

STRATEGY PAPER OCTOBER 2016

# Lessons for Broadening School Accountability under the Every Student Succeeds Act

Diane Whitmore Schanzenbach, Lauren Bauer, and Megan Mumford



#### **MISSION STATEMENT**

The Hamilton Project seeks to advance America's promise of opportunity, prosperity, and growth.

We believe that today's increasingly competitive global economy demands public policy ideas commensurate with the challenges of the 21st Century. The Project's economic strategy reflects a judgment that long-term prosperity is best achieved by fostering economic growth and broad participation in that growth, by enhancing individual economic security, and by embracing a role for effective government in making needed public investments.

Our strategy calls for combining public investment, a secure social safety net, and fiscal discipline. In that framework, the Project puts forward innovative proposals from leading economic thinkers — based on credible evidence and experience, not ideology or doctrine — to introduce new and effective policy options into the national debate.

The Project is named after Alexander Hamilton, the nation's first Treasury Secretary, who laid the foundation for the modern American economy. Hamilton stood for sound fiscal policy, believed that broad-based opportunity for advancement would drive American economic growth, and recognized that "prudent aids and encouragements on the part of government" are necessary to enhance and guide market forces. The guiding principles of the Project remain consistent with these views.





# Lessons for Broadening School Accountability under the Every Student Succeeds Act

Diane Whitmore Schanzenbach, Lauren Bauer, and Megan Mumford

OCTOBER 2016

**BROOKINGS** 

#### **Abstract**

A quality education that promotes learning among all students is a prerequisite for an economy that increases opportunity, prosperity, and growth. School accountability policies, in which school performance is evaluated based on identified metrics, have developed over the past few decades as a strategy central to assessing and achieving progress toward this goal. The recent federal education law, the Every Student Succeeds Act (ESSA), requires states to add at least one measure of "school quality or student success" to its statewide accountability system. When students are absent from school, regardless of reason, they are not learning what is being taught—resulting in lower performance on coursework, course exams, and standardized tests and lower rates of high school graduation. Based on lessons learned from the No Child Left Behind Act and analyses based on the statutory and draft regulatory requirements under ESSA, we propose that states adopt chronic absenteeism as their measure of school quality or student success.

## Table of Contents

ABSTRACT	2
CHAPTER 1: INTRODUCTION	5
CHAPTER 2: LESSONS LEARNED FROM NO CHILD LEFT BEHIND	7
CHAPTER 3: CHRONIC ABSENTEEISM AS THE FIFTH INDICATOR	10
CHAPTER 4: QUESTIONS AND CONCERNS	15
CHAPTER 5: CONCLUSION	17
ACKNOWLEDGMENTS	17
ENDNOTES	17
APPENDIX	18
REFERENCES	22
TECHNICAL APPENDIX	25
HAMILTON PROJECT PAPERS ON EDUCATION	27

## **Chapter 1: Introduction**

ffering students a quality education is a prerequisite for an economy that increases opportunity, prosperity, and growth for all. Education policies that promote learning among all students, and the efficient use of resources, are key inputs toward that end. The shift toward accountability policies for schools over the past two decades—first introduced in some states, and made national under the No Child Left Behind Act (NCLB), signed into law in 2002—has been an important part of these efforts. Under NCLB, test scores and graduation rates improved, especially for children who had been low-achieving.

The new federal education law, the Every Student Succeeds Act (ESSA), makes changes aimed at improving upon NCLB including giving more freedom to states to tailor their education policies. Under ESSA, states will be required to design state-wide accountability systems for implementation in the 2017-18 schoolyear. ESSA requires state accountability systems to annually measure five indicators that assess progress toward the state's long-term educational goals, with a particular focus on certain student subgroups: those who are economically disadvantaged, minorities, children with disabilities, and English language learners. The first three indicators-academic achievement measured in an annual assessment, an additional academic measure such as student growth and graduation rates for secondary schools, and an additional academic indicator for presecondary schools are related to academics, and are holdovers from NCLB. The fourth indicator is a new requirement for the state-wide system, holding them accountable for improvement in the English language proficiency of English language learners.

ESSA also requires states to add at least one measure of "school quality or student success" to its statewide accountability system. According to the law and to the rules proposed by the Department of Education earlier this year to guide its implementation, the "fifth indicator" must exhibit particular features to qualify. The fifth indicator may include measures of student or educator engagement, student access to and completion of advanced coursework or postsecondary readiness, school climate and safety, or any other indicator under a broad banner of school quality and student success. An indicator that captures the values of "school quality or student success" must be evidence-based, be systematically measurable and meaningfully differentiate between schools,

and relate to improvements in student achievement and high school graduation. The requirement that there be meaningful differentiation between schools means that an indicator must allow states to identify which schools should be targeted for support or intervention—i.e. the lowest performing schools.

NCLB has been studied extensively, and much has been learned about its strengths and its weaknesses. Based on this research, we have taken away the following lessons from the effects of high-stakes accountability under NCLB and offer a framework for states to use to decide how best to choose among candidates for the new accountability measure required under ESSA.

- 1. What gets measured gets done. Accountability regimes direct efforts by schools toward improving on measures to which stakes are attached. To broaden the scope of school improvement tasks, one approach would be to expand the domains that are measured—as long as the new domains can be measured with consistency and rigor.
- 2. The goal has to be within reach. Accountability goals are most effective at changing behavior by schools and students when they can improve their ratings on the measure after making reasonable changes in their policies and practices. On the other hand, goals that are out of reach may not induce desired behavior changes.
- 3. Beware: goalposts can be moved. Indicators that can be changed over time—by moving the passing threshold, altering how the outcomes are measured, or introducing or replacing measures—obscure true gains and losses.
- 4. When a measure becomes a target, it ceases to be a good measure. When stakes are attached to a measure, schools can employ strategies to raise their performance in ways that do not necessarily align to the broader goal. Teaching narrowly to the test is one example of this phenomenon. The best accountability measures are minimally susceptible to gaming, and actions that enhance performance according to the measure also contribute to gains in other desirable outcomes.

