Closing the Gap: An Analysis of Racial Disparities in Exclusionary Discipline in Henrico County Public Schools

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Prepared for

HCPS
HENRICO COUNTY PUBLIC SCHOOLS
The right to achieve.
The support to succeed.

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On my honor as a student, I have neither given nor received aid on this assignment.

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List of Acronyms

HCPS	Henrico County Public Schools
MTP-S	My Teaching Partner Secondary
SWIS	School Wide Information System
SWPBS	School-Wide Positive Behavioral Supports

Executive Summary

African-American students in Henrico County Public Schools (HCPS) are disproportionately likely to receive exclusionary discipline.

Exclusionary discipline practices include suspensions and expulsions that remove students from their ordinary classroom settings, generally with the goal of separating a student that is deemed to be disruptive from other students.

Students that receive out of school suspensions or other exclusionary discipline are removed from their normal routines and learning environments, missing out on instruction time and potentially beneficial interactions with teachers and peers. These practices have been documented to be associated with lower academic achievement, higher school dropout rates, and future misbehavior and discipline, suggesting that the practice is not effective in addressing problem behavior.

There are high social costs not only to the general use of exclusionary discipline, but also to the specific overuse of exclusionary discipline on black students. Use of exclusionary discipline by schools is associated with higher dropout rates, which are subsequently associated with a number of negative life outcomes. School dropouts have poorer health, lower incomes, and lower employment rates than high school graduates, and are ultimately more likely to require public assistance. A single high school dropout is associated with $527,000 in lost tax revenue and other social costs (Rumberget & Losen 2016).

This report provides Henrico County Public Schools with several options to address the racial discipline gap and provide all students in the county with the opportunity to succeed.

The report analyzes the projected impacts of three policy options:

1. Maintenance of the Status Quo
2. Expanded Use of Positive Behavioral Supports
3. Teacher Coaching Using My Teaching Partner Secondary

These policy options are evaluated on the following criteria:

- Cost-Effectiveness
- Political Feasibility
- Logistical Feasibility
- Equity

After thorough analysis, this report concludes that Henrico County Public Schools should implement the My Teaching Partner Secondary teacher coaching program in all middle and high schools.

Problem Statement

African-American students in Henrico County Public Schools (HCPS) are disproportionately likely to receive exclusionary discipline.

Context

Henrico County Public School System is located in Henrico County, Virginia. The school system serves 50,173 students in grades K-12 and employs 3,917 teachers. The teacher-student ratio is 19.2 at the elementary level, 22.6 at the middle school level, and 22.5 at the high school level (Henrico County Public Schools 2017).

The public school system serves a diverse student population. While Caucasian students make up 39% of the student body, black students represent 35%, Asian students 11%, Hispanic students 10%, and uncategorized or "other" students make up 5% (Henrico County Public Schools 2017). Despite making up only 35% of student body, black students are roughly five times more likely to receive a short-term suspension than their white peers (Legal Aid Justice Center 2017).

Of the more than 50,000 K-12 students enrolled in the Henrico County Public Schools, 94% will complete the school year without receiving a single out of school suspension. Yet one in eight black students in the county will experience an out of school suspension. (Legal Aid Justice Center 2017) Of the roughly 1200 students that receive more than two out of school suspensions in a single year, 80% are African American (Legal Aid Justice Center 2015).

This racial discipline gap is not unique to Henrico County Public Schools, as similar trends are present both in Virginia and nationally. According to the U.S. Department of Education's Office for Civil Rights (2014), black students in the United States are three times as likely as their white peers to be suspended or expelled. In Virginia, the disparity is more pronounced, with black students being 3.8 times more likely to be suspended than white or Hispanic students (Legal Aid Justice Center 2017). However, the magnitude of the problem in Henrico County exceeds both the state and national statistics. As a result, the school system is currently seeking new, evidence-based practices to address the racial disparity in discipline rates.

Literature Review

DISPROPORTIONATE DISCIPLINE OF MINORITY STUDENTS

In 1995, the Children's Defense Fund released the groundbreaking report, "School Suspensions: Are They Helping Children," detailing the prevalence of suspensions in the American school system and, perhaps more consequentially, the disparities in the use of school suspensions to punish certain students. The report's fourth chapter, "Racial Discrimination in the Use of Suspension," utilized anecdotal evidence as well as statistics to illustrate the differential disciplinary treatment experienced by black students when compared to their white peers. At the secondary school level, a survey by the Children's Defense Fund found that black students were suspended three times as often as white students.

Since the report was released, countless studies have gone beyond the raw statistics and confirmed the findings of the research, providing evidence suggesting that minority students are not only more likely to experience school discipline (Anderson & Ritter 2017, Bekkerman & Gilpin 2015, Kinsler 2011, Skiba Arredondo & Williams 2014) but also are more likely to be referred to administration (Skiba et al. 2002) and, ultimately, receive harsher punishment (Wallace et al. 2008).

Since the release of the Children's Defense Fund's initial 1995 report, the racial discipline gap has gained the attention of not only academia and educators, but also the Federal government. A 2014 letter from the Department of Justice following investigations by the Department of Education stated that their investigation yielded disparities in both the frequency and severity of punishment for black students and concluded that, "Significant and unexplained racial disparities in student discipline give rise to concerns that schools may be engaging in racial discrimination that violates the Federal civil rights laws…In short, racial discrimination in school discipline is a real problem"(U.S. Department of Justice 2014).

POTENTIAL CAUSES

Differential Student Behavior

Despite the multitude of studies on the topic, there is little evidence in the literature to explain the differences in rates of disciplinary action taken against African American students when compared to their white peers. One hypothesis is that black students simply commit offenses punishable by suspension at a higher rate than white students. However, there is little evidence to suggest this "differential involvement hypothesis."

