

Disproportionality in school discipline: An assessment in Maryland through 2018

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Key findings

- Exclusionary discipline rates declined for all subgroups of students in Maryland over the past decade; however, Black students and students with disabilities continued to be suspended and expelled from school at more than twice the rates of other students.
- Even when they were involved in the same types of infractions, Black students and students with disabilities were significantly more likely to receive out-of-school suspensions than other subgroups.

Why this study?

Nationally, Black students and students with disabilities are suspended and expelled from school at twice the rates of other students (Lipscomb et al., 2017). Disciplinary removals, meaning out-of-school suspensions and expulsions, are controversial not only because of evidence that schools can apply them unevenly across student subgroups but also because any student removed from the classroom can lose opportunities to learn and engage positively in school. Prior research has linked disciplinary removal with poorer academic performance, increased risk of grade repetition, and increased risk of dropping out of school (Fabelo et al., 2011; Forsyth et al., 2013; Gregory, Skiba, & Noguera, 2010; Lcoe & Steinberg, 2019; Lamont et al., 2013).

Disciplinary removal rates in Maryland resembled those of the nation from 2009 to 2012, with students of color and students with disabilities removed at higher rates (Porowski, O’Conner, & Passa, 2014). In response, the Maryland State Board of Education (MSDE) adopted policies to ensure that disciplinary removals are considered a last resort and, when used, are applied equitably. In keeping with federal regulations under the Individuals with Disabilities Education Act that require states to identify districts with significant disproportionality in discipline for students with disabilities (U.S. Department of Education, 2016), the State Board further directed MSDE to reduce and ultimately eliminate disproportionality in school discipline for minority subgroups and students in special education (Code of Maryland Regulations 13A.08.01.21). As part of this effort, MSDE developed a measure to identify schools with disproportionately high disciplinary removal rates (see box 1). Maryland’s regulations do not require sanctioning or penalizing schools or school districts that are identified with disproportionality high discipline rates. Instead, MSDE views identification as an opportunity for districts and schools to receive technical assistance and support from the state to implement the action plans. School districts are responsible for developing an action plan for all schools in the district identified as having discipline disproportionalities. The action plans must outline strategies to reduce disparities within one year and eliminate them within three years.

Results from this report, together with root cause analyses conducted by MSDE and information on district approaches to reducing disproportionality summarized by the Regional Educational Laboratory (REL) Mid-Atlantic, will inform MSDE’s development of technical support for districts. Understanding Maryland’s recent trends in disciplinary removals and disproportionality will inform MSDE’s efforts to reliably measure and reduce disproportionality in its schools. To this end, this report describes trends in disciplinary removals in Maryland from the 2009/10 to 2017/18 school years and applies MSDE’s definition of discipline disproportionality to identify and describe disproportionate schools. The rest of this report describes these findings in more depth and discusses the implications and limitations of the results.

Box 1. Measuring discipline disproportionality in Maryland

The Maryland State Department of Education (MSDE) developed an approach to identify discipline disproportionalities for subgroups of students in schools based on race/ethnicity and disability status. Only schools with at least 10 members of a given student subgroup and three disciplinary removals for that subgroup in a year are included in the calculation. The methodology involves calculating two measures:

- **School-level risk ratio.** A measure of the proportion of students in a subgroup who are suspended or expelled at a school, compared with the proportion of other students in the same school who are suspended or expelled.
- **State comparison.** A measure of the proportion of students in a subgroup who are suspended or expelled at a school, compared with the proportion of all students statewide across the previous three school years who are suspended or expelled, calculated separately for elementary schools and middle/high schools. Based on the most recent data available, the removal rates for all students statewide calculated by MSDE were 1.53 percent for elementary students and 6.75 percent for middle/high school students, based on an average of the 2013/14, 2014/15, and 2015/16 school years (see appendix B for additional information on this calculation).

MSDE defines that a disproportionality exists when **both** of these measures exceed 3.0. MSDE collects and analyzes data during the summer and fall for the preceding school year, and shares the discipline data with school districts about their schools in the winter.

Starting with the 2018/19 school year, school districts in which one or more schools have disproportionately high removal rates for at least one subgroup of students must develop and implement action plans to reduce and eliminate disproportionalities within three years.

Research questions

This report presents analysis of administrative data from Maryland (box 2) to answer the following research questions:

1. What are the trends in school removals (out-of-school suspensions and expulsions) in Maryland from 2009/10 to 2017/18? What are the overall trends in characteristics of disciplinary responses during this period, such as type of removal, length of removal, and type of offense causing removal?
 2. What are the trends in school removals in Maryland from 2009/10 to 2017/18 by student subgroup?
 3. Do schools with disproportionality differ in significant ways from schools without disproportionality?
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Box 2. Data sources, sample, and methods

Data sources. Data for this study came from multiple sources:

- *The Suspensions, Expulsions, and Health Related Exclusions Maryland Public Schools* report is publicly available from the Maryland State Department of Education (MSDE). Reports from 2009/10 through 2017/18 provided statewide disciplinary removal rates by student subgroup.

MSDE's *Suspensions, Expulsions, and Health Related Exclusions* data file for the 2009/10 through 2017/18 school years, which is not publicly available but is used to generate the report mentioned above, provided student-level behavioral infraction records from all school districts in the state. The data include demographic information, details of the infraction, and the disciplinary response for students receiving in-school and out-of-school suspensions or expulsions.

- MSDE's disproportionality data file provided school and student subgroup-level data and was used to determine the disproportionality of individual schools for the 2009/10 through 2017/18 school years. The file includes unduplicated counts of removed students and total group sizes aggregated to the school and school-subgroup level, using MSDE's business rules (see box 1). School-subgroups that did not meet the criteria outlined in box 1 were not included in the file.

- The Maryland Public Schools Enrollment by Race/Ethnicity and Gender and Number of Schools files for 2009/10 through 2017/18 and the Maryland Special Education/Early Intervention Services Census Data and Related Tables files for 2009/10 through 2017/18 provided enrollment totals.
- Publicly available school-level data from the MSDE website for the 2009/10 through 2016/17 school years provided school characteristics such as student performance and demographics across all students. Analyses using this data source are presented for 2016/17, as that is the most recent year available for public data.
- The National Center for Education Statistics Common Core of Data (CCD), which is publicly available at the school level, included total enrollment and grade-level enrollment by race and ethnicity. Rate calculations throughout this report require enrollment data by grade level, which were not available for the 2017/18 school year. For this reason, rates reflect 2016/17 data as the most recent year. The CCD was used because it provided enrollment by race/ethnicity and grade. This information was needed to calculate proportions of students by race/ethnicity subgroups.

Sample. All Maryland public school students in kindergarten through grade 12 from 2009/10 to 2017/18 were included. In analyses using the disproportionality data file, school-level subgroups are included if they have at least 10 members of the subgroup enrolled, and the subgroup has at least three disciplinary removals.

Methodology. Study authors calculated frequencies, percentages, and averages to describe trends in disciplinary removals and identify disproportionate rates of disciplinary removals for student subgroups in schools. Multiple regression analyses were used to determine differences in removal rates by offense type, student subgroup, and school. Statistical significance testing was used to examine differences between disproportionate and not-disproportionate schools. See appendix B for additional detail on the data sources, sample, and methods of this report.