These lessons, along with empirical work we present below, lead to our recommendation that states adopt chronic absenteeism as their "fifth indicator." The problem of chronic absenteeism is widespread: more than 6 million students

were chronically absent in the 2013–14 school year (U.S. Department of Education 2014).

While we do not know with certainty how any of the potential indicators of student success and school climate would perform as the fifth indicator for school-wide accountability, nonetheless schools must adopt a new measure on a short timeframe. In considering a range of options—from surveys of school climate to retention rates—we find that chronic absenteeism performs near the top across a variety of criteria. In particular, while some proposed measures are highly susceptible to manipulation for example, self-reported measures such as school climate and noncognitive skills, and subjective ones such as grade point average—rates of chronic absence are less vulnerable to this threat. Furthermore, actions that schools take to reduce chronic absenteeism are likely to enhance student learning, as opposed to some other proposed measures such as retention rates or the completion of advanced coursework which accountability pressure may end up harming students. Nonetheless in some cases it is still possible for schools to manipulate absence rates, and data systems should be put into place to curtail such behavior.

An underlying assumption of every policy in education is that students attend school. Students do of course miss school, and for a variety of reasons. These reasons range from illness, family vacations, and residential instability, to skipping school due to conditions in the school itself like bullying or test-avoidance, to those who fail to attend school because they do not see its value (Balfanz and Byrnes, 2012). Regardless of reason, when students are absent from school, they are not learning what is being taught, resulting in lower performance on coursework, course exams, and standardized tests. Poor performance in school, especially course failures, in turn predicts high school dropout—a status associated with a lifetime of poor economic outcomes. High absence rates may also hurt classmates with high attendance, to the extent that teachers use class time to remediate or repeat lessons (Goodman, 2014).

Chronic absenteeism is defined as when a student misses more days of school than a particular threshold—typically measured as 15 total days or 10 percent of the school year—and is a measure of school attendance that does not depend on the reason for the absence. That is, a student can be chronically absent if they miss the requisite number of school days for both unexcused and excused absences. This includes all days a student spends out-of-school for unexcused absence (truancy), exclusionary disciplinary action (out-of-school suspension),

sick days, family vacations, or being kept at home to opt-out of standardized exams. The calculation of chronic absenteeism is dependent on two factors: the definition of a daily absence and the number of days or share of days that a student must be absent in order to be deemed chronically absent. Once daily absence and chronic absenteeism are defined by the state, chronic absenteeism is a low-cost administrative measure that can be easily calculated from data that are already required to be collected by schools.

In this strategy paper, we summarize lessons learned from NCLB and how they relate to accountability under ESSA, particularly states' choice for the required new fifth indicator of "student success or school quality." We then argue that chronic absenteeism is a good candidate for adoption as the fifth indicator, as it is a valuable indicator of "school quality or student success" and performs well with regard to lessons learned under NCLB. Next, we analyze whether chronic absenteeism fulfills the statutory and proposed regulatory requirements for the fifth indicator.

We analyze whether rates of chronic absenteeism provide meaningful differentiation between schools, as required in the statute. We find that across the nation and in every state, rates of chronic absenteeism meaningfully differentiate between schools, meaning that rates of chronic absenteeism are widely distributed across schools and the lowest performing schools are clearly identifiable. In each state there are substantial differences across schools in rates of chronic absenteeism. This is particularly consequential for ESSA implementation, as the meaningful differentiation requirement is by state and among schools by grade span within a state. On the Hamilton Project website there is an interactive that allows one to see the distribution of chronic absenteeism for each state individually: overall and among elementary, middle, and high schools.

Where data are available, we analyze whether rates of chronic absenteeism relate to other statewide accountability indicators, such as student achievement and graduation rates, as proposed in the draft regulations. We find that in New York City, schools with high rates of chronic absenteeism have lower proficiency in reading and math. In Oregon, schools with high rates of chronic absenteeism have lower median growth percentiles in reading and math. In New York City and Oregon high schools, schools with higher rates of chronic absenteeism have lower rates of on-time graduation.

## Chapter 2: Lessons Learned from No Child Left Behind

ow a measure performs is important to consider prior to holding schools accountable for its improvement, and experts weigh properties such a measure's validity (whether it measures the concept it intends to measure) and reliability (whether it produces consistent results). Equally important, though, is understanding how a high-quality measure continues to perform when stakes are attached to it. Based on a host of research on NCLB, as well as research on accountability systems more generally, we offer the following four principles as a framework for how states should think about adding a new accountability measure under ESSA.

#### 1. WHAT GETS MEASURED GETS DONE

Schools are asked to perform a multitude of tasks—not just by government but also by parents. In its 48th annual survey of parental opinion conducted by Phi Delta Kappa International and Gallup, Americans in 2016 want schools to teach basics reading, writing, and arithmetic—and factual information, enhance students' critical thinking skills, help them develop good work habits, and prepare them to work well in groups (PDK International 2016). Under NCLB, schools reported, and were held accountable for, student outcomes including math and reading proficiency rates as well as high school graduation rates, for both the general student population and particular sub-groups. Schools employed a variety of strategies, including new curricula or additional instructional time for tested subjects, to improve these outcomes (Center on Education Policy 2007). To a large extent, accountability improved student success. A sizeable body of research has evaluated the impact of NCLB on these outcomes, and found that NCLB led to improvements in skills, especially in math and among low-performing students (see Dee and Jacob [2010] for a review of the literature).