A study by Huang and Cornell (2017) tested the differential involvement hypothesis through a survey administered to 58,613 Virginia public high school students with a

response rate of 89%. Questions included self-reports of past suspensions, risk behaviors including alcohol and drug use, fighting, and bullying, agreement with a series of statements measuring aggressive attitudes, and GPA. While the survey results revealed that black students were three times more likely to receive a suspension than white students, the authors concluded, "differences in suspension could not be explained by differences in reasons why students were suspended, student endorsement of aggressive attitudes, or risk behaviors such as substance abuse, fighting, and carrying weapons." The study did, however, find that white students were often disciplined for more objective, observable misconduct such as substance abuse violations, while black students were more likely to be disciplined for more subjective violations such as use of bad language, arguing with a teacher, and excessive talking. This secondary finding is consistent with the work of Gregory & Weinstein (2008) and Skiba et al. (2011), among others.

Disproportionate Identification

Alternatively, as much of the literature posits, black students may commit punishable offenses at a rate no higher than that of white students, but be subject to a higher rate of referral for punishment by teachers and administrators. That is, black students may be disproportionately identified for suspension due to conscious or unconscious bias on the part of school personnel.

A study by Barrett et al. (2017) investigates this theory by looking at the disciplinary outcomes of interracial fights in Louisiana schools between 2000-2014 and controlling for a variety of background characteristics including previous disciplinary history and academic achievement. The theory holds that if students have similar disciplinary histories and are involved in the same misconduct, their punishment should be the same. However, the results yield a statistically significant 1.1-1.2 percentage point increase in the likelihood of suspension as well as a small but statistically significant increase in the length of suspensions of 0.05 days for black students. These results are consistent with the findings of other researchers. Including Gastic (2017), who found that while there was no statistically significant difference in self-reported fighting among black and white high school students in Massachusetts, 24.7% of fights involving black students resulted in disciplinary action while only 14.6% of those involving white students resulted in discipline.

Bias and Inappropriate Identification

A final hypothesis to explain disparate rates of discipline is the inappropriate identification of black student behavior as misconduct due to bias. Whereas the previous theory explored the disproportionate identification of black students given base rates of misconduct, this theory posits that teachers, and specifically white teachers, tend to interpret black behavior as misbehavior. The differential rates of punishment for subjective offenses described earlier support this notion, as well as studies on the effects of placing black students with black teachers.

A study by Lindsay and Hart (2017) using 2007-2013 administrative data from North Carolina found that exposure to a greater proportion of black teachers had a statistically significant impact on the likelihood of a black student receiving exclusionary discipline. The authors also looked at the likelihood of a black student being referred for discipline, and again the likelihood of referral decreased as exposure to black teachers increased, especially for offenses requiring "subjective evaluation." However, the authors note that the mechanism linking same-race teacher-student matching and disciplinary outcomes is not yet clear.

An eye-tracking study by Gilliam et al. (2016) on the behavioral expectations of preschool teachers provides further evidence of inappropriate identification of misbehavior by educators. In the first part of the study, teachers and administrators were asked to watch clips of children completing traditional classroom activities and look for behavior that could become problematic in the future. The four subjects of the videos represented four racial and sex categories: black male, black female, white male, and white female. Using eye-tracking technology to calculate time spent focusing on each child, the researchers found that participants spent significantly more time observing black students, and especially on watching the black boy. This is despite the fact that no child was actually misbehaving, suggesting that teachers expect misbehavior from black children and therefore spend a disproportionate amount of time scrutinizing their behavior, potentially leading to both appropriate and inappropriate identification of misbehavior. Cumulatively, one might expect this to contribute to higher rates of discipline for black students.

EFFICACY OF EXCLUSIONARY DISCIPLINE PRACTICES

Exclusionary discipline practices are among the most common forms of discipline in the United States education, with 3.45 million students suspended and 130,000 students expelled in school year 2011-2012 alone (US Department of Education, 2016). Yet despite being a common practice, exclusionary discipline has been repeatedly shown to yield poor results in dissuading future misbehavior while having negative effects on student social and academic life.

While there is little to no evidence available to support the notion that exclusionary discipline practices such as suspension are effective in decreasing future student misbehavior, there is a plethora of literature to support the conclusion that exclusionary discipline is positively correlated with future disciplinary problems. A study by Raffaele Mendez (2003) using longitudinal data tracking 8,268 students from kindergarten through twelfth grade found that rather than discouraging future misbehavior, out-of-school suspensions in fourth and fifth grade were strong predictors of out-of-school suspensions in sixth grade.

Years of research have also repeatedly correlated high rates of school suspension with lower academic achievement, including standardized test scores on literacy and numeracy (Rausch & Skiba, 2004), test scores in subjects including science,

math, and history (Davis & Jordan, 1994), and student dropout rates (Christle, Jolivette, & Nelson, 2007).

SOCIAL COSTS OF THE RACIAL DISCIPLINE GAP

The negative academic outcomes associated with the use of exclusionary discipline are further associated with a variety of negative life outcomes that may incur heavy social costs. Of particular concern for many educators and researchers is the matter of student dropout. In keeping with much of the literature, a study of 296 Virginia public high schools by Lee et al. (2011) found that "the degree to which the school made us of suspensions as a disciplinary consequence was predictive of dropout rates." These school-level results are consistent with student-level results from a meta-analysis of 34 studies by Noltemeyer, Ward & McLoughlin (2015), who found "a significant inverse relationship between suspensions and [academic] achievement, along with a significant positive relationship between suspensions and dropout".

High school dropouts are more likely to be incarcerated, have poorer health outcomes than graduates, earn lower salaries, have a higher unemployment rate, and are more likely to require welfare (Rumberger & Losen 2016). According to a study by Rumberget & Losen (2016), a single high school dropout is responsible for $163,000 in lost tax revenue and $364,000 in other social costs.