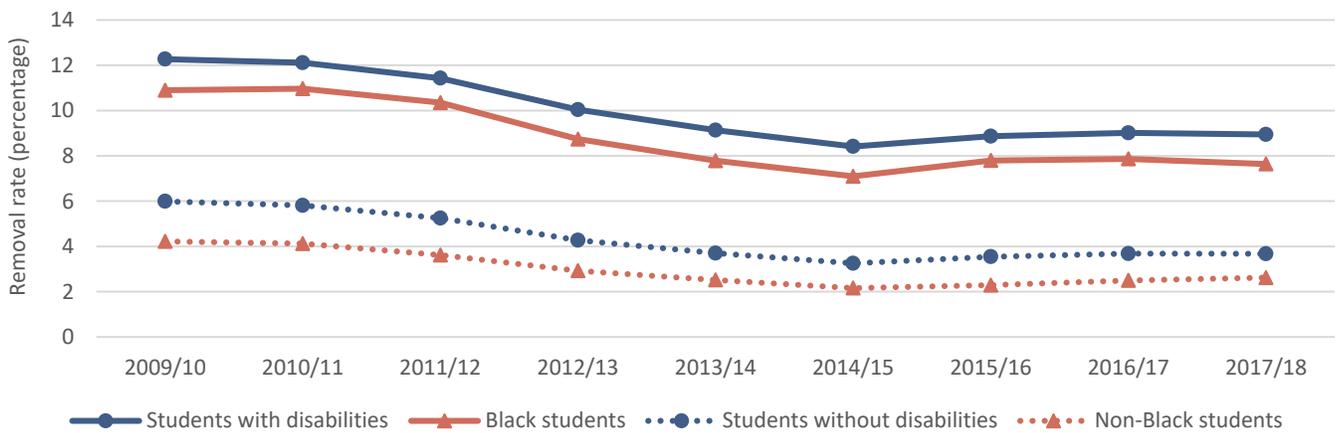
Findings

Consistent with previous REL Mid-Atlantic research, this study found disproportionate rates of school removal for Black students and students with disabilities in Maryland over the past 10 years (Porowski et al., 2014).

Exclusionary discipline rates declined for all subgroups in Maryland over the past decade; however, Black students and students with disabilities continued to be suspended and expelled from school at more than twice the rates of other students.

Overall, the rate of disciplinary removals for all students in Maryland declined between the 2009/10 and 2017/18 school years (**Figure 1**). Although removal rates for Black students and students with disabilities also declined, these rates remained more than twice as high as the removal rates for non-Black students and students without disabilities. In 2017/18, 7.6 percent of Black students were suspended or expelled from school, compared to 2.6 percent of non-Black students. In the same year, 8.9 percent of students with disabilities were suspended or expelled, compared to 3.7 percent of students without disabilities. Black students accounted for more than half of the students with disabilities who were removed in our most recent year of data. The removal rate for Black students with disabilities was 13.5 percent, compared to 6.7 percent for Black students without disabilities. The removal rate for middle and high school students was 6.9 percent in 2017/18, down from 10.4 percent in 2009/10, and the rate for elementary students was 2.3 percent in 2017/18, down from 2.8 percent in 2009/10 (see appendix C, **Exhibit C1**). In all grades, Black students and students with disabilities were more likely to be removed than all students.

Figure 1. Statewide disciplinary removal rates, by selected subgroups



Note: Disciplinary removals include out-of-school suspensions and expulsions.

Source: These rates were generated from the Suspensions, Expulsions, and Health Related Exclusions Maryland Public Schools reports for 2009/10 through 2017/18; the Maryland Public School Enrollment by Race/Ethnicity and Gender and Number of Schools files for 2009/10 through 2017/18; and the Maryland Special Education/Early Intervention Services Census Data and Related Tables files for 2009/10 through 2017/18.

Out-of-school and in-school suspensions for the most common infractions decreased statewide. Violence and conduct infractions (see box 3 for definitions) were the most commonly reported behavior incidents statewide in 2017/18, together representing 89 percent of all reported infractions (45 percent and 44 percent, respectively). Conduct infractions are common, but less serious types of misbehavior, and rarely result in out-of-school suspension. At the secondary level between 2009/10 and 2016/17, the rate for conduct infractions declined from 0.7 to 0.6 (a 14 percent reduction) and the rate for violent infractions declined from 4.6 to 4.0 (a 13 percent reduction). At the elementary level, overall removal rates were much lower, but out-of-school suspensions for violent incidents declined by 14 percent (**table 1**). Expulsion rates have also declined over the past 10 years, but because expulsion rates are very low (below 0.1 percent during this period), meaningful changes are hard to detect.

Box 3. Types of disciplinary infractions

Removals: out-of-school suspensions and expulsion. In-school suspensions are not considered removals.

- **Out-of-school suspensions:** removals from school grounds for less than 45 days
- **Expulsions:** removals from school grounds for more than 45 days. Expulsions are not permanent removals.

The study team aggregated the infraction types into the following six categories. Our partners at the Maryland State Department of Education confirmed that these aggregated categories represent meaningfully distinct types of infractions.

- **Attendance infraction:** class cutting, tardiness, and truancy
- **Conduct infraction:** disrespect, disruption, academic dishonesty, dress code violations, inappropriate use of personal electronics, trespassing, and destruction of property
- **Drugs and alcohol infraction:** being under the influence/in possession of, or selling alcohol, inhalants, or controlled substances
- **Health-related infraction:** missing immunizations or other health-based reasons for exclusion
- **Sex infraction:** sexual harassment, attacks, or activity
- **Violent infraction:** possession or use of firearms, explosives, or other weapons; threatening or attacking an adult or student; fighting; extortion; bullying and harassment; arson; and bomb threats

In-school suspensions have also declined between the 2009/10 and 2016/17 school years (**Table 1**). These declines were evident across all three of the most common infraction types, with the largest declines at the elementary

school and middle/high school levels occurring for conduct infractions. Schools could reduce out-of-school suspensions by using in-school suspensions instead. However, the data did not indicate that such substitution occurred.

Table 1. In-school and out-of-school suspension rates, by infraction type

Year	Conduct		Violence	
	In-school (percentage)	Out-of-school (percentage)	In-school (percentage)	Out-of-school (percentage)
Elementary schools				
2009/10	0.4	0.0	0.0	1.4
2010/11	0.3	0.0	0.0	1.4
2011/12	0.3	0.0	0.0	1.4
2012/13	0.2	0.0	0.0	1.1
2013/14	0.2	0.0	0.0	1.0
2014/15	0.2	0.0	0.0	0.9
2015/16	0.2	0.0	0.0	1.1
2016/17	0.2	0.0	0.0	1.2
Percent change 2009/10–2016/17	-50.0	^a	^a	-14.3
Middle and high schools				
2009/10	3.6	0.7	0.1	4.6
2010/11	2.9	0.8	0.0	4.8
2011/12	2.8	0.8	0.1	4.6
2012/13	2.2	0.7	0.0	4.1
2013/14	1.9	0.7	0.1	3.7
2014/15	1.4	0.6	0.1	3.6
2015/16	1.1	0.6	0.0	4.1
2016/17	1.0	0.6	0.0	4.0
Percent change 2009/10–2016/17	-72.2	-14.3	^a	-13.0

Note: Percentages reflect the suspension rate among all students for a given offense type. These are generated by dividing the number of unduplicated students receiving a suspension for specific infractions by the total number of students.

a. Changes are not provided for these categories due to the small numbers of removals for some or all years.