However, these improvements came at a cost to other important aspects of education that were not measured under NCLB. For example, emphasis on social studies and science declined (Dee, Jacob, and Schwartz 2013; West 2007; Jacob 2005), and schools allocated less time to gym class and recess (Murnane and Papay 2010). In addition, performance among students with low baseline scores, who had little chance of meeting the accountability threshold, was stagnant or declined (Neal and Schanzenbach 2007).

The patterns in NCLB effects fall in line with the old managerial maxim: What gets measured gets done. Schools measured math and reading scores, and those scores improved accordingly. One approach to broaden the scope of improvements is to increase the number of domains that are measured, according to the logic that if something is worth having schools do, it is also worth having schools measure (Holmstrom and Milgrom 1991). The fifth indicator under ESSA provides states an opportunity to add additional breadth to what gets measured—and, presumably, to what gets done.

#### 2. THE GOAL HAS TO BE WITHIN REACH

Of course, for an accountability goal to be motivating, it must be attainable through changes in policies and practices. At the same time, the bar should be set high enough so it is aspirational for at least some schools.

When a single statewide accountability goal is set, but schools begin at a variety of starting points, some schools will have to work much harder than others to meet the goal. Some have argued that the federal requirement under NCLB that states set a goal of 100 percent proficiency within 12 years was unrealistic for schools that had the lowest baseline levels of proficiency (Darling-Hammond 2006; Linn 2003). Inclusion of a "safe harbor" provision helped ameliorate this problem, as it gave schools a provisional passing status as long as their proficiency rates increased substantially over the year. Some states responded to the federal requirement to set a 100 percent proficiency goal by setting low thresholds for proficiency that would be easier for a larger number of schools to attain.

In addition, a goal should be in reach of all students. Under NCLB, many states exclusively employed a threshold model meaning that a student was considered proficient only if they scored above a certain passing threshold. For some lowscoring students, the passing threshold was likely out of reach, at least in the short run. Because of the proficiency rule, even if a school took a student's score from the bottom up to a near-passing score, the school would receive no credit for the improvement in score because the student did not clear the passing hurdle. As a result, evidence suggests schools shifted their efforts away from the lowest-performing students, and toward students who were scoring closer to the passing threshold (Neal and Schanzenbach 2007). The introduction of a separate accountability measure based on growth in test scores, e.g. the change in an individual student's test scores from 4th to 5th grade —which gives credit for improvements in scores, regardless of the student's baseline score—is one way to ameliorate this problem.

#### 3. BEWARE: GOALPOSTS CAN BE MOVED

A goal of NCLB was to increase proficiency rates through gains in learning among all students. A nefarious way to improve measured proficiency rates, however, is to water down the standards for proficiency. Under NCLB, some states appeared to lower the threshold for proficiency over time, for example, by introducing a replacement standardized test

that was easier. As reported in Neal (2010), the state of Illinois introduced a new standardized test between 2005 and 2006 and proficiency rates jumped between those years. Between 2002 and 2009, more than four-fifths of the growth in 8th grade proficiency rates in Illinois came from the onetime jump associated with the introduction of a new test. While some of the gain could have been real learning, much of it is likely due to the change that likely made the test easier. Similar examples from other states are plentiful. For example, Texas lowered its standards by decreasing the number of questions that students must correctly answer to pass, and Michigan

decreased the percentage of students that must pass a test for a school to be certified as making adequate progress—from 75 percent to 42 percent for high school English (Plank and Dunbar 2004; Ryan 2004; U.S. Department of Education 2009).

Even when states are not explicitly attempting to water down proficiency standards, goalposts can move in subtler ways. A particular concern is raised when self-reported, subjective surveys are included in an accountability system. For example, imagine an accountability system that includes a measure on which students were asked to report on how hard they work in school. If a school wanted to improve student reports on this measure, teachers and principals could employ a variety of approaches, such as frequently complimenting students for being hard workers (regardless of the verity of the compliment). After hearing this enough, they may be more likely to report being a hard worker, even if their underlying

behavior has not changed. While few schools would employ such drastic techniques, subtler forms of shifting a student's self-perception or reference point could also work to inflate the measure.

Interestingly, this does not necessarily mean that those held accountable will take it easy on themselves. Noncognitive skills are measured through self-reported surveys with questions such as whether the individual gives up easily in response to setbacks, or is eager to learn new things. Responses to these questions depend on what standard or reference they have in mind. Recent work by Martin West, Angela Duckworth and others found that students at high-performing charter schools reported lower levels of conscientiousness, grit, and

Potentially the most important lesson to keep in mind when considering the fifth indicator is that the meaning of measures can change—usually in undesirable ways—when high accountability stakes are tied to them.

self-control than did their counterparts attending regular district schools (West et al. 2016). The researchers posit that the decline is not due to lower levels of these skills among charter school students, but instead because the expectations for these characteristics are set high in their schools—as a result, they compare themselves to an aspirational standard and recognize that they fall short.

## 4. WHEN A MEASURE BECOMES A TARGET, IT CEASES TO BE A GOOD MEASURE

Potentially the most important lesson to keep in mind when considering the fifth indicator is that the meaning of measures can change—usually in undesirable ways—when high accountability stakes are tied to them. For example, standardized tests can be useful measures of a school's quality under normal conditions—not because they perfectly capture all of the aspects of what is important at a school, but because they are correlated with other aspects of education that are

valuable. For example, prior to high-stakes accountability, it was observed that schools that did well on standardized test measures also did well on deeper measures of learning, on development of noncognitive skills, and so on.