The existence of the racial discipline gap means that all members of society pay for the negative outcomes associated with exclusionary discipline, but the suffering and lack of opportunity associated with them are concentrated in black communities. Additionally, given the lack of evidence to suggest that the racial discipline gap is driven by differential student behavior and the extensive literature suggesting that it is instead a product of biased practice, the disproportionate discipline of black students may needlessly result in tremendous social costs and personal suffering.

EFFORTS TO CLOSE THE RACIAL DISCIPLINE GAP

Given these negative consequences of exclusionary discipline practices, it is particularly concerning that one demographic of students is subject to a higher frequency and severity of suspension. Several studies have sought solutions to close the racial discipline gap, both through holistic methods intended to decrease overall student disciplinary action and through methods targeted at bringing rates of black student disciplinary action in line with those of white students.

School-Wide Positive Behavioral Support (SWPBS)

One heavily studied method for modifying student behavior is through the implementation of school-wide behavioral support. SWPBS is a prevention-based approach to school discipline that "emphasizes an integration of measurable outcomes, data-based decision-making, evidence-based practices, and overt support

systems for implementers" (Sugai & Horner, 2006). As outlined by Vincent et al. (2011), the program is more specifically is built around three principles:

> 1) A common and positive school culture can be derived from clearly defined behavioral expectations, consistent acknowledgment of appropriate behaviors, and consistently implemented consequences for inappropriate behaviors
> 2) Proactive teaching of what constitutes appropriate and inappropriate behavior in various school settings creates a level playing field where all students can be held to the same standards, and
> 3) Continuous collection of discipline data allows efficient and effective allocation of resources based on students' responses to the level of behavioral support they receive

Vincent et al. (2010) studied 72 US elementary schools that had implemented at least 80% of SWPBS expectations and 81 that had not for a three-year period. While the authors found that a racial discipline gap in office discipline referrals between black and white students existed in both groups, the magnitude of the gap was statistically significantly smaller in schools that implemented SWPBS. However, the authors caution that data limitations related to inconsistent tracking of race across schools and across the implementation and non-implementation groups may have impacted the results.

Despite limited evidence of the effectiveness of SWPBS in closing the racial discipline gap, implementation of SWPBS has repeatedly been shown to lead to lower overall office discipline referral and suspension rates. Luiselli et al.'s (2005) study on the impact of implementing SWPBS in an urban elementary school in the US showed decreases in disciplinary problems and increases in test scores that not only continued but also increased in magnitude further in the second year. From the pre-intervention period to the follow-up two years later, suspensions dropped roughly 35%.

My Teaching Partner - Secondary

My Teaching Partner Secondary (MTP-S) is an intensive teacher coaching program with a focus on strengthening teacher emotional supports and instructional supports. This coaching program seeks to decrease discipline referrals and create and engaging classroom environment by fostering positive student-teacher relationships and utilizing problem solving and high-level thinking activities in lesson plans. The theory holds that both teacher behavior and student engagement can positively impact both student behavior and teachers' reactions to student behavior.

Gregory et al. (2016) studied the effectiveness of the program in a three-year randomized controlled trial using 86 secondary school teachers, in which teachers were coached for the first two years and left without coaching in the final year.

Participating in the coaching program led to not only lower rates of referral for student discipline compared to the control group, but also a statistically significant decrease in referrals of black students. There was no statistically significant effect on the referrals of non-black students. These results were maintained even when teachers began the third year of the study with a new class of students and the coaching program was discontinued.

Policy Options

Given the inability to make causal claims as to the root cause of the racial discipline gap in Henrico County and nationwide, the policy options outlined below represent several approaches with well-documented impacts on racial disparities in the use of exclusionary discipline. Beyond their impact on the racial discipline gap, these options were chosen because their implementation fell squarely within the county's realm of control.

For example, an additional policy option that was considered but ultimately not included in this analysis was the option to increase Henrico County's recruitment and hiring of black teachers and staff. While a common approach to decreasing the racial discipline gap and a method of addressing other concerns regarding diversity and inclusions in schools, this option ultimately was not pursued for two reasons. First, the literature is inconclusive as to the impact of increasing the diversity of faculty on discipline. Second, Henrico County has limited control over which teachers take interest in teaching in the county as well as how many teachers will leave the county and create job openings for new teachers each year.

The following policy options therefore represent evidence-based practices that Henrico County can invest in with limited uncertainty.

POLICY OPTION 1: MAINTAIN THE STATUS QUO

Henrico County Public Schools may decide to let present trend continues and take no new action to address the racial discipline gap. This would include continuing the use of school-wide positive behavioral supports in all elementary schools and a select handful of middle and high schools without expanding the program to all middle and high schools in the county. Henrico County has not yet published data detailing the impacts of the elementary school implementation of SWPBS on the racial discipline gap. Maintenance of the status quo would also include continued use of current professional development programs without major changes.

POLICY OPTION 2: EXPANDED USE OF POSITIVE BEHAVIORAL SUPPORTS

While Henrico County Public Schools currently use school-wide positive behavioral supports in all elementary schools, only a handful of middle and high schools have adopted the method. However, across Virginia, about 77% of all short term suspensions are issued at the middle and high school grade levels (Legal Aid Justice Center 2017). For this reason, the district may consider implementing school-wide positive behavioral supports in every school in the county.

Use of school-wide positive behavioral supports is associated with improved student test scores as well as lower suspension rates, with a noted additional decrease in suspensions for black students. School-wide positive behavioral

supports address the discipline gap by preventing disruptive behavior. This involves a three-pronged approach of communicating clear behavioral standards early in the school year, reinforcing good behavior through a student reward system, and collection and analysis of disciplinary data. Data tracking is used to identify frequently disruptive students, times of day when misbehavior tends to occur, locations in schools where disruption frequently occurs, and other key information to aid administrators in addressing and preventing future issues.