Source: Suspensions, Expulsions, and Health Related Exclusions Maryland Public Schools files for 2009/10 through 2017/18; Maryland Public School Enrollment files for all schools.

Black students and students with disabilities represented a disproportionate number of incidents that resulted in removal relative to their representation in the population (Table 2; see exhibit C2 in appendix C for other subgroups).

Table 2. Disciplinary incidents by student subgroup relative to the student population, 2017/18

Student subgroup	Percentage of all incidents	Percentage of student population
Race		
Black	58	45
White	25	37
All other	17	18
Disability		
Yes	27	12
No	73	88

Source: Suspensions, Expulsions, and Health Related Exclusions Maryland Public Schools files for 2017/18; the Maryland Public School Enrollment by Race/Ethnicity and Gender and Number of Schools files for 2017/18; and the Maryland Special Education/Early Intervention Services Census Data and Related Tables files for 2017/18.

Even when they were involved in the same types of infractions, Black students and students with disabilities were significantly more likely to receive out-of-school suspensions than were other subgroups. Students of color and

students with disabilities received a larger proportion of out-of-school suspensions than White students or students without disabilities for the same types of infractions between 2009/10 and 2017/18 (Table 3; see exhibit C3 in appendix C for results across all race/ethnic groups).

Table 3. Distribution of dispositions for disciplinary incidents, by student subgroup, 2009/10–2017/18

Student subgroup	Elementary school				Middle/high school			
	Total infractions	Expelled (percentage)	Out-of-school suspension (percentage)	In-school suspension (percentage)	Total infractions	Expelled (percentage)	Out-of-school suspension (percentage)	In-school suspension (percentage)
Conduct infractions								
<i>Race/ethnicity</i>								
Black	29,129	0.1	79	21	230,018	0.2	73	27
White	10,108	0.0	65	35	115,125	0.1	63	35
<i>Disability</i>								
Yes	13,312	0.1	81	19	87,875	0.2	76	24
No	31,061	0.1	72	28	303,119	0.2	68	32
Violent infractions								
<i>Race/ethnicity</i>								
Black	46,145	0.6	85	15	130,423	2.3	90	7
White	14,823	0.2	73	27	51,391	0.6	83	16
<i>Disability</i>								
Yes	21,348	0.6	86	14	56,323	1.8	90	9
No	47,471	0.4	79	20	152,545	1.6	88	11

Note: Percentages reflect the proportion of infractions among a given student subgroup that received a specific type of discipline, for a given infraction type. For example, 79 percent of conduct infractions among Black students resulted in an out-of-school suspension. See box 3 for details on behaviors categorized as conduct-related and violence-related infractions. Responses to infractions are mutually exclusive. Distributions that do not sum to 100 percent are because of health-related exclusions.

Source: Suspensions, Expulsions, and Health Related Exclusions Maryland Public Schools files for 2009/10 through 2017/18.

For example, a larger proportion of Black students at all school levels received out-of-school suspensions for conduct or violent infractions compared to students in other racial or ethnic subgroups who were involved in the same type of infraction. When we considered the different subcategories of conduct and violent infractions (for example, violent infractions such as fighting, bullying, or attacking an adult, and conduct infractions such as disruption, disrespect, and academic dishonesty), these patterns held in most cases (see Exhibit C4 in appendix C). Taking into account the schools that students attended and the infraction type, on average, Black students were 4 percentage points more likely than White students to be removed, a statistically significant difference. In addition, students with disabilities were 4 percentage points more likely to be removed than students without disabilities, also a statistically significant difference (see Exhibit C5 in appendix C).

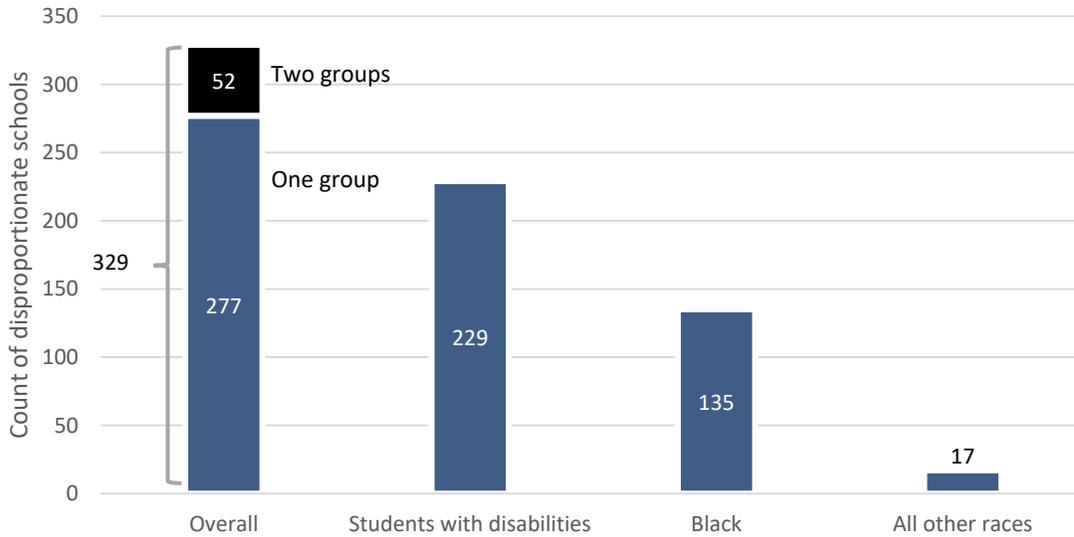
Non-White students—Black, Hispanic, American Indian or Alaska Native, Native Hawaiian or Pacific Islander, and multi-race students—were removed for longer periods than their White peers (see Exhibit C6 in appendix C). In 2017/18, Black students were removed for 30 percent longer than were White students, on average (3.7 days compared with 2.9 days). Students with disabilities were removed for slightly shorter periods, on average, than were students without disabilities.

Almost every district in the state had at least one school with disproportionate discipline removal rates, and on average, disproportionate schools had different characteristics than other schools.

If MSDE’s current disproportionality definitions were applied retroactively to the 2016/17 school year, 329 schools would have been identified with discipline disparities. In 277 schools, the majority of schools that would have been identified, one subgroup—Black students or students with disabilities—exceeded both risk ratio thresholds. Only

52 schools would have been identified for exceeding risk ratio thresholds for two subgroups. Seventeen schools would have been identified with disproportionately high removal rates for other subgroups such as Hispanic students (figure 2). This finding was consistent across years (see exhibit C7 in appendix C).

Figure 2. Count of schools with disproportionately high removal rates by subgroup, 2016/17



Notes: The total number of schools for 2016/17 was 1,434. Schools not meeting the reporting thresholds set by Maryland State Department of Education are excluded from this chart.
 Source: Maryland State Department of Education’s disproportionality data file for 2016/17.