Problems may arise when stakes are placed on an outcome; becoming a target makes the outcome lose some of its value as a proxy for other characteristics. For example, if test score growth becomes a school's accountability goal, there are strategies schools can adopt to improve test scores that do not have the same impact on the larger bundle of outcomes. For example, teaching test-taking strategies such as strategic guessing on multiple-choice exams may increase test scores, but does not impart additional subject-matter knowledge. Similarly, narrowly teaching to the standardized math test may increase performance without a commensurate increase in math knowledge that is related in concept but not directly tested on the exam.

Of course, schools can employ even more blatant means to increase performance on high-stakes measures. Some schools at high risk of failing to meet the adequate yearly progress goal under NCLB were found to suspend low-performing students strategically during the test period so that their

scores would not count toward the accountability measure (Cizek 2001, Figlio 2006). The recent scandal in the Atlanta Public School (APS) system is perhaps the most prominent example of cheating on standardized tests. Teachers were financially rewarded or punished based on their class's scores on the standardized test. Under these high-stakes conditions, employees were found to alter, fabricate, or falsely certify test answer sheets.

The phenomenon that when a measure becomes a target, it ceases to be a good measure, is known as Goodhart's law. A far less pithy version of this, Campbell's law, set out by social psychologist Donald Campbell, states: "The more any quantitative social indicator is used for social decision-making, the more subject it will be to corruption pressures and the more apt it will be to distort and corrupt the social processes it is intended to monitor (p. 34)." Because of this phenomenon, it is important to understand how susceptible accountability measures are to these types of distortions. In some cases, the distortions may be small enough that they do not outweigh the good being done by placing accountability stakes on the outcome. On the other hand, if a measure is highly gameable, it may become less meaningful after stakes are attached.

#### Chapter 3: Chronic Absenteeism as the Fifth Indicator

requires that states add at least one measure of "school quality or student success" to its statewide accountability system. As described in Box 3.1, by statute the measure must be based on evidence and provide meaningful differentiation across schools in a state, among other requirements. We argue that it is also important that the measure perform well in regard to the principles outlined in Chapter 2. In this section, we evaluate chronic absenteeism under these criteria, and find that it performs well and is a leading candidate for the fifth indicator.

#### CHRONIC ABSENTEEISM AFFECTS PERFORMANCE, SCHOOLS CAN IMPROVE

Across the United States, studies from Maryland (Connolly and Olson 2012) to Indiana (Spradlin et al. 2012) to Utah (Utah Education Policy Center 2012) and Oregon (Buehler et al. 2012) find that chronic absenteeism is related to lower achievement. For example, in California, three-quarters of students who were chronically absent in kindergarten and first grade did not meet state proficiency standards in math and reading in third grade (Harris 2016). In a nationwide study, half as many eighth graders who missed more than three days of school per month scored at or above the basic achievement level on the National Assessment of Educational Progress exam as students who did not (KewalRamani et al. 2007).

The relationship between absenteeism and worse outcomes persists among students at all ages. As early as kindergarten, school absences lower subsequent achievement levels (Chang and Romero 2008). Missing school lowers achievement in elementary school and middle school (Che et al. 2015; Gottfried 2010). Chronic absenteeism is also a valuable indicator of whether a student is on track to complete high school. Research has found that low attendance in middle school (Balfanz, Herzog, and MacIver 2007) and high school (MacIver 2011) is predictive of the student dropping out before completing high school. School suspensions, which are included in a student's absence rate, are associated with dropping out of high school (Balfanz, Byrnes, and Fox 2015; Noltemeyer, Ward, and McLoughlin 2015).

Research has documented the effects of chronic absenteeism and points to potential interventions to reduce it. A strong research base supports the common-sense notion that attending more days of school causes students to learn more (Goodman 2014, Carlsson et al. 2015). Even among those who are chronically absent, the number of days missed matters, as those who are more chronically absent have lower performance on standardized tests than those who are moderately chronically absent (Gottfried 2014). This suggests that measures schools take to reduce chronic absenteeism and increase attendance will be productive for student learning.

The effects of chronic absenteeism are not irreversible. Students that are chronically absent in kindergarten but then improve their attendance can close the achievement gap in later grades (Connolly and Olson 2012). On the flip side, good attendance among disadvantaged students can help close the achievement gap, starting in early grades (Ready 2010). Teachers, and especially more-experienced teachers, can reduce student absenteeism (Gershenson 2016; Ladd and Sorenson 2016). In addition, preliminary evidence from a recent randomized experiment of a program to reduce student absenteeism suggests that low-cost communication with parents—such as mailing information to parents about their child's absences—was successful in reducing chronic absenteeism (Rogers and Feller 2016; see Kearney and Diliberto 2014 for a review of other absenteeism reduction interventions).

#### HOW WILL CHRONIC ABSENTEEISM PERFORM UNDER ACCOUNTABILITY?

Assessing chronic absenteeism as a potential measure requires predictions about how administrators, educators, parents, and students will respond to increased attention on chronic absenteeism. Because the fifth indicator must be incorporated into every state's accountability plan for the 2017-18 school year, there is limited time for pilot testing; however, existing policies that affect attendance and attendance-recording practices preview how parties are expected to respond to incentives from an attendance-based accountability measure.

Prior experience with school-based accountability measures suggests that essentially any accountability measure can be gamed or corrupted to some extent. Policy makers should consider the extent to which a potential measure is likely to be gamed—and whether the resulting distortion is large enough to offset the gains from introducing the accountability measure in the first place. With these constraints in mind, we argue that

chronic absenteeism is likely to perform well based on lessons learned from NCLB, and that the downside risk of schools gaming the metric is minimal.