District-wide implementation of SWPBS would require the identification of both district- and school-level leadership teams to set behavioral goals and expectations, solicit buy-in from teachers and staff, plan and execute school-wide behavioral expectation demonstrations and assemblies at the beginning of the school year, and analyze disciplinary data once collected. Teachers would be required to explain and model behavioral expectations for their classrooms, and all faculty members would be expected to participate in incentive systems that reward positive student behavior with prizes. School administrators are additionally responsible for addressing problem areas or at-risk children identified through the newly created disciplinary data tracking system, as well as drafting plans to engage with students who do not respond to the school-wide incentives.

POLICY OPTION 3: MY TEACHING PARTNER SECONDARY

Henrico County Public Schools may also consider implementing rigorous professional development and teacher coaching through My Teaching Partner Secondary. The MTP-S coaching program has shown promising results in lowering overall suspension rates, with decreases in black suspension making up a disproportionate amount of the overall reduction in suspensions. The program has also been associated with improved student academic performance.

MTP-S resources and coaching services are provided through TeachStone, a teacher training and resource provider located in Charlottesville, VA. A purchase of the MTP-S program would include access to a team of teaching consultants who work one-on-one with teachers to provide general coaching, individual teacher observations and feedback, lesson plan consultations, and regular communication and engagement through learning prompts that ask how teachers would react to hypothetical situations. Teachers would be able to access additional resources and learning materials through an online clearinghouse provided upon purchasing the program. After purchasing the service, implementation would require the ongoing participation of teachers but no additional administrative support.

Evaluative Criteria

Each policy option is assessed on the following evaluative criteria:

COST-EFFECTIVENESS

Cost-effectiveness measures the estimated cost of avoiding the suspension of one black student. The cost portion of this measure takes into account the private cost to Henrico County Public Schools of implementing each policy, and does not include the opportunity cost of teacher, administrator, and staff time. It does, however, include the cost of overtime pay for teachers and administrators should the implementation of any policy option require additional time commitments beyond that of a normal work week. The effectiveness of each option was derived from the relevant literature on each policy option's effect on both general and black student suspension rates. Effectiveness measures the percent decrease in the likelihood that a black student experiences a suspension in a given year.

Cost-effectiveness represents the most important consideration for any policy change from the status quo, as implementation of either SWPBS or MTP-S would involve significant investment of time and resources. The individual cost and effectiveness of a given option are also highly likely to influence political feasibility.

POLITICAL FEASIBILITY

For the purposes of this analysis, political feasibility measures the anticipated response of decision-makers and stakeholders to a given policy option, as well as the extent to which the district can expect buy-in from those whose participation will be instrumental in the implementation of the option. Relevant stakeholders include teachers, staff, students' parents, and school administrators.

Due to the nature of student discipline, student opinion will not be included as a part of political feasibility. Another group of stakeholders excluded from the analysis of political feasibility is taxpayers. This decision was made because this report does not include a budgetary analysis assessing what portion of funding for each policy option could be derived from the school district's current budget or if additional funding would be required. Consequently, taxpayer responses cannot be projected for each policy option.

Aspects of political feasibility include:

- General support or lack of resistance to policy changes
- Willingness to fund policy changes
- Willingness to directly participate in implementing policy changes

LOGISTICAL FEASIBILITY

Logistical feasibility measures the logistical difficulty of implementing the policy option, including the speed and complexity with which it will need to be implemented. This includes:

- Number of individuals whose direct involvement will be required to implement the policy change
- Level of inter- and intra-school communication and coordination required to implement the policy change
- Financial and personnel resources required to maintain the policy option after initial implementation

EQUITY

Equity measures the degree to which a policy option specifically addresses the disproportionate discipline of black students, as well as the extent to which it evens the playing field for students, allowing for equal standards of behavior and opportunities for education.

Methodology

DESCRIPTION OF THE DATA

This analysis utilizes a combination of publicly available county-specific data from Henrico County Public Schools including documentation on HCPS' current discipline rates, as well as documentation from previous experimental and non-experimental implementation of school-wide positive behavioral support programs and the My Teaching Partner Secondary teacher coaching program. Results from these studies are used to estimate implementation and administrative costs as well as the projected effectiveness of decreasing black student suspensions using the various policy options.

Additional sources used to justify assumptions in the cost-effectiveness portion of this analysis include 2015 and 2017 reports on Virginia public school disciplinary trends by the Legal Aid Justice Center.

DATA ASSUMPTIONS AND LIMITATIONS

The primary data limitation for this study is the inability to estimate the precise effect that each policy option will have on Henrico County. The studies used to determine the effectiveness of each policy option were conducted in school settings that do not exactly reflect the racial demographics and grade levels in Henrico County, and are therefore unlikely to precisely predict the effect of a given policy on the county's black student suspension rate.

The key data assumption for this analysis is therefore the assumption that the studies used are generalizable to student populations with differing racial backgrounds. An additional data assumption is that of full compliance with policy changes on the part of all relevant stakeholders. Since data on the effectiveness of each option comes from the literature and results from past experimental implementation, it is reasonable to expect that the treatment fidelity in Henrico County may not match that of the schools and districts in which the studies were conducted.

Analysis and Projected Outcomes

POLICY OPTION 1: MAINTAIN THE STATUS QUO

Cost-Effectiveness

Henrico County Public Schools would neither incur new costs nor achieve increased effectiveness by maintaining the status quo. This means that a continuation of current hiring and disciplinary practices would result in no new costs, but would also fail to decrease the black student discipline rate.

Political Feasibility

Maintenance of the status quo is somewhat politically feasible. The disproportionate suspension rates in the county have recently become a priority for county administrators, however it is unclear if teachers and other staff members are aware of the problem and how they feel about it. While one might expect that all relevant stakeholders would be interested in leveling the playing field for students and eliminating disparities in exclusionary discipline, non-administrative staff may have incentives to maintain the status quo in order to avoid new responsibilities.

Logistical Feasibility

While not politically feasible, maintaining the status quo is highly logistically feasible. This policy option would require no increase or redistribution of resources to address the racial discipline gap, and therefore no additional communication or coordination among stakeholders.