Disproportionate schools had different characteristics, including student populations and achievement levels, than schools that would not be identified as disproportionate. Disproportionate schools also used exclusionary discipline more often than schools that were not disproportionate. At all levels, schools with disproportionality had a larger proportion of out-of-school suspensions than schools that were not disproportionate (Table 4). In addition, schools with discipline disparities had higher removal rates for violent and conduct infractions than schools without disproportionality; however, a smaller rate of infractions in disproportionate schools involved injury, an indicator of severity of the incident (see exhibit C3 in appendix C).

Table 4. Characteristics of disciplinary incidents and removals by disproportionality status, 2016/17

Types of incidents and removals	Elementary schools		Middle and high schools	
	Disproportionate	Not disproportionate	Disproportionate	Not disproportionate
Count of schools	260	672	69	590
Incidents resulting in in-school suspension (percentage)	14.9***	19.4	13.2***	17.4
Incidents resulting in out-of-school suspension (percentage)	81.2***	75.4	85.1***	81.1
Incidents resulting in expulsion (percentage)	0.0	0.0	0.6	0.6

Notes: Removals and removal rates refer to out-of-school suspensions and expulsions. Schools not meeting the reporting thresholds set by Maryland State Department of Education are excluded from this table.
 ** / *** Significantly different from not disproportionate schools at the .05 / .01 level.
 Within disproportionality status, distributions that do not sum up to 100 percent are due to health-related exclusions.
 Source: Suspensions, Expulsions, and Health Related Exclusions Maryland Public Schools files and the Maryland State Department of Education’s disproportionality data file for 2016/17.

In 2016/17, elementary schools identified with disproportionately high removal rates tended to have (1) larger proportions of Black students, (2) lower test score performance, and (3) more inexperienced teachers. Middle and

high schools with disproportionalities, in contrast, had few demographic differences from those without disproportionalities: they had fewer Asian students and lower Partnership for Assessment of Readiness for College and Careers (PARCC) proficiency scores in English language arts but were otherwise similar to schools that did not have disproportionately high removal rates (**Table 5**; for information on the distribution of student characteristics, see **exhibit C8** in appendix C).

Table 5. Student characteristics and achievement by disproportionality status, 2016/17

Student characteristic	Disproportionate schools	Not disproportionate schools
Elementary schools		
Race/ethnicity	Percentages	
Hispanic	15.8	16.0
Native American/Alaska Native	0.3**	0.2
Asian	3.1***	6.2
Black	48.4***	31.2
Native Hawaiian or Other Pacific Islander	0.2	0.1
White, non-Hispanic	28.0***	41.5
Multiple races	4.2**	4.8
Students with disabilities	11.6	12.1
PARCC scores		
PARCC ELA	54***	66
PARC Math	53***	66
Middle and high schools		
Race/ethnicity		
Hispanic	13.8	14.9
Native American/Alaska Native	0.3	0.2
Asian	2.9***	4.8
Black	45.7	43.4
Native Hawaiian or Other Pacific Islander	0.1	0.1
White, non-Hispanic	33.7	33.2
Multiple races	3.5	3.4
Students with disabilities	12.6	11.5
PARCC scores		
PARCC ELA	51**	59
PARC Math	44	48

ELA is English language arts. PARCC is Partnership for Assessment of Readiness for College and Careers.

Notes: For the PARCC scores, percentages denote the average school-level share of students who approached, met, or exceeded expectations in the category. All four differences in average PARCC proficiency levels between disproportionate and not disproportionate schools were statistically significant at $p < 0.01$. Demographic information was aggregated within the disproportionate and not disproportionate schools; therefore, significance tests were not performed.

** / *** Significantly different from not disproportionate schools at the .05 / .01 level.

Schools not meeting the reporting thresholds set by Maryland State Department of Education are excluded from this table.

Source: Maryland State Department of Education's disproportionality data file, the Common Core of Data, and Maryland's public data files on PARCC performance for 2016/17.

Elementary, middle, and high schools identified with disproportionately high removal rates were served by a larger percentage of inexperienced teachers (see **table 6**).

Table 6. School characteristics by disproportionality status, 2016/17

School characteristic	Disproportionate schools	Not disproportionate schools
Elementary schools		
Student mobility rate	24.5***	19.2
Percentage of new teachers	10.9***	8.9
Average enrollment (count)	485	460
Middle and high schools		
Cohort dropout rate	13.6	15.0
Cohort graduation rate	84.3	81.1
Promotion rate	91.6***	85.7
Student mobility rate	22.5	19.4
Percentage of new teachers	13.1**	10.6
Average enrollment (count)	612	691

Note: Schools not meeting the reporting thresholds set by Maryland State Department of Education are excluded from this table.

** / *** Significantly different from not disproportionate schools at the .05 / .01 level.

Source: Maryland State Department of Education's disproportionality data file and Maryland's public data files on dropout rates, graduation rates, promotions, teacher experience, and student mobility for 2016/17.

Implications

More data and research are needed to understand the sources of discipline disproportionalities for Black students and students with disabilities and effective strategies to reduce disproportionate removal rates. Although removal rates declined across student subgroups between 2009/10 and 2017/18, gaps for these groups in particular persisted. Removal rates for Black students and students with disabilities were higher than the rates for other students involved in similar infractions, and lengths of removal for students of color were longer. These findings indicate a need to identify and address the root causes of these discipline disparities. Inequitable punishment for the same offenses suggests the possibility that implicit bias against Black students and students with disabilities plays a role.

Being removed from the instructional setting decreases the academic achievement of students who are removed (Lacoe & Steinberg, 2019; Zarecki, 2019). Schools with disproportionately high removal rates for disadvantaged subgroups must change the policies and practices that drive discipline disparities and simultaneously adopt academic and nonacademic supports and strategies to address behavioral concerns, promote opportunities to learn, and promote a positive school climate (Steinberg & Lacoe, 2018).

Differences or similarities across schools and districts can provide insight into the types of supports they might need to address disproportionality. For example, instructional staff serving schools in which Black students or students with disabilities are more likely to be removed for the same offense might benefit from implicit bias training to help them develop more equitable classroom management strategies. Implementing culturally relevant and evidence-based instructional and behavioral interventions can build staff capacity to create a more welcoming and engaging learning environment for all students. Identified schools might also benefit from offering social-emotional learning programming to help newly enrolled or transfer students transition into the school community. Recognizing that many evidence-based classroom management and school climate interventions require significant teacher training and ongoing support to be effective (Flannery, Fenning, Kato, & McIntosh, 2014; Reinke, Herman, & Stormont, 2013; Wills, Kamps, Fleming, & Hansen, 2016), identified schools with high percentages of inexperienced teachers might require increased onsite instructional coaching, mentoring, and other embedded professional development and onboarding opportunities for new teachers.

Limitations

These analyses show trends in discipline disproportionality over the past 10 years and describe differences across subgroups, age, and infraction types. Although the findings are consistent with the possibility that implicit bias has contributed to disproportionalities, they cannot definitively show *why* some schools are disproportionate or prove that there is underlying bias in a school.