When chronic absenteeism is included in the accountability measurement, we would expect that schools will monitor chronic absenteeism more closely and employ measures to reduce it—including working to move students just above the threshold for chronic absenteeism to just below it. To the extent that this results in more children spending more days in school and receiving classroom instruction instead of being absent, we predict that these efforts will increase student achievement, although the exact magnitude is not known. Additionally, since out-of-school suspensions are counted toward chronic absentee rates, some schools may improve their rate by shifting suspensions from out-of-school to in-school, which many educators argue is preferable (Blankenship and Bender 2007).

There are some ways that schools could reduce their chronic absenteeism rate that are less productive, however. States could adopt a low threshold—or lower it over time—for how much of a day must be attended to count towards a full day of attendance. Accurate daily attendance is a priority for schools and for student safety; in the event of an incident, it is incumbent upon schools to know who is in their charge. Nevertheless, in some cases, schools may falsify attendance logs—for example, a recent report found

that four Chicago high schools systematically manipulated attendance records in order to inflate their average daily attendance rates (Schuler 2016). States could put in safeguards to prevent such a problem, increasing the likelihood that schools that falsify attendance rates will be caught. For example, daily attendance could be required to be centrally managed, or monitoring algorithms could be established looking for anomalies such as late data entry, the volume of edited entries, or excess deviation from baseline chronic absenteeism data. States or districts could support random, in-person spot-checking of logs if data were not centrally managed.

Another principle to keep in mind for chronic absenteeism is that, while a zero chronic absenteeism rate is a lofty goal, it does not need to be the only goal. Across the nation, 18 percent of schools have a chronic absence rate above 20 percent; i.e., one in five students in about one in five schools misses at least three weeks. While reducing chronic absenteeism rates to zero is likely not a realistic short-term goal for these schools, the accountability system should reward progress in making steady progress toward reducing their rates. In addition, in some years a school might experience a temporary spike in its absence rates—e.g. due to an unexpected, contagious illness—and should not be penalized for the aberration. Giving schools the option to take a 3-year average of their chronic absenteeism rates would be one way to address this problem.

#### **BOX 3.1**

#### Statutory Requirements for the Fifth Indicator

The statutory language requires that the fifth indicator:

- 1. allow for "meaningful differentiation" (ESSA 2015, 1177-35) in performance on the indicator between schools. This means that an indicator that does not allow states to distinguish between schools or to identify the lowest performing schools would not qualify.
- 2. be "valid, reliable, comparable, and state-wide" (ESSA 2015, 1177-35) across all schools and by grade span. This means that measurement of the indicator cannot be biased in determining differences among schools or subgroups within a state, overall and among elementary, middle, or high schools.

The US Department of Education proposed regulations through the negotiated rulemaking process that further clarified how states should select the fifth indicator (2016). These rules are not yet final, but we do not anticipate any changes that would substantially affect this section. The proposed rules suggest that the fifth indicator:

- 3. must be "supported by research finding that performance or progress on such measure is likely to increase student academic achievement or, for measures used within indicators at the high school level, graduations rates (U.S. Department of Education 2016, 34546)." This means that the indicator must be evidence-based, particularly with evidence that shows an impact on the other accountability indicators.
- 4. must be calculated the same way in all schools or vary by grade span. This means that the indicator must have common definitions and measurement features implemented consistently in school-level data collection.
- 5. "includes a different measure than the State uses for any other indicator (U.S. Department of Education 2016, 34546)." This means that the fifth indicator cannot be exclusively a test score or graduation rate, which are part of the other four indicators.
- 6. can be amended over time. This means that while a state must select a fifth indicator for the 2017–18 school year, it can be changed later.

#### EMPIRICAL CHARACTERISTICS OF CHRONIC ABSENTEEISM

The fifth indicator is required by the statute and proposed regulation to have particular empirical attributes (Box 3.1.) To assess the fitness of chronic absenteeism as a measure, we document that it provides meaningful differentiation across schools using national data. Where data are available, we also find that chronic absenteeism is strongly and positively related to other accountability measures such as student proficiency and high school graduation rates.

#### 1. RATES OF CHRONIC ABSENTEEISM PROVIDE MEANINGFUL DIFFERENTIATION

ESSA requires the fifth indicator to provide meaningful differentiation differentiate among schools by grade span within a state. We find that nationally, and in each state, rates of chronic absenteeism meet this requirement.

The data used in this analysis are from the 2013-14 Civil Rights Data Collection (CRDC; n.d.), a statutorily mandated national survey by the U.S. Department of Education that collected rates of chronic absenteeism—defined in this particular dataset as a student missing 15 days or more during a school year—from every public school in the United States. This analysis is the first to our knowledge to use these data to assess whether chronic absenteeism fits the requirements of the fifth indicator for statewide accountability systems.

Figure 1 displays the distribution of rates of chronic absenteeism for all schools nationwide (Figure 1), and demonstrates that there is substantial meaningful differentiation among schools by rates of chronic absenteeism.<sup>2</sup> Comparable national figures for elementary, middle, and high schools can be found in the appendix. Each bar indicates what share of schools have a given rate of chronic absenteeism, displayed in five-percentage-point bins. For example, the left-most bar shows that about one in four schools has a chronic absenteeism rate of between 0 and 5 percent. We also highlight the share of schools with a 0 percent chronic absenteeism rate.

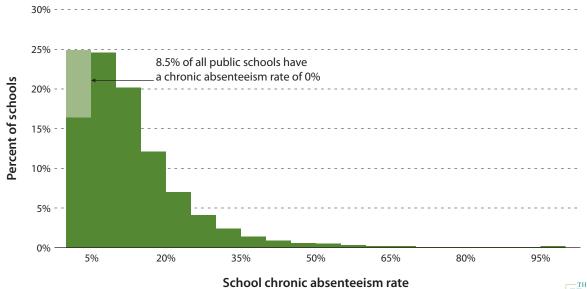
The vast majority of schools have room to improve their performance on this measure. Only 8.5 percent of regular public and charter schools nationwide reported no students who were chronically absent. Put another way, more than 90 percent of schools can improve their rates of chronic absenteeism. About half of schools reported rates of chronic absenteeism above 10 percent.