Equity

This policy option scores low on equity due to its failure to address the racial gap that persists in Henrico County Public Schools. Despite current hiring practices, teacher training, and limited use of school-wide positive behavioral supports, black students in Henrico County still face unequal odds of receiving exclusionary discipline.

POLICY OPTION 2: EXPANDED USE OF POSITIVE BEHAVIORAL SUPPORTS

Cost-Effectiveness

Cost estimates for expanding school-wide positive behavioral supports were derived from a first-year cost analysis of SWPBS implementation by Blonigen et al. (2008) and adjusted to reflect Henrico County's needs and capabilities. The cost estimates were extrapolated to 21 schools, and certain costs such as those for data input time and facility costs were eliminated with the understanding that Henrico County could utilize existing resources to without incurring new costs.

Given that Blonigen et al.'s (2008) work is several years old, all cost estimates were adjusted for inflation and are given in real 2018 dollars.

The main costs associated with this policy option include:

- Recruiting and training a district leadership team
- Recruiting and training coaches and trainers for school-level teams
- Recruiting and training school-level teams
- Wages for a part-time district administrator to oversee the program
- The cost of prizes and other incentives used to encourage positive behavior from students

Over a 10-year period, the average annual cost to implement SWPBS in all Henrico County public middle and high schools would be **$**444,874.43.

The estimated effectiveness of school-wide positive behavioral supports for this analysis is derived from a study by Luisseli et al. (2005). The average program effect for SWPBS is a 19.35% decrease in black student suspensions. In Henrico County, this is equivalent to avoiding the suspension of 445 black students.

Given these cost and effectiveness estimates, the average annual cost-effectiveness of implementing school-wide positive behavioral supports in all Henrico County public middle and high schools is $22,990.93 per one-percent decrease in the black student suspension rate, which is equivalent to $ 1,297.31 per avoided suspension of a black student.

The above analysis likely overestimates of the cost of expanding SWPBS to all Henrico County middle and high schools, as it does not take into consideration the infrastructure and existing trainers likely established when the program was implemented in the county's elementary schools.

Political Feasibility

The expanded use of school-wide positive behavioral supports to all schools within HCPS is somewhat politically feasible. District leadership has already demonstrated support for this option by implementing SWPBS district-wide in elementary schools

and a small handful of middle and high schools. However, this policy option would require cultural change in each of the 21 middle and high schools in the district, as well as daily participation in the positive reinforcement program on the part of all principals, teachers and staff. Obtaining the level of stakeholder buy-in necessary to properly implement SWPBS in all 72 HCPS schools would be incredibly difficult, especially given the potentially prohibitively high cost of the policy option.

Logistical Feasibility

This option is somewhat logistically feasible. While the county already established some administrative leadership teams and familiarized itself with the data-tracking technology in order to implement the current elementary school SWPBS program, an expansion of SWPBS to all middle and high schools would require high levels of coordination and communication across and within schools. Additional leadership teams would need to be identified, assembled, and trained in each school, and positive reinforcement programs for students would require the participation of all principals, teachers, and staffs. This would require internal communication among school personnel to establish guidelines for the new disciplinary system as well as external communication with parents about the policy changes.

In order to maintain common standards from kindergarten through high school graduation, schools serving all grade levels would need to agree on common behavioral standards. This policy involves top-down change from the district to school administrators to teachers and staff, and the program by its very nature requires both centralized district authority and decentralized decision-making by school teams.

Given this program's basis in setting student expectations and positive reinforcement of good behaviors, maintaining this policy option would require continued time and resource investments in student rewards, school assemblies, data tracking, and general staff involvement. The continued effort required to maintain the program is also reflected in its stable cost over time.

Equity

This policy option scores high on equity. Use of SWPBS has been shown experimentally to decrease suspension rates among all students, with a noted additional decrease in suspension rates for black students. However, the intervention itself is not designed or explicitly intended to decrease black student suspension rates and is therefore only somewhat equitable.

Still, the prevention-based method aims to even the playing field for students by focusing on clear standards of behavior, consistent use of clearly defined disciplinary measures, and the intentional direction of resources towards students in particular need of support through data-tracking.

POLICY OPTION 3: TEACHER COACHING USING MY TEACHING PARTNER SECONDARY

Cost-Effectiveness

Cost estimates for implementing MTP-S teacher coaching in all middle and high schools were derived in part from a cost analysis of previous implementation by Hafen et al. (2010) and adjusted to reflect Henrico County's needs.

The main costs associated with this policy option are:

- The initial purchase of the My Teaching Partner Secondary program from Teachstone, which is a function of the number of coaches required to work with all middle and high school teachers in the county
- The one-time cost of obtaining classroom video technology for remote teacher observations by coaches
- Overtime pay for teacher time spent on coaching sessions outside of the normal work week
- The cost to train newly hired teachers as they enter the school system each year

Over a 10-year period, the average annual cost to implement MTP-S in all Henrico County public middle and high schools would be $131,745.

This analysis averages the impact of MTP-S on black student discipline rates found in three studies (Gregory et al. 2014; Gregory et al. 2015; Gregory et al. 2016) to determine the effectiveness of the program. Using this method of estimation, the average effect of the program is a 53.14% decrease in the likelihood that a given black student will receive a referral for suspension. In Henrico County, this would be equivalent to avoiding the suspension of about 944.5 black students each year.

Given these cost and effectiveness estimates, the average annual cost-effectiveness of implementing the My Teaching Partner Secondary program in all Henrico County public middle and high schools is $2,479.20 per one-percent decrease in the black student suspension rate, which is equivalent to $139.49 per black student suspension avoided.

The above cost estimate could be greatly decreased by replacing existing professional development with MTP-S training, therefore eliminating the need to pay teachers additional overtime pay for time spent working with coaches.