These data do not reflect all discipline infractions, nor do they provide insight into underlying differences in discipline policy, policy implementation, or student behavior across schools. Reporting disciplinary infractions relies on the discretion of school staff, and reporting requirements vary by school district (for example, some districts only require schools to report out-of-school suspensions, expulsions, and school-based arrests). Infractions for which no disciplinary action occurred are not reflected here. This is important because not reporting disciplinary infractions is an approach schools might take to obscure disproportionality. Common discipline reporting requirements and more detailed school- or district-level information on discipline policy implementation and practice are necessary to better understand why some schools are disproportionate and others are not. To help address these gaps, future analyses could review and integrate school discipline policies, school climate surveys, implementation or perception surveys, or implementation studies.

Finally, school dropout affects the composition of the students in a school, potentially affecting suspension rates in the later grades. For instance, if students who drop out of school are also more likely to be involved in disciplinary infractions and suspended or expelled, schools with high dropout rates might have lower removal rates than schools that are better able to retain students. Therefore, schools with lower dropout rates could be more likely to be identified as disproportionate. The effects of dropout on the composition of students remaining in schools—or other factors, including changes in statewide demographics, poverty, and incarceration rates occurring in Maryland during the study period—are beyond the scope of this analysis but could be the subject of future research.

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Appendix A. About the study

The Maryland State Department of Education (MSDE) requested assistance from Regional Educational Laboratory (REL) Mid-Atlantic to address an urgent need to identify trends in, and school characteristics associated with, disproportionate rates of exclusionary discipline for students based on race/ethnicity and disability status. The preliminary findings from the study informed a meeting of the MSDE leadership in spring 2019, at a key point on the timeline for implementing a statewide policy initiative to reduce and ultimately eliminate disproportionalities in school discipline.

Out-of-school suspensions and expulsions remove disruptive students from the school environment (Forsyth et al., 2013). These disciplinary strategies are controversial for at least four reasons:

1. **Students who are removed lose opportunities to learn and be positively engaged in school.** Research suggests disciplinary removals are associated with negative outcomes, such as decreased academic performance and an increased likelihood of grade repetition and school dropout (Fabelo et al., 2011; Forsyth et al., 2013; Gregory, Skiba, & Noguera, 2010; Lacoë & Steinberg, 2019; Lamont et al., 2013).
2. **School removals are often unevenly applied across groups of students.** Generally, students of color are more likely to experience exclusionary discipline, and tend to be excluded for longer periods (Anfinson, Autumn, Lehr, Riestenberg, & Scullin, 2010; Vincent, Sprague, & Tobin, 2012). Research has also shown that students with disabilities tend to be suspended at higher rates than their peers (Lipscomb et al., 2017; Losen & Gillespie, 2012).
3. **Little evidence indicates that exclusionary discipline is effective.** Research has not demonstrated that zero-tolerance, exclusionary, or harsh disciplinary practices resolve problems underlying bad behavior or make schools safer (Skiba, Shure, Middelburg, & Baker, 2012).
4. **There are evidence-based alternatives to disciplinary removals.** Research has demonstrated that multi-tiered behavioral frameworks such as Positive Behavioral Interventions and Supports can help improve overall school climate and safety (Bradshaw, Koth, Thornton, & Leaf, 2009). Tiered interventions that use proactive prevention strategies have also been shown to address the underlying cause of misbehavior, reinforce positive behaviors and pro-social growth, improve academic engagement and achievement, and reduce suspensions (Christle, Jolivette, & Nelson, 2005; Crone, Hawken & Horner, 2010; Liaupsin, Umbreit, Ferro, Urso, & Upreti, 2006; Luiselli, Putnam, Handler, & Feinberg, 2005; Putnam, Horner, & Algozzine, 2006; Skiba & Sprague, 2008; Theriot, Craun, & Dupper, 2010).

Efforts to reform discipline policies to reduce school removal, however, can also be controversial. Some claim that reducing school removal can unfairly harm the achievement of school peers who are not removed (Petrilli, 2016). But a recently released briefing report from the U.S. Commission on Civil Rights (2019) underscored data that out-of-school suspensions are largely exacted for nonviolent behavior. In addition, recent research in Philadelphia found that the effect of discipline reform on the academic achievement of peers in schools that complied with the policy change was negligible (Steinberg & Lacoë, 2018).

In 2012, the Maryland State Board of Education adopted policies indicating that school removals should be a last resort and should be applied equitably when used. According to a prior REL Mid-Atlantic study, discipline rates in Maryland from 2009 to 2012 were twice as high for Black students and students with disabilities as compared with other students, even as the proportion of students being suspended and expelled from school overall fell from 5.6 to 5 percent (Porowski, O’Conner, & Passa, 2014). Consistently defining and continually tracking disproportionalities in school removal are critical for discipline reform efforts to reduce those disproportionalities and avoid unintended consequences. For instance, suspensions for less serious infractions declined for Black students relative to White students following discipline reforms in Philadelphia prohibiting school removal for low-level infractions; however,

suspensions for more serious infractions increased for Black students relative to White students (Steinberg & Lacoë, 2018).

To this end, MSDE is in the third year of a three-year rollout of an initiative to reduce and eliminate disproportionalities in discipline at schools across the state based on racial/ethnic and disability status. In the first year (2016/17), MSDE developed a method for identifying the presence of disproportionalities for subgroups of students in schools. The method involves calculating two measures:

School-level risk ratio. A measure of the proportion of students in a subgroup who are suspended or expelled at a school compared with the proportion of other students in the same school who are suspended or expelled.

State comparison. A measure of the proportion of students in a subgroup who are suspended or expelled at a school compared with the proportion of all students statewide who are suspended or expelled (calculated separately for elementary students and middle/high school students).

MSDE has defined that disproportionality exists when both of these measures exceed 3.0. MSDE collects and analyzes the data during the summer and fall, and shares the discipline data with school districts in the winter.

Starting in fall 2019, any district with schools that have been identified with discipline disparities must develop an action plan to reduce and eliminate those disproportionalities within three years. MSDE will support and guide school districts as they implement their action plans. MSDE views identification of disproportionate schools as an opportunity to provide targeted support to school districts with discipline issues.

The information from this study, in addition to information gathered on root causes and approaches, will inform MSDE's development of technical support approaches provided to districts with disproportionate schools.

Research questions

The study focused on the following research questions:

1. What are the trends in school removals (out-of-school suspensions and expulsions) in Maryland from 2009/10 to 2017/18? What are the overall trends in characteristics of disciplinary responses during this period, such as type of removal, length of removal, and type of offense causing removal?
2. What are the trends in school removals in Maryland from 2009/10 to 2017/18 by student subgroup?
3. Do schools with disproportionality differ in significant ways from schools without disproportionality?

Appendix B. Methods

The analyses in this report were based on administrative data for the 2009/10 through 2017/18 school years provided by the Maryland State Department of Education (MSDE) to Regional Educational Laboratory (REL) Mid-Atlantic. Details on the data and methods used to answer each research question are described below.

What are the trends in school removals (out-of-school suspensions and expulsions) in Maryland from 2009/10 to 2017/18? What are the overall trends in characteristics of disciplinary responses during this period, such as type of removal, length of removal, and type of offense causing removal?