While the national data are illustrative, ESSA requires that the fifth indicator be able to differentiate meaningfully among schools by grade span within a state. We find that in every state, rates of chronic absenteeism meaningfully differentiate among schools, both overall and within grade spans. See the interactive tool on the Hamilton Project website that allows the user to graph the distribution of chronic absenteeism for each state individually: overall, and among elementary, middle, and high schools.

## 2. CHRONIC ABSENTEEISM IS RELATED TO STUDENT ACHIEVEMENT, STUDENT GROWTH, AND HIGH SCHOOL GRADUATION

According to the proposed rules, the fifth indicator should be evidence-based and related to the other key components of the

National Distribution of Chronic Absenteeism, 2013–14



Source: Civil Rights Data Collection 2013-14.

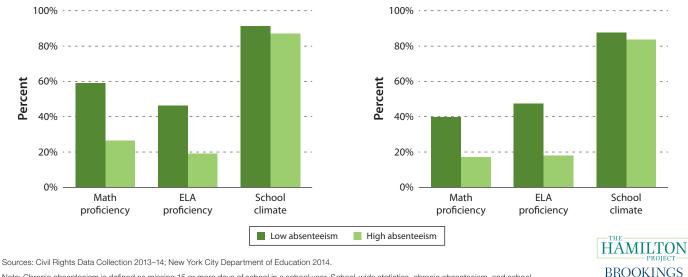
Note: Chronic absenteeism is defined as missing 15 or more days of school in a school year.

accountability system: student achievement and high school completion. Chronic absenteeism fulfills these requirements based on the extant literature. We report additional analyses using state-wide data from Oregon and city-wide data from New York City to analyze the relationship between chronic absenteeism and other accountability measures: student achievement, student growth, and graduation rates. In each of the following figures,

we show the outcomes for schools that report the lowest quartile of chronic absenteeism rates (Low absenteeism) and the highest quartile of chronic absenteeism (High absenteeism).

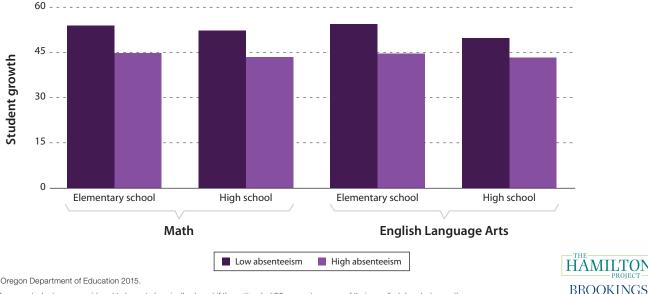
First, we use data from New York City and the CRDC to analyze proficiency levels in math and reading as well as self-reported school climate by high and low rates of chronic absenteeism. In

FIGURE 2. Relationship between Chronic Absenteeism and School Outcomes in New York City, Grade 4 and Grade 8, 2013-14



Note: Chronic absenteeism is defined as missing 15 or more days of school in a school year. School-wide statistics, chronic absenteeism, and school climate are matched to schools that have fourth-grade (left-hand panel) and eighth-grade (right-hand panel) students in New York City. The average chronic absenteeism rate for schools in the lowest absenteeism quartile is approximately 0.5 and 0.6 percent for fourth and eighth grade, respectively and is 8.1 and 9.6 percent for the highest absenteeism quartile for fourth and eighth grade, respectively

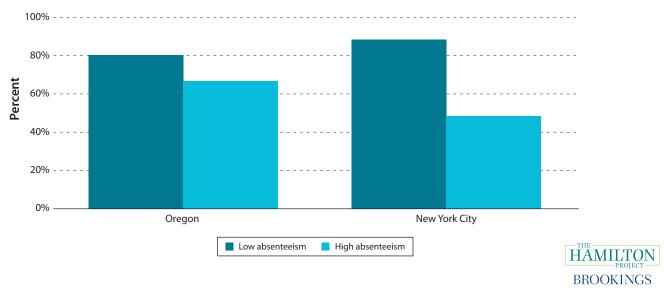
FIGURE 3. Relationship between Chronic Absenteeism and Test Score Growth in Oregon, 2014-15



Sources: Oregon Department of Education 2015

Note: In Oregon, students are considered to be not chronically absent if they attended 90 percent or more of their enrolled days between the beginning of the 2014-15 school year and May 1, 2015; thus, chronic absenteeism is calculated as one minus "not chronically absent." Test score growth is measured as the median student growth percentile of the school. The average level of chronic absenteeism is 8.1 and 12.6 percent for elementary and high schools, respectively, in the lowest quartile, and 26.5 and 43.9 percent, respectively, in the highest quartile

Relationship between Chronic Absenteeism and High School On-Time Graduation in Oregon and New York City



Sources: Civil Rights Data Collection 2013–14; New York City Department of Education 2014, 2015; Oregon Department of Education 2015.

Note: For Oregon, students are considered to be not chronically absent if they attended 90 percent or more of their enrolled days between the beginning of the 2014–15 school year and May 1, 2015; thus, chronic absenteeism is calculated as one minus "not chronically absent" for the

2014–15 school year. For New York City, chronic absenteeism is defined as missing 15 or more days of school in the 2013–14 school year.

this analysis, student achievement is captured by the fraction of students who are proficient in English language arts (ELA) and math in the fourth and eighth grades at each school. Because there has been discussion of self-reported school climate surveys serving as the fifth indicator, it is also included. School climate is the school's average satisfaction rating across subscales for

systems for improvement and school culture on the city's survey

of school quality (New York City Department of Education 2016).