Political Feasibility

The adoption of My Teaching Partner Secondary in all middle and high schools is highly politically feasible. This policy option requires no participation on the part of administrators, principals, and non-teaching staff beyond obtaining classroom video technology and purchasing the coaching program from TeachStone. District and

school leadership would also have strong incentives to adopt this policy option due to its effects not only on decreasing suspension rates, but also its positive effects on test scores in a number of subjects. Parents would also likely be advocates of a program that improves test scores while decreasing disciplinary action against their children and improving overall teacher quality.

Teachers would also benefit from the professional development program and resulting positive academic and disciplinary outcomes for students in exchange for only 20 hours of their time over the course of the year. Since this time could either be sourced by decreasing existing teacher training or by compensating teachers for time spent in the coaching program outside of normal work hours, they would likely support its adoption.

Past implementation of the MTP-S program in an experimental setting also yielded promising survey results regarding the acceptability and feasibility of the program for teachers. 100% of teachers in a randomized control trial by Gregory et al. (2016) reported that the coaching was "worth the time it took."

Logistical Feasibility

For several of the reasons listed above, this policy option is also highly logistically feasible. The coaching program is almost entirely facilitated by outside teaching consultants or coaches, while the role of administrators is limited to purchasing and informing teachers of the new program and that of teachers does not extend too far beyond the current participation in existing professional development programs. The program is highly decentralized and requires little coordination and communication beyond the initial announcement of the program and the regular contact made between coaches and teachers.

This program would also require limited maintenance by comparison to other options. Teachers would only be required to complete training in the first year of the program or, if hired after the program is implemented, during their first year in the school district. Given the previously mentioned positive feedback from teachers regarding the program, a positive reception from the first group of teachers trained can be expected, making maintenance and buy-in from newly recruited teachers easier.

Equity

This policy option is somewhat equitable. As with school-wide positive behavioral supports, My Teaching Partner Secondary is not explicitly designed to address the racial discipline gap or even suspension rates more generally. However, along with its positive effects on student academic outcomes, My Teaching Partner Secondary has been documented in the literature to not only decrease overall suspension rates, but also to have particularly pronounced effects on black student suspension rates.

Despite this, the policy change relies heavily upon individual teachers to properly implement. Potential lack of uniformity in practice could lead to inconsistent application of MATP-S methods, therefore failing to truly even the playing field for students. Additionally, the MTP-S program never directly addresses disciplinary practices and does not have the same emphasis on clear demonstration of behavioral standards that SWPBS presents.

Outcomes Matrix

Figure 1: Summary Outcomes Matrix				
	Cost-Effectiveness	**Political Feasibility**	**Logistical Feasibility**	**Equity**
Maintain the Status Quo	N/A	Medium	High	Low
Expanded Use of Positive Behavioral Supports	$1,297.31 per black student suspension avoided	Medium	Medium	High
My Teaching Partner Secondary	$139.49 per black student suspension avoided	High	High	Medium

Policy Recommendation

Henrico County Public Schools should implement the My Teaching Partner Secondary teacher coaching program in all middle and high schools in the district.

Of the policy options analyzed in this report, MTP-S has the best-documented impact on black student discipline rates and meets the county's expressed need to take action to close the racial discipline gap. A series of experiments conducted by Gregory et al. (2014), Gregory et al. (2015), and Gregory et al. (2016) found that schools where the program were implemented had a black student suspension rate an average of 53.14% lower than in schools where teachers did not receive coaching. Given their definitions, this means that a black student in an MTP-S school has a 53.14% lower chance of experiencing a suspension in a given year.

Not only is there more robust documentation to demonstrate the effectiveness of MTP-S, but also the impact of the program is repeatedly estimated to be greater than that of school-wide positive behavioral supports. This is despite the fact that the average annual cost of implementing SWPBS is more than three times more expensive than that of MTP-S. Ultimately, MTP-S is both less costly and more effective at reducing black student suspensions than the expansion of school-wide positive behavioral supports.

In addition to its superior cost-effectiveness, bringing My Teaching Partner Secondary to Henrico County Public Schools is both more politically feasible and more logistically feasible than expanding the use of SWPBS to middle and high schools.

The high overall feasibility of MTP-S is driven by the limited number of individuals whose cooperation and direct involvement is necessary to implement the coaching program. MTP-S limits the need for coordination and communication to one-on-one coach-teacher relationships, and only requires strong buy-in for day-to-day implementation from teachers. Given survey data from past implementations of MTP-S, teachers can be expected to be strong advocates for the program, and county officials and school administrators need only be willing to fund the venture. This is a stark contrast to expanding SWPBS, which would require buy-in from and inter- and intra-school communication across various stakeholder groups, including teachers, school administrators, county administrators, and non-teaching staff.

Finally, while My Teaching Partner Secondary scored lower on equity than expanding school-wide positive behavioral supports, this is primarily driven by the coaching program's lack of focus on discipline, as well as concerns about the possibility of inconsistent application of the lessons from coaching. While valid concerns, these do not diminish the program's demonstrated ability to positively impact student suspension rates, particularly for black students.

Implementation Strategies

While the previous analysis outlined the reasons that My Teaching Partner Secondary is the best policy option for Henrico County and highlighted the expected ease of implementation, district administrators should take the following strategies into consideration when implementing the program.

EFFECTIVE COMMUNICATION OF POLICY CHANGES TO TEACHERS

As mentioned previously, teachers involved in the MTP-S coaching program have reported high levels of approval for the program and the belief that their time was well spent when working with the coaches. In order to replicate these levels of satisfaction in Henrico County, administrators should prioritize communicating the need for and benefits of the policy change to the middle and high school teachers that it will affect.

First, it is critical that teachers are not only aware of the racial discipline gap and its associated negative consequences, but also that they do not feel blamed for its existence. District and school administrators should highlight this as a state and national problem and emphasize that Henrico County teachers have the opportunity to be at the forefront of solving it.