Analyses for this research question used MSDE's Suspensions, Expulsions, and Health Related Exclusions public reports and data file, which included annual data from all school districts. The file included student-level information about grade, gender, ethnicity, race, English learner status, free or reduced-price meal status, migrant status, disability codes, offense codes, date of offense, punishment codes, length of removal, physical injury indicator, and type of educational services provided. In addition, analyses also relied on the Maryland Public School Enrollment by Race/Ethnicity and Gender and Number of Schools files for 2009/10 through 2017/18 and the Maryland Special Education/Early Intervention Services Census Data and Related Tables files for 2009/10 through 2017/18. These files are publicly available. The MSDE data provided for this research question included a variable for school level (elementary or middle/high school).

The study authors used this file to calculate frequencies, percentages, and averages to describe removal rates, disciplinary incident characteristics, and trends in types of removals for each school year in the study period.

What are the trends in school removals in Maryland from 2009/10 to 2017/18 by student subgroup?

Analyses for this research question also used the Suspensions, Expulsions, and Health Related Exclusions data file, a student-level data file containing information on each infraction and the student who committed the infraction, as well as Maryland's disproportionality data file, a school-level data file provided by MSDE containing counts of unduplicated students who were removed, total subgroup counts, and risk ratios for each student subgroup. The school-level data the study team used to calculate removal rates excluded subgroup-school combinations that were too small to meet inclusion criteria. Student counts provided in this file reflected any students enrolled in a school for at least 10 days. Therefore, students who moved schools during the year were reflected in the totals for each school in which they exceeded the 10-day enrollment period.

The study authors used the student-level file to calculate frequencies, percentages, and averages to describe student characteristics and how they varied by types of removals and offenses for each school year in the study period. To explore whether disproportionalities for subgroups were found only across schools, or existed within schools, the authors used multiple regression analysis that included school fixed effects to estimate the probability of removal for Black and White students, and students with and without disabilities within the same schools, controlling for the student characteristics listed above from the Suspensions, Expulsions, and Health Related Exclusions data file, infraction type, and school year. The analysis file for the regressions included elementary school and middle/high school students for the years 2009/10 through 2017/18, and the model controlled for grade level and school year.

Do schools with disproportionality differ in significant ways from schools without disproportionality?

Analyses for this research question used the Suspensions, Expulsions, and Health Related Exclusions data file and Maryland's disproportionality data file. The REL Mid-Atlantic team merged the disproportionality data file with publicly available school-level data on student performance, enrollment, mobility, staff credentials, per-student expenditure, and other characteristics (available at reportcard.msde.maryland.gov). These data were also merged with publicly available school-level data from the Common Core of Data, including total enrollment and grade level

enrollment by grade level, race, and ethnicity. Rate calculations throughout this report required enrollment data by grade level, which were not available for the 2017/18 school year. For this reason, rates reflect 2016/17 data as the most recent year.

The study authors used these files to calculate percentages and averages to describe school and district characteristics for schools that would and would not be disproportionate on 2016/17. Statistical significance testing was conducted for applicable analyses.

Study sample and decision rules. Students in kindergarten through grade 12 and school characteristics from 2009/10 to 2017/18 were included in the analysis. The school-level data file, as initially provided, did not include some schools, and thus, some students, because they had no removals or they had student subgroups that were too small to meet the reporting threshold. However, because the data file was merged with public data sets that included all schools, we were able to add the missing schools back in, and they are reflected in the “Not disproportionate” group used throughout the report. Because data files from MSDE were merged across years, business rules regarding the input of data were reviewed for each year to reconcile differences in offense codes and other variables. Relevant business rules related to these data include the following:

- Only one reason could be recorded for a given disciplinary action. If there was more than one reason for discipline, only the most serious removal was recorded. This determination is made by the school staff. For example, if a student cut class and started a fight, only the fight would be recorded in the discipline data.
- On May 7, 2009, The Maryland General Assembly passed Senate Bill 241, prohibiting a student from being out-of-school suspended or expelled from school solely for attendance-related offenses. Therefore, after 2009, no removals were logged under offense codes for attendance.
- If students reported more than one race/ethnicity, they were recorded in only one subgroup. If a student is Hispanic/Latino and another race, the student was recorded only in the Hispanic/Latino subgroup. Other students with more than one race were recorded in the “two or more races” subgroup.
- For the purposes of determining disproportionality, if there were zero removals for All Other Students or the total count of All Other Students was less than 10, then the unduplicated count of removals for All Other Students at the district level was used for comparison.

The main variables had low missing data rates. Data on student race and ethnicity was missing from a single school that appeared in the disproportionality file but did not appear in the Common Core of Data. Less than 4 percent of schools were missing special education data due to student counts below 10 suppressed by MSDE. Less than 6 percent of schools were missing data on Partnership for Assessment of Readiness for College and Careers (PARCC) scores due to some schools being excluded from the public test score data because student counts below 10 were suppressed.

Box B1. Key concepts and terms

Ethnicity indicates whether a student is or is not of Hispanic/Latino origin.

Race includes indicators for American Indian/Alaska Native, Asian, Black, Native Hawaiian or Other Pacific Islander, and White.

Migrant indicator documents children who are—or whose parent or parent’s spouse is—a migratory agricultural worker, including a migratory dairy worker or a migratory fisher, and who in the preceding 36 months, to accompany such parent or parent’s spouse in order to obtain temporary or seasonal employment in agricultural or fishing work, has moved schools or administrative areas, or regularly travels long distances for work.

English learner indicator for students who have a primary/home language other than English and have been assessed as having limited or no ability to understand, speak, or read English and are receiving English for Speakers of Other Languages services.

Injury indicator notes whether the offense resulted in students, school personnel, or other people on school grounds requiring professional medical attention.

Disability codes indicate the major category of disability under which the student needs special education services as defined by the U.S. Department of Education and the Code of Maryland Regulations. These include Intellectual Disability, Hard of Hearing, Deaf, Speech/Language Impairments, Visual Impairments, Emotional Disability, Orthopedic Impairments, Other Health Impairments, Specific Learning Disabilities, Multiple Disabilities, Deaf/Blind, Traumatic Brain Injury, Autism, and Developmental Delay.

Offense codes describe the incident for which a student was disciplined. There are 37 unique codes, grouped into six infraction categories: (1) health, (2) attendance, (3) drug and alcohol, (4) violence, (5) sex, and (6) conduct.

Dispositions are the disciplinary consequences of behavioral incidents, including (1) in-school suspension, (2) out-of-school suspension, and (3) expulsion.

Appendix C. Supporting analyses

This appendix provides supplementary information for the analyses described in the report.

Supporting analyses for research question 1

Analyses address school discipline trends across the state of Maryland. Removal rates for all students, as well as Black students and students with disabilities, have been decreasing (**Exhibit C1**). However, the gaps between these groups and the average for all students have persisted. Additionally, Black students and students with disabilities represented a disproportionate number of removals relative to their representation in the population (**Exhibit C2**).