As shown in Figure 2, for both fourth and eighth grades, New York City schools with high rates of chronic absenteeism have substantially lower proficiency rates in math and ELA. The left-hand panel shows that in fourth grade, a school in the highest chronic absenteeism quartile has an average proficiency rate of 26 percent in math and 19 percent in ELA, while a school in the lowest absenteeism quartile has average proficiency rates of 59 and 46 percent respectively.

Regardless of rates of chronic absenteeism, rates of satisfaction with schools are high – over 90 percent of schools in New York City report of a rate of satisfaction over 80 percent. While school climate satisfaction in the highest and lowest quartiles for chronic absenteeism is not dramatically different, schools with the highest rates of chronic absenteeism do score 4 percentage points lower on this measure. A similar pattern can be seen for eighth grade on the right-hand panel of figure 2.

To investigate the relationship between chronic absenteeism and student test score growth, we use data from the state of Oregon in the 2014–15 school year. Because the state has already begun to collect chronic absenteeism data by its own metric, it is defined slightly differently: students are considered to be chronically absent if they missed 10 percent or more days of school. Figure 3 displays the relationship between quartile of chronic absenteeism and median student test-score growth percentile for elementary and high schools. In both math and ELA, and in both grade spans, schools with higher rates of chronic absenteeism have lower median rates of test score growth.

Finally, as shown in Figure 4, we find that chronic absenteeism rates are related to a school's rate of on-time high school graduation rates, measured both in New York City and the state of Oregon. In Oregon, four-fifths of students in high schools with the lowest rates of chronic absenteeism graduated on-time, compared with two-thirds in high-absenteeism schools. In New York City, students in high schools with the lowest quartile of rates of chronic absenteeism in their junior year were almost twice as likely to graduate on-time compared with students in high schools in the highest quartile of rates of chronic absenteeism. These analyses provide evidence to suggest that chronic absenteeism meets the technical specifications defined in statute and proposed regulations for the fifth indicator. Chronic absenteeism meaningfully differentiates between schools and is related to the other indicators required to be in a statewide accountability system.

#### **Chapter 4: Questions and Concerns**

## Has the Department of Education said that chronic absenteeism would qualify as the fifth indicator?

Yes. The proposed rules released by the Department of Education directly state that chronic absenteeism would be an acceptable indicator of student engagement (U.S. Department of Education 2016).

## How can selecting chronic absenteeism help states meet ESSA consolidated state plan deadlines?

The review and adoption process for statewide accountability plan will take place in the coming months and the fifth indicator will be part of every state accountability plan for the 2017–18 school year. Rather than creating their own measure, states should consider adopting an indicator that the Department of Education has already stated would qualify and which meets the guidelines set forth in the statute and draft regulation. Chronic absenteeism meaningfully differentiates between schools in every state, and is distinct from existing student indicators. Furthermore, research suggests its improvement would likely lead to increased student achievement and graduation rates.

## Are data on chronic absenteeism required to be collected and made public?

Yes. The Department of Education Office for Civil Rights has mandated reporting chronic absenteeism, defined in the Civil Rights Data Collection as 15 days of absence during a school year, biennially since the 2013–14 school year. By law, a school's rate of chronic absenteeism, defined by the state, will be made public on its report card (Attendance Works 2015).

## How does chronic absenteeism help my state implement its accountability plan starting in the 2017-18 school year?

It can be challenging to collect data for a new student indicator, especially if states do not already have the infrastructure to do so. One way to reduce this risk is to choose a fifth indictor from administrative data that has already been repeatedly collected. Reporting chronic absenteeism rates is one such option: since the 2013–14 school year, the Department of Education Office for Civil Rights has required states to collect chronic absenteeism data biennially. Many states have also begun to

collect chronic absenteeism data using their own metrics.

#### Is it a problem if my state is focused on reducing chronic absenteeism?

No. Many states have already started working to reduce chronic absenteeism. Last October, before ESSA was signed, the Secretaries of Education, Health and Human Services, and Housing and Urban Development, as well as the Attorney General, sent a letter to states to "call upon States and local education, health, housing, and justice agencies and organizations, in partnership with community stakeholders, to join forces and commit to creating or enhancing coordinated, cross-sector systems for identifying and supporting students who are, or are at risk of becoming, chronically absent, with the goal of reducing chronic absenteeism by at least 10 percent each year" (U.S. Department of Education 2015). Adopting chronic absenteeism as the fifth indicator would build on extant emphasis on the measure in a higher stakes accountability context, rather than introduce a new measure outright. Attaching high stakes to chronic absenteeism would be prudent relative to other prominent options because it is presently a target.

## Would there be additional costs associated with collecting chronic absenteeism data?

Perhaps. Because chronic absenteeism is already required for collection and reporting, there would be few additional costs associated for this type of reporting. If there is not a data system in place that would allow for daily collection and calculation, which would be required to incorporate an early warning system and monitoring, this would require an upfront investment.

## What are the pros and cons of considering a single measure versus a multiple measure for the fifth indicator?

Choosing a single measure for the fifth indicator allows for schools to focus its limited resources on addressing a single problem, such as chronic absenteeism, that is related to school quality and student success, and year-to-year progress will depend only on the school's improvement on this single dimension. This can also be considered a drawback, however, as temporary fluctuations in attendance that are out of a school's

control may cause a school's rate of chronic absenteeism to increase. This is ameliorated somewhat by-as suggested in the rules—not placing too much weight on the fifth indicator in the overall accountability regime. On the other hand, multiple measures reduce the importance of each indicator; the more you add, the less impact each individual indicator has. As a result, it is harder to make large improvements on the combined measure because improvements on any one component of the indicator get averaged together with the other components. In other words, if a school makes large progress toward reducing chronic absenteeism, but has fewer gains on other included indicators, movement in the measure overall will be muted in the averaging across indicators. The opposite holds as well—that is, when several measures are averaged, then the overall rating will not decline much if rates of chronic absenteeism spike in one year due to circumstances beyond the school's control, like an outbreak of the flu.