Second, administrators should provide teachers with key facts about the MTP-S program, including the evidence supporting it and the many benefits it is associated with, including decreased student misbehavior, increased student engagement, and greater levels of academic success for students.

Finally, MTP-S' personalized coaching model is a unique form of professional development that is rarely offered to teachers, and the county should take care to frame this as an opportunity for teachers to keep their skills sharp and be as effective as possible in the classroom. A 2016 survey of public K-12 teachers by the Center on Education Policy found that 68% of teachers report joining the profession to make a difference in students' lives. Once they have begun teaching, 82% of teachers report making a difference in students lives as one of the most rewarding aspects of their job, and 69% cite students' academic success as among the most rewarding aspects of their career. MTP-S' focus on effective and engaging teaching, as well as its positive impacts on student academics and discipline, falls directly in line with these teacher values.

MANAGING TEACHER WORKLOADS

While 20 hours of coaching time per year may seem perfectly manageable on paper, many teachers already feel overworked and underpaid (American Federation of Teachers 2017), which could limit teacher buy-in and adherence to the coaching.

Even if the coaching program's intentions and benefits are properly communicated to teachers, some may feel that they simply do not have the time to participate. For this reason, Henrico County should consider either compensating teachers for time spent on coaching activities or using existing professional development time for teachers to complete coaching activities.

The cost estimates in this analysis assumed that no existing professional development time would be used for MTP-S coaching, and therefore include the cost of paying all teachers for 20 hours of overtime per year. However, the county may save on costs and avoid adding additional work for teachers by allowing teachers to use existing professional development time to complete coaching requirements.

CONTINUOUS DATA COLLECTION AND CONTINUED TRAINING

While the MTP-S program has shown promising results in previous studies, it is difficult to precisely predict the impact that it will have on Henrico County. Additionally, studies of the program have generally collected data for three or fewer years. For these reasons, Henrico County should use existing disciplinary data tracking systems to closely monitor the impacts of the program, both to make continued investment decisions and to publish the positive impacts of the program for all stakeholders to see, encouraging continued buy-in.

In a similar vein, this analysis assumed consistent impact of the program over time, but studies have not tracked disciplinary outcomes beyond three years of program implementation. It is possible that teachers who have undergone MTP-S coaching may benefit from continued training or periodic reminders of teaching strategies and principles covered in their initial coaching. Costs for potential continued training were not included in this analysis, but could be incorporated into regular professional development time in order to incur minimal costs.

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Cost-Effectiveness Technical Appendix

TIME HORIZON AND DISCOUNT RATE

The following cost-effectiveness analysis spans 10 years and uses a 7 percent discount rate.

COST AND EFFECTIVENESS MEASUREMENTS

For the purposes of this analysis, only accounting costs borne by Henrico County Public Schools are considered. Effectiveness is measured as the number of black student suspensions avoided as a result of a given policy change. This is a calculation based off of the percent decrease in the likelihood that a given black child receives a suspension in a year, translated into a specific number of students using Henrico County student demographic data.

GENERAL ASSUMPTIONS

The assumptions used for this cost-effectiveness analysis, as well as the justification for their use, are as follows:

Assumption	Choice	Justification
Discount Rate	7%	OMB best practice from OMB Circular A-94
Number of Middle and High Schools	21	Henrico County Public Schools 2017 data
Number of Middle and High School Teachers	1,207	Henrico County Public Schools 2017 data[1]
Number of Black Middle and High School Students Suspended	1,777.37	Calculated using data from the Legal Aid Justice Center (2017) [2]

[1] Estimate calculated from reported numbers of middle and high school students as well as reported student-teacher ratios for middle and high school

[2] There are 18,471 black students in Henrico County, 12.45% of whom will be suspended in a given year. Given that 76.98% of Virginia students suspended are in middle or high school, then approximately 1,777.37 black students are suspended in Henrico County middle and high schools each year.

[3] There are 18,471 black students in Henrico County, 12.45% of whom will be suspended in a given year. Given that 76.98% of Virginia students suspended are in middle or high school, then approximately 1,777.37 black students are suspended in Henrico County middle and high schools each year.

OPTION 2: EXPAND SCHOOL-WIDE POSITIVE BEHAVIORAL SUPPORTS

As mentioned previously, much of the cost analysis for SWPBS is taken from estimates by Blonigen et al. (2008) and adjusted for Henrico County. Facility costs were largely removed from the analysis due to HCPS' ability to host training sessions in existing spaces such as gyms and auditoriums. The costs estimated by Blonigen et al. (2008) were also extrapolated to the 21 middle and high schools in Henrico County.

Additional modifications were made to reflect Henrico County's familiarity with the SWPBS model given the current use of the program in elementary schools, such as the exclusion of costs related to contracting an external program evaluator and costs associated with marketing and visibility efforts. Given that Blonigen et al.'s (2008) work is several years old, all cost estimates are adjusted for inflation and given in real 2018 dollars.

The cost category of "Daily Cost of Staff Time" represents compensation for time spent by staff outside of the regular school week, and was derived directly from Blonigen et al.'s (2008) analysis and adjusted for inflation. However, this cost category was not replaced with precise salary estimates from Henrico County due to difficulty projecting exactly what composition of staff members (e.g. teachers, district administrators) would be recruited as participants on the various teams.

The reader should note that costs for this policy option are consistent each year of the program, as it is uncertain how many staff and administrators will remain involved each year and what degree of school-level retraining will be required to maintain the program. Thus, this analysis assumes full retraining of all participants for each year that the policy option is maintained.