Exhibit C1. Removal rates by student subgroup, 2009/10 through 2017/18

Year	Black (percentage)	Special education (percentage)	White (percentage)	All (percentage)
Elementary school				
2009/10	4.8	10.1	2.0	2.8
2010/11	4.9	9.9	1.9	2.7
2011/12	5.1	9.7	1.8	2.7
2012/13	4.2	9.1	1.8	2.3
2013/14	4.0	9.1	1.7	2.3
2014/15	3.9	9.0	1.8	2.2
2015/16	4.3	9.2	1.6	2.4
2016/17	4.5	9.4	1.8	2.5
2017/18	4.0	8.3	1.7	2.3
Middle and high school				
2009/10	16.2	20.1	7.4	10.4
2010/11	16.1	19.7	7.1	10.2
2011/12	15.1	18.2	6.1	9.3
2012/13	13.1	16.4	4.9	7.8
2013/14	11.8	15.2	4.3	6.8
2014/15	11.0	14.5	3.8	6.2
2015/16	11.9	14.7	3.8	6.5
2016/17	11.8	14.6	4.0	6.6
2017/18	11.8	15.2	4.4	6.9

Source: Suspensions, Expulsions, and Health Related Exclusions Maryland Public Schools data files for 2009/10 through 2017/18; the Maryland Public School Enrollment by Race/Ethnicity and Gender and Number of Schools files for 2009/10 through 2017/18; and the Maryland Special Education/Early Intervention Services Census Data and Related Tables files for 2009/10 through 2017/18.

Exhibit C2. Disciplinary incidents by student subgroup relative to the student population, 2017/18

Student subgroup	Percentage of all incidents	Percentage of student population
Race and ethnicity		
American Indian/Alaska Native	<0.5	<0.5
Asian	1	2
Black	58	45
Hispanic	11	14
Multiple races	5	2
Hawaiian/Pacific Islander	<0.5	<0.5
White	25	37
Disability status		
Students with disabilities	27	12
Students without disabilities	73	88

Source: Suspensions, Expulsions, and Health Related Exclusions Maryland Public Schools files for 2017/18; the Maryland Public School Enrollment by Race/Ethnicity and Gender and Number of Schools files for 2017/18; and the Maryland Special Education/Early Intervention Services Census Data and Related Tables files for 2017/18.

Supporting analyses for research question 2

Exhibit C3 presents the distribution of dispositions for violent and conduct infractions for a wider set of student subgroups.

Exhibit C3. Distribution of dispositions for violent and conduct infractions, by student subgroup, 2009/10–2017/18

	Elementary school				Middle/high school			
	Total infractions	Expelled (percentage)	Out-of-school suspension (percentage)	In-school suspension (percentage)	Total infractions	Expelled (percentage)	Out-of-school suspension (percentage)	In-school suspension (percentage)
Conduct infractions								
<i>Race/ethnicity</i>								
Black	29,129	0.1	79	21	230,018	0.2	73	27
White	10,108	0.0	65	35	115,125	0.1	63	35
Hispanic	2,507	0.0	71	29	26,742	0.1	70	29
Two or more races	2,265	0.0	66	34	14,826	0.1	64	34
All other races	389	0.0	74	26	4595	0.2	72	28
<i>Disability</i>								
Yes	13,312	0.1	81	19	87,875	0.2	76	24
No	31,061	0.1	72	28	303,119	0.2	68	32
Violent infractions								
<i>Race/ethnicity</i>								
Black	46,145	0.6	85	15	130,423	2.3	90	7
White	14,823	0.2	73	27	51,391	0.6	83	16
Hispanic	4,006	0.1	80	20	16,445	1.1	89	10
Two or more races	3,145	0.1	74	26	7,701	0.8	86	13
All other races	776	0.1	80	20	3266	0.9	87	12
<i>Disability</i>								
Yes	21,348	0.6	86	14	56,323	1.8	90	9
No	47,471	0.4	79	20	152,545	1.6	88	11

Source: Suspensions, Expulsions, and Health Related Exclusions Maryland Public Schools files for 2009/10 through 2017/18.

Exhibit C4 provides the distribution of dispositions for specific violent and conduct infractions. Across the subtypes of violent infractions, Black students were more likely to be expelled or receive an out-of-school suspension than were White students involved in the same type of infraction. White students were more likely to receive in-school suspensions. The same pattern held for the two most common types of conduct infractions, disrespect and disruption.

Exhibit C4. Distribution of dispositions for specific violent and conduct infractions, by student subgroup, 2009/10–2017/18

Violent infractions	Total infractions			Conduct infractions	Total infractions		
	Expelled	OSS	ISS		Expelled	OSS	ISS
<i>Weapon</i>				<i>Disrespect</i>			
Black	9,222	12.7	84.8	Black	89,869	0.1	71.5
White	4,312	2.7	88.4	White	55,363	0.1	65.1
Disability	4,401	9.9	86.4	Disability	38,199	0.1	73.7
No disability	11,889	8.3	86.5	No disability	127,712	0.1	67.4
<i>Attack on adult</i>				<i>Disruption</i>			
Black	15,638	7.7	88.9	Black	167,344	0.2	74.2
White	4,701	1.2	90.2	White	66,089	0.2	62.0
Disability	10,737	3.6	91.3	Disability	63,290	0.2	77.2
No disability	12,116	7.5	87.8	No disability	200,977	0.2	68.3
<i>Attack on student</i>				<i>Dress code</i>			
Black	45,566	1.2	87.5	Black	165	0.0	9.1
White	18,952	0.3	78.5	White	34	0.0	20.6
Disability	21,539	0.8	87.3	Disability	46	0.0	15.2
No disability	52,611	0.9	83.5	No disability	168	0.0	10.7
<i>Threat to adult</i>				<i>Academic dishonesty</i>			
Black	11,754	1.0	93.6	Black	584	0.0	54.6
White	3,699	0.8	88.3	White	599	0.7	48.6
Disability	7,035	0.7	92.9	Disability	161	0.0	49.7
No disability	10,408	1.1	91.6	No disability	1,250	0.4	52.5
<i>Threat to student</i>				<i>Electronics</i>			
Black	8,635	0.4	80.9	Black	4,369	0.1	73.7
White	5,799	0.4	72.9	White	4,167	0.1	56.9
Disability	5,083	0.4	81.3	Disability	1,284	0.0	66.2
No disability	11,716	0.4	76.3	No disability	8,283	0.1	65.6
<i>Fighting</i>				<i>Theft</i>			
Black	92,598	0.2	91.2	Black	10,343	0.8	84.5
White	27,352	0.1	82.9	White	4,160	0.3	68.8
Disability	31,356	0.1	89.7	Disability	4,119	0.7	81.6
No disability	106,014	0.2	88.9	No disability	12,761	0.5	79.1
<i>Serious injury</i>				<i>Trespassing</i>			
Black	390	8.5	87.9	Black	1,273	2.9	91.2
White	84	0.0	81.0	White	230	1.7	83.0
Disability	155	6.5	88.4	Disability	374	3.5	90.9
No disability	409	7.3	85.6	No disability	1,328	2.2	89.3
<i>Bullying/harassment</i>				<i>Property destruction</i>			
Black	11,064	0.6	81.0	Black	5,285	0.5	87.1
White	7,593	0.3	70.9	White	3,002	0.2	70.0
Disability	5,950	0.6	82.3	Disability	2,896	0.3	87.5
No disability	15,547	0.4	74.6	No disability	6,648	0.4	77.7

ISS is in-school suspension. OSS is out-of-school suspension.

Source: Suspensions, Expulsions, and Health Related Exclusions Maryland Public Schools files for 2009/10 through 2017/18.

