our main model and those estimated using either dataset, suggesting little sensitivity to the matching process. Tables 11 and 12 report fit statistics for our final models and those estimated as robustness checks. Overall, the statistics suggested our final models fit the data well and were not substantially worse than the alternative models.

Table 11: Arrest Model Statistics for Goodness of Fit Checks

Model functional form (data used)	Negative binomial (matched without weights)	Ordinary least squares (matched with weights)	Negative binomial (matched with weights)	Negative binomial (unmatched)
Estimated statistics				
Incidence rate ratio for police presence [95% confidence interval]	2.18 [1.47, 3.23]	1.9786 [1.1117, 2.8456]	2.33 [1.63, 3.33]	1.70 [1.12, 2.57]
Log likelihood	-83,056	-1,040.6	-77,783	-67,940
Chi-squared (degrees of freedom)	166,112 (3,650)	2,081.17 (3,651)	155,567 (3,574)	135,881 (4,446)
R-squared	—	0.072	—	—
Adjusted R-squared	—	0.067	—	—
Pseudo R-squared	0.0942	—	0.101	0.116
Akaike information criterion	166,152	2,119.17	155,607	135,921
Bayesian information criterion (degrees of freedom)	166,276 (20)	2,237.12 (19)	155,730 (20)	136,048 (20)

Source: GAO analysis of matched sample using Department of Education Civil Rights Data Collection (restricted use data) and Survey on Crime and Safety data, school years 2015-2016 and 2017-2018. | GAO-24-106294

Note: All models were estimated with robust standard errors and incorporated appropriate weights to account for the complex survey design of the underlying data.

Table 12: Referral Model Statistics for Goodness of Fit Checks

Model functional form (data used)	Negative binomial (matched without weights)	Ordinary least squares (matched with weights)	Negative binomial (matched with weights)	Negative binomial (unmatched)
Estimated statistics				
Incidence rate ratio for police presence [95% confidence interval]	1.37 [1.04, 1.81]	1.4606 [1.0537, 1.8675]	1.19 [0.89, 1.57]	1.42 [1.09, 1.84]
Log likelihood	-233,235	-5,789.2	-233,537	-190,275
Chi-squared (degrees of freedom)	466,470 (3,691)	11,578.4 (3,692)	467,074 (3,616)	380,550 (4,503)
R-squared	—	0.107	—	—
Adjusted R-squared	—	0.103	—	—
Pseudo R-squared	0.0523	—	0.047	0.057
Akaike information criterion	466,510	11,616.4	467,114	38,059
Bayesian information criterion (degrees of freedom)	466,635 (20)	11,734.5 (19)	467,238 (20)	380,719 (20)

Source: GAO analysis of matched sample using Department of Education Civil Rights Data Collection (restricted use data) and Survey on Crime and Safety data, school years 2015-2016 and 2017-2018. | GAO-24-106294

Note: All models were estimated with robust standard errors and incorporated appropriate weights to account for the complex survey design of the underlying data.

We performed additional regression analyses using the matched data to assess whether the impact of police presence varied by student characteristics. While we could not control for individual student characteristics in our final models, we could analyze arrests and referrals reported separately by race and ethnicity, gender, and disability status. To perform this analysis, we ran separate regressions using these school-level arrest and referral counts for each student demographic subgroup as the outcome variables. We then compared the confidence intervals of the estimated incidence rate ratios on police presence across each student group.

If the 95 percent confidence intervals for two different groups, such as those for Black and White students, did not overlap, this would be evidence that the association between police presence and student arrest and referral rates differed between these two groups. We found no statistically significant differences between gender or disability groups. We determined the results for the race and ethnicity groups to be unreliable for three reasons:

- **Lack of enrollment among certain racial groups in many schools.** In the analysis sample, more than 700 schools reported zero American Indian/Alaskan Native or Native Hawaiian/Pacific Islander students enrolled, and over 350 schools reported zero Asian students enrolled.
- **Rarity of arrest and referrals overall.** Most schools in the civil rights data, as well as those in our matched sample, reported zero arrests and referrals for all students. However, for certain racial groups, such as Asian students, over 95 percent of schools reported zero arrests or referrals. This issue was exacerbated by the civil rights data reporting arrests and referrals by race and ethnicity only for students without disabilities and those with Individual Education Programs. This excluded students who only receive services under section 504 of the Rehabilitation Act, as amended, thus further lowering the recorded incidents of arrests and referrals by race.
- **Some models by race and ethnicity did not reach convergence.** We could not estimate the final models for American Indian/Alaskan Native students and Native Hawaiian/Pacific Islander students

because the models did not reach convergence. We combined enrollment, arrest, and referral counts for these groups to increase the number of nonzero arrest and referral observations to try and remedy the issue. We also could not estimate those models.

Every methodology has advantages and limitations. For the method used in our analysis, the advantages are as follows:

- Propensity score matching simulates an experimental design with random assignment of police presence to schools by limiting the schools without police to those who were similar to schools with police.
- Propensity score matching controls for factors associated with police presence at schools, thereby reducing the potential for those factors to overestimate or underestimate differences in arrests when making simple comparisons between schools with and without police.