The option-specific assumptions made to estimate the cost of expanding school-wide positive behavioral supports were all derived from Blonigen et al.'s original analysis and adjusted for inflation. The following effectiveness assumption was also made:

Assumption	**Choice**	**Justification**
Effectiveness of SWPBS	19.35%	Results from Luisseli et al. (2005)

The **cost of assembling and maintaining a district-level leadership team** to oversee the district-wide implementation of SWPBS is calculated as follows:

District Leadership Team Costs
= (Number of Training Days x Number of Staff Trained
x Daily Cost of Staff Time)

+ Salary for Part-Time Administrator
= (4 x 12 x $354.68) + $63,842.00
= $80,866.64

The **cost of recruiting, assembling, and training a team of coaches and trainers** to be deployed to schools to assist school-level implementation teams is calculated as follows:

Coach and Trainer Costs
= (Number of Orientation Days x Number of Staff Trained as Coaches and Trainers x Daily Cost of Staff Time)
+ (Number of Training Days x Number of Staff Trained as Coaches x Daily Cost of Staff Time)
+ (Number of Training Days x Number of Staff Trained as Trainers x Daily Cost of Staff Time)
= (1 x 15 x $354.68) + (2.5 x 10 x $354.68) + (2 x 5 x $354.68)
= $17,734

The **cost of training one staff member at each school to use the School Wide Information System (SWIS)**, a database used by schools to track disciplinary data, is calculated as follows:

SWIS Training Costs
= (Number of Training Days x Number of Staff Trained in SWIS Data Input x Daily Cost of Staff Time)
+ (Cost of Travel and Lodging x Number of Staff Trained in SWIS)
+ (Cost of Hiring a SWIS Trainer x Trainers Needed)
= (3 x 21 x $354.68) + ($591.14 x 21) + ($295.57 x 4)
= $35,941.06

The **cost of recruiting and training school-level positive behavioral support teams** using an external trainer is calculated as follows:

School-Level Implementation Team Training Costs
= Cost of Recruiting Conference
+ (Number of Training Days x Number of Staff Trained for School-Level Implementation x Number of Schools x Daily Cost of Staff Time)
+ Cost of Hiring an External Trainer
= $4,137.95 + (6 x 5 x 21 x $354.68) + $11,349.81
= $238,936.16

The **cost of regular school implementation of SWPBS** includes biweekly planning meetings as well as the purchase of student prizes to reward positive behavior and the cost to license the SWIS system. For the purposes of this analysis, data input time was not included in the cost of regular implementation due to the assumption that the district would fully transition to the SWIS system as a replacement for

current student discipline databases. The cost of implementation is calculated as follows:

Regular Implementation

= (Number of Implementation Team Members x Number of Schools x Number of Planning Days x Daily Cost of Staff Time)
+ (Cost of Prizes for Positive Student Behavior x Number of Schools)
+ (Licensing Cost of SWIS System x Number of Schools
= (5 x 3.33 x 21 x $354.68) + ($1,773.41 x 21) + ($295.57 x 21)
= $167,462.44

The **total 10-year discounted cost** of expanding school-wide positive behavioral supports to all Henrico County middle and high school classrooms is $4,448,744.31, or an average cost of $444,874.43 per year.

The effectiveness of expanding SWPBS is calculated as follows:

= Number of Black Students Suspended x Effectiveness
=1,777.37 x 0.1935
= 342.92 black student suspensions avoided per year

The average annual **cost-effectiveness** of this option is therefore:

Cost-Effectiveness

= Annual Cost / Suspensions Avoided
= $ 444,874.43 / 342.92
= $1,297.31 per black student suspension avoided per year

OPTION 3: MY TEACHING PARTNER SECONDARY

The following option-specific assumptions were made to estimate the cost-effectiveness of the My Teaching Partner Secondary teacher coaching program.

Assumption	Choice	Justification
Average Annual Teacher Turnover	66 teachers per year	Based on 5.5% teacher turnover rate reported by Henrico County Public Schools[3]
Teacher Wage Rate for Overtime Pay	$39.00 per hour	Henrico County job postings[4]
Cost of MTP-S Coaching Services	$3,500 per teacher per year, excluding cost of video equipment	Cost estimate from previous implementation by Hafen et al. (2010)
Cost of Video Equipment	$200	Author's estimate
Hours of Coaching	20 per year	Estimate from previous implementation by Hafen et al. (2010)
Effectiveness of MTP-S	53.14%	Average of results from Gregory et al. (2014), Gregory et al. (2015), and Gregory et al. (2016).

The **cost to purchase MTP-S coaching service and technology** is calculated as follows:

First Year Coaching and Technology Costs

= (Number of Teachers x Cost of Coaching Services)
+ (Number of Teachers + Cost of Video Equipment)
= (1,207 x $3,500) + (1,207 x $200)
= $4,465,900

Subsequent Year Coaching Costs

= Number of Teachers x Cost of Coaching Services
= 66 x $3,500
=$231,000

[3] HCPS officials reported a 5.5% teacher turnover rate for school year 2013-14 to the Richmond Times-Dispatch. See references section for details.
[4] Cost estimate from Teacher.org online job postings, derived from 2013 Bureau of labor and statistics estimates. Annual salary was divided by 2080 hours to estimate an hourly wage and multiplied by 1.5 to obtain time-and-a-half pay.

The **cost of teacher overtime pay** for time spent on coaching activities is calculated as follows:

First Year Cost of Teacher Overtime Pay
= Number of Teachers x Overtime Wage Rate x Hours of Coaching
= 1,207 x $39.00 x 20
= $941,460

Subsequent Year Cost of Teacher Overtime Pay
= Number of Teachers x Overtime Wage Rate x Hours of Coaching
= 66 x $39.00 x 20
= $51,480

The **total 10-year discounted cost** of implementing the MTP-S program in all Henrico County middle and high school classrooms is $1,317,448.99, or an average cost of $131,745 per year.

The effectiveness of the MTP-S program is calculated as follows:
= Number of Black Students Suspended x Effectiveness
=1,777.37 x 0.5314
= 944.5 black student suspensions avoided per year

The average annual **cost-effectiveness** of this option is therefore:

Cost-Effectiveness
= Annual Cost / Suspensions Avoided
= $131,745 / 944.5
= $139.49 per black student suspension avoided per year