The patterns observed in **Table 3** and **Exhibit C4** were statewide patterns; therefore, in **Exhibit C5**, we looked within school data by estimating a multiple regression model that included school fixed effects. School effects allowed us to compare students with behavioral infractions who attended the same school in the same school year, and estimate whether there was a difference in the probability that Black students received a disciplinary removal relative to White students. The school fixed effects also controlled for characteristics of schools that did not change over the time period, but might differ between schools. **Exhibit C5** presents the results from the regression model. We found that Black students were 4 percentage points more likely than White students to be removed, even when they attended the same schools. In addition, students with disabilities were 4 percentage points more likely to be removed than students without disabilities who attended the same schools.

Exhibit C5. Regression analysis of removal rates, 2009/10 through 2017/18

Variable	Removal rate
Black	0.04*** (0.01)
Disability	0.04*** (0.00)
Observations	746,805
R-squared	0.31
Number of schools	858

*** Significant at $p < .01$; ** significant at $p < .05$; * significant at $p < .1$.

Note: Robust standard errors in parentheses.

The student sample was limited to Black and White students who have been involved in behavioral infractions. The regression models controlled for school, school year (2009/10 through 2017/18), specific infraction types, free or reduced-price meal status, migrant status, English language learner status, and grade (K–12).

Source: Suspensions, Expulsions, and Health Related Exclusions Maryland Public Schools files for 2009/10 through 2017/18.

Over time, differences among student subgroups in the length of removals have persisted (**Exhibit C6**).

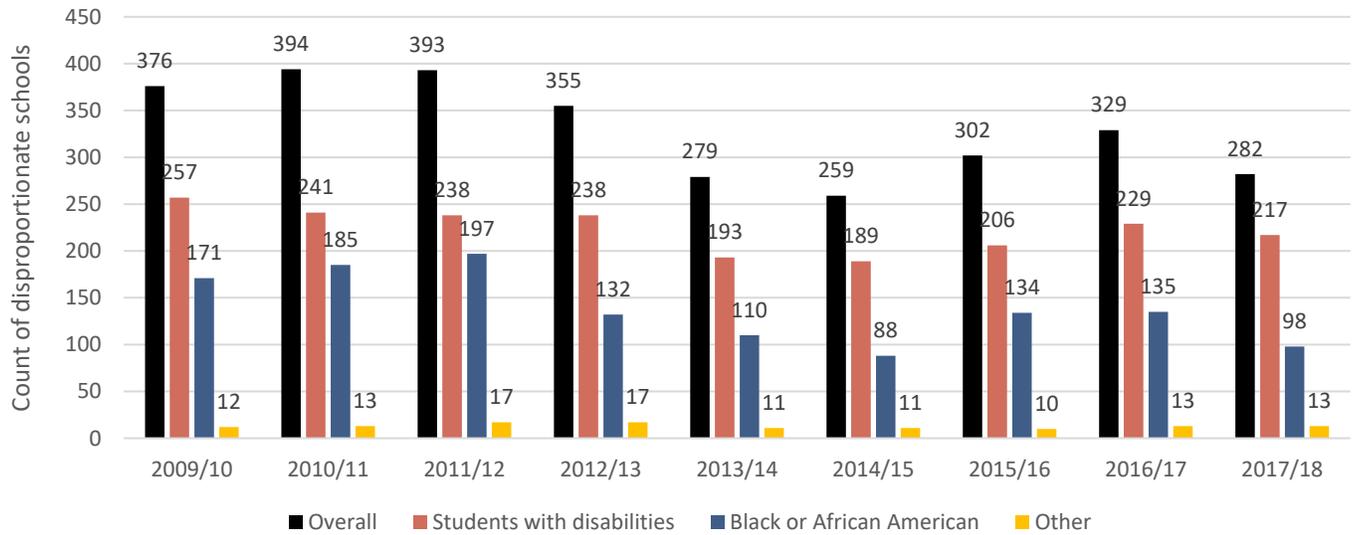
Exhibit C6. Length of removal by racial/ethnic subgroup and disability status, over time

Academic year	Average number of days removed						
	Asian	Black	Hispanic	White	Two or more races	Students with disabilities	Students without disabilities
2009/10	3.17	4.00	3.71	2.91	2.85	3.34	3.71
2010/11	2.95	3.91	3.62	2.87	2.83	3.26	3.64
2011/12	3.44	3.82	3.56	3.21	3.07	3.27	3.73
2012/13	3.59	3.97	3.95	3.14	3.08	3.33	3.87
2013/14	3.36	3.90	3.75	3.01	3.26	3.35	3.77
2014/15	3.15	3.54	3.42	2.58	2.96	2.98	3.40
2015/16	3.51	3.74	4.60	2.64	2.89	3.19	3.67
2016/17	3.95	3.75	4.12	2.71	3.34	3.10	3.71
2017/18	2.85	3.73	3.91	2.93	3.38	3.22	3.68

Source: Suspensions, Expulsions, and Health Related Exclusions Maryland Public Schools files for 2009/10 through 2017/18.

Analyses included in this section address trends in discipline disproportionality. As shown in **Exhibit C7**, identification has been driven by disproportionalities in removal rates for Black students and students with disabilities. This has been consistent over time.

Exhibit C7. Count of disproportionate schools, by student subgroup



Source: Maryland State Department of Education's disproportionality data file for 2009/10 through 2017/18.

Supporting analyses for research question 3

As shown in **Exhibit C8**, infraction and disciplinary action types differed across schools by length of removal, use of in-school compared to out-of-school suspension, removal rates for different types of offenses, and infractions involving injury.

Exhibit C8. Characteristics of disciplinary incidents and removals by disproportionality category, 2016/17

Incidents and removal characteristics	Elementary schools		Middle and high schools	
	Disproportionate	Not disproportionate	Disproportionate	Not disproportionate
Count of schools	260	672	69	590
Average length of removal (days)	1.92	1.84	3.79	4.01
	Percentage			
<i>Disciplinary outcome</i>				
Incidents resulting in in-school suspension	14.9	19.4	13.2	17.4
Incidents resulting in out-of-school suspension	81.2	75.4	85.1	81.1
Incidents resulting in expulsion	0.0	0.0	0.6	0.6
<i>Infraction type</i>				
Health infraction removal rate	0.3	0.3	0.4	0.3
Attendance infraction removal rate	0.0	0.0	0.0	0.0
Drug infraction removal rate	0.0	0.0	1.2	1.1
Violent infraction removal rate	4.2	3.3	9.0	7.8
Sex-related infraction removal rate	0.2	0.1	0.5	0.5
Conduct infraction removal rate	2.5	1.8	8.2	7.4
<i>Infractions involving injury</i>				
Total infractions involving injury	1.7	2.7	1.0	2.0
Violence-related infractions involving injury	2.5	3.6	2.0	3.4
<i>Number of removals per student</i>				
Students with no removals ^a	94.1	95.4	84.5	86.3
Students with one removal	3.5	2.7	9.5	8.3
Students with more than one removal	2.4	1.9	6.0	5.4

a. Removals and removal rates refer to out-of-school suspensions and expulsions.

Source: Suspensions, Expulsions, and Health Related Exclusions Maryland Public Schools files and Maryland State Department of Education's disproportionality data file for 2016/17.



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