For the method used in our analysis, the limitations are as follows:

- Some variables that may be related to arrests, referrals, or police presence at a school were not available in the data, such as school funding or characteristics of individual students.
- Data were available at the school level rather than the student level. Consequently, we could not describe the association between independent variables and a student's experience of disciplinary incidents, such as arrests or referrals, while controlling for characteristics of an individual student such as gender, race and ethnicity, or grade level.
- Using a regression model to estimate propensity scores assumed a relationship between the control and outcome variables that was structurally similar for all schools in the analysis. If dissimilar schools from the universe of schools with police were included in the model estimation sample, then the propensity score model may not have accurately predicted police presence and produced spurious results.
- We discarded schools that had missing information on key controls, potentially introducing bias.
- We conducted a bias analysis to determine whether significant differences in key characteristics existed between schools that could and could not be merged with the civil rights data and school districts with missing and non-missing arrest data. However, some estimates may be subject to nonresponse bias from characteristics we could not measure in the bias analysis. Because certain school characteristics are not observed for unmerged or nonresponding records, the exact amount of bias remaining in estimates cannot be known with certainty and is likely to vary between estimates. Additionally, we could not capture the potential bias from schools underreporting data (e.g., reporting zero arrests when students were, in fact, arrested).
- We could only match schools with police to schools without police if there was sufficient overlap between the range of propensity scores for each group. When little to no overlap existed, we discarded schools from the analysis, which potentially introduced sample selection bias for the original population of interest.
- Our findings are based on comparisons of schools with police to schools without police that were similar on selected characteristics, which allowed us to estimate the association of police presence among similar schools. However, these estimates cannot speak to the effect of police presence in schools with characteristics quite different from schools with police or for any broader group.
- We used merged survey data that represent the larger population of schools, so our data are subject to sampling and non-sampling error. While the analysis controlled for sampling error, non-sampling error could have occurred for many reasons, such as a failure to sample a segment of the population, inability to

or unwillingness of respondents to provide correct information, mistakes by respondents, and errors made in the collection or processing of data (e.g., imputation or data quality checks).

- The results of our analysis are associational in nature and do not imply a causal relationship between the presence of a police officer at a school and that school's student arrest or referral rates. Additionally, the results of our analysis do not generalize to the student level or imply that an individual student's probability of arrest increases with presence of police at a school.
- Arrest and referral counts are of students who have experienced an event rather than a count of the events themselves. Because of this, estimated rates of student arrests and referrals do not account for any student that may have been arrested or referred multiple times.
- We cannot identify or account for data reporting errors. Counts of student arrests and referrals are potentially vulnerable to errors such as administrative errors in recordkeeping, reporting a zero in place of a missing value, and misunderstanding definitions of referral or arrest. If these errors happen in a systematic way, this could introduce bias into our data.

Appendix III: Agency Comments



UNITED STATES DEPARTMENT OF EDUCATION
OFFICE FOR CIVIL RIGHTS

THE ASSISTANT SECRETARY

June 12, 2024

Jacqueline M. Nowicki
Director, Education, Workforce, and Income Security Issues
Government Accountability Office
441 G Street, N.W.
Washington, D.C. 20548

Dear Ms. Nowicki:

Thank you for providing the U.S. Department of Education (Department) the opportunity to review and comment on the Government Accountability Office's (GAO) draft report "K-12 Education: Differences in Student Arrest Rates Widen When Race, Gender, and Disability Status Overlap" (GAO-24-106294).

As the Assistant Secretary for the Office for Civil Rights (OCR), I am pleased to respond on behalf of the Department to the GAO's three draft recommendations regarding the Civil Rights Data Collection (CRDC). In addition, I have attached technical edits and comments on the draft report for your consideration.

OCR appreciates GAO's recommendations regarding the CRDC. OCR administers the CRDC and uses the data to enforce civil rights laws that prohibit discrimination based on race, color, national origin, sex, and disability, including the prohibition of discrimination against individuals with disabilities under Section 504 of the Rehabilitation Act. The CRDC is also a valuable resource for other Department offices and federal agencies, policymakers and researchers, educators and school officials, parents and students, and the public who seek data on students' access to educational opportunities.

The CRDC is a mandatory survey of all public school districts and schools serving students in preschool through grade 12 in the 50 states, Washington, D.C., and the Commonwealth of Puerto Rico. As explained further below, planning for and collecting the data from approximately 18,000 school districts and their tens of thousands of public schools requires a lengthy process, including stakeholder input, to assess the feasibility and utility of collecting particular data items.

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GAO's First Recommendation:

*The Secretary of Education should ensure that the Assistant Secretary of the Office for Civil Rights revise the Civil Rights Data Collection to collect racial [arrest and referral] data for students with disabilities served under Section 504 of the Rehabilitation Act of 1973, as amended.**

Response: OCR concurs with the spirit and purpose of this recommendation to study intersectional discrimination in school discipline, including referrals to law enforcement and school-related arrests. OCR will consider proposing collecting additional racially disaggregated data about 504-only students with disabilities when OCR next seeks Office of Management and Budget (OMB) approval of the CRDC data collection.

Regarding the timing of any potential data collection, OCR has already collected the CRDC data for the 2021–22 school year. And OMB has already approved under the Paperwork Reduction Act (PRA) the CRDC data elements for the 2023–24 school year. So the earliest this recommendation could be implemented would be in the data collection for the CRDC for the 2025–26 school year.

Given that the OMB information collection process under the PRA requires two opportunities for public input, OCR would need to consider stakeholder input regarding, among other issues – (1) privacy protection obligations to the students represented in the data and (2) the utility of the data for civil rights enforcement, as provided in the statutory authorization to OCR to collect these data.

We note that OCR's data collection for the CRDC to date reflects that reporting disaggregated racial data at the school-level about 504-only students with disabilities would raise significant privacy concerns. For example, in the 2020–21 CRDC, schools reported about 3,100 504-only students were referred to law enforcement and less than 600 504-only students received a school-related arrest. Reporting these data at the school-level disaggregated by race would yield small cell counts that could not be released without risking the disclosure of identifying information.

OCR shares GAO's concern that students in public schools can experience intersectional discrimination—discrimination due to the combination of protected characteristics such as race, sex, and disabilities. For our collections to date, OCR has determined, after balancing the benefits and burdens associated with collecting and reporting disaggregated data by race, that it is sufficient for OCR's needs at this time to collect data regarding referrals to law enforcement and school-related arrests disaggregated by race only about the students with disabilities served under the Individuals with Disabilities Education Act (IDEA), a population over four times larger than the 504-only students with disabilities.

As the draft report notes, the data currently collected by the CRDC shows that students with disabilities served under the IDEA “are always arrested at higher rates than students without disabilities who are the same race and gender as they are.” Combined with the non-racially-disaggregated data about 504-only students with disabilities, OCR has determined it has

* We added the bracketed language because we believe, based on the summary and discussion in the draft report, that the recommendation was intended to extend only to referrals to law enforcement and school-related arrests.

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sufficient information about the intersection of race, sex, and disability with regard to referrals to law enforcement and school-related arrests. OCR will revisit this issue when seeking OMB approval and obtaining stakeholder feedback for the 2025–26 data collection.

GAO's Second Recommendation:

The Secretary of Education should ensure that the Assistant Secretary of the Office for Civil Rights take necessary steps to disclose the known limitation in its arrest data for the 2021–22 school year Civil Rights Data Collection. This could include, for example, confirming and disclosing which definitions school districts used or noting that arrest data for that year is not comparable among districts.

Response: OCR agrees with GAO's recommendation. In the resources released in conjunction with the 2021–22 CRDC, OCR will highlight the revisions to the definition of school-related arrest and caution users about comparing arrest data among school districts.

GAO's Third Recommendation:

The Secretary of Education should ensure that the Assistant Secretary of the Office for Civil Rights clearly communicate any future changes to data on arrests and referrals to law enforcement in the Civil Rights Data Collection before the start of the school year for which districts are to collect data.

Response: OCR agrees with GAO's recommendation and will, when feasible, communicate to school districts the data elements the CRDC will collect prior to the start of the school year, particularly when there are changes to the data elements or definitions from prior data collections. OMB has already approved the CRDC data elements for the 2023–24 school year, which do not include changes to the data elements or definitions regarding referrals to law enforcement or school-related arrests. For the 2025–26 CRDC, OCR's intention is to obtain OMB approval of the collection by the spring of 2025, ahead of the start of the 2025–26 school year. If OCR does obtain OMB approval of the 2025–26 CRDC during that period, then OCR plans to communicate to school districts any data element and definition changes to arrests and referrals to law enforcement before the start of the school year of the CRDC data collection.

We appreciate GAO's work on identifying opportunities to improve the CRDC, particularly around data element issues involving referrals to law enforcement and school-related arrests. We also appreciate the opportunity to comment on the draft report and GAO's consideration of our comments as the report is finalized.

Sincerely,



Catherine E. Lhamon
Assistant Secretary for Civil Rights

Appendix IV: GAO Contact and Staff Acknowledgements

GAO Contact

Jacqueline M. Nowicki, (202) 512-7215 or nowickij@gao.gov.

Staff Acknowledgements

Major contributors to this report were Sherri Doughty (Assistant Director), Melissa Jaynes (Analyst in Charge), Joey Carroll, Caroline DeCelles, Tangere Hoagland, Ying (Sophia) Liu, Lydie Loth, John Mingus Jr., and Frances Tirado. Elizabeth Calderon, Holly Dye, Charles Ford, Gina Hoover, Rayna Ketchum, Lindsay Shapray, Meg Sommerfeld, Curtia Taylor, Anjali Tekchandani, and Jeff Tessin also made contributions to this report.

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