# Some studies have defined the threshold for chronic absenteeism at missing 15 or more school days, others at missing more than 10 percent of all school days. Is there a preferred definition?

Accountability requires that the fifth indicator be comparable statewide, and thus have a common, statewide definition. Schoolyear length varies within states, so a statewide definition would presumably require the share-of-missedschooling approach. The literature does not suggest a preferred definition, though 10 percent of the school year is commonly collected and reasonable. Moreover, the designation of a daily absence must be defined statewide, because daily absences add up to chronic absenteeism. Implementation, compliance, and monitoring could be eased through the adoption of a straightforward definition of daily absence that is simple to understand, calculate, and enter. What matters here is that states define a daily absence and chronic absenteeism reasonably in year one and refrain from altering the definition of a daily absence in subsequent years. Should schools in the state make strides, flexibility under ESSA allows the state to continue to raise the bar for school improvement on chronic absenteeism.

#### How should out-of-school suspensions fit into the measure of chronic absenteeism?

Any type of absence should be included in a measure of chronic absenteeism, because functionally, missing a day of class is agnostic to reason. Exclusionary disciplinary policies, i.e. out-of-school suspensions, are more in control of the school. Including out-of-school suspensions in the calculation for chronic absenteeism incentivizes schools to reduce out-of-school suspensions, even if it is not warranted. Despite this possibility, a school's rate of chronic absenteeism should be inclusive of out-of-school suspensions because students are out of class; because of this possibility, states should caution against simplistic solutions in response to incentives by monitoring school disciplinary practices and working with schools to improve inclusive discipline practices.

#### Should we adopt a school climate survey for the fifth indicator?

We do not recommend adopting a school climate measure, as these are typically measured fully or partially by self-reported survey. Such measures are susceptible to reference bias, and as a result we believe they do not meet the statutory requirement of being valid, reliable and comparable. Furthermore, in their brief on the fifth indicator, Chiefs for Change noted that survey-based measures of school climate cannot be easily or validly disaggregated for particular subpopulations and that survey responses can be manipulated (Chiefs for Change 2016). Though not valid for high stakes accountability, investing in collecting and using school climate data for the formative assessment and continuous improvement—the purposes for which these surveys were developed—is appropriate.

#### Why chronic absenteeism and not average daily attendance?

In the proposed rules, the Department of Education (2016) has indicated that average daily attendance would not qualify as an indicator under the banner of school quality and student success because it does not meaningfully differentiate between schools. Appendix figure 1 shows average daily absences versus average chronic absenteeism by state. In the 2011–12 school year, every state reported an average daily attendance between 90 percent and just over 96 percent. Average daily attendance does not meaningfully differentiate schools or states.

## Chapter 5: Conclusion

tate policy should, through its accountability system, encourage schools to ensure every child is in school every day and learning. By adopting chronic absenteeism as the fifth indicator, states will hold schools accountable to this goal.

States should not attach stakes to any self-reported measure, because these measures do not fulfill the statutory requirement that measures be valid, reliable, and comparable; furthermore, states would not be able to disaggregate this information by subpopulation with integrity. Although there are many measures that are not appropriate for statewide school accountability, that is not to say they do not provide valuable information. States should continue to invest in data systems that support both accountability-related measures and measures that can be used by teachers and principals for formative assessment and continuous improvement. For accountability, centralized data systems would improve oversight, reduce gaming, and increase the likelihood of the measures' use as an early warning system for intervention.

Chronic absenteeism fits the statutory and draft regulatory requirements for the fifth indicator. Chronic absenteeism is valid, reliable, and comparable. There exist low-stakes baseline data for every school and they are straightforward to collect and calculate. Rates of chronic absenteeism meaningfully differentiate between schools within every state. Differences in rates of chronic absenteeism relate to school-wide measures of student achievement, student growth, and graduation rates. Evidence suggests that reducing chronic absenteeism would increase student achievement and raise graduation rates. Interventions adopted by schools can reduce chronic absenteeism rates. Moreover, the body of evidence will only grow as states, districts, and schools experiment with early warning systems, programs, and methods for reducing chronic absenteeism because of the accountability incentive. Given these considerations, states should consider adopting chronic absenteeism as the fifth indicator.

## Acknowledgments

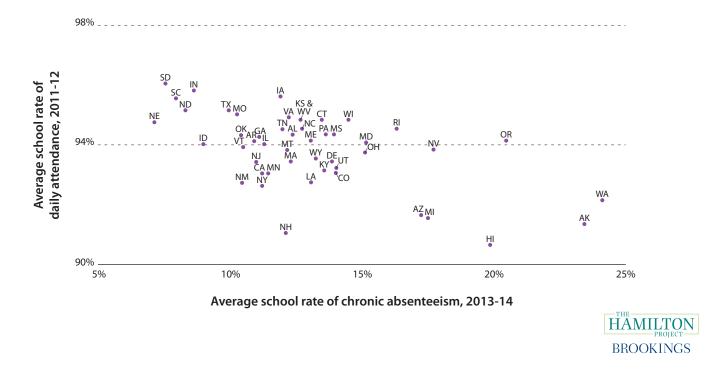
We are grateful to Lisa Barrow, David Deming, David Dreyer, Ofer Malamud, Kriston McIntosh, Michele McLaughlin, Greg Nantz, Ryan Nunn, Martin West, and Russ Whitehurst for helpful discussions and insightful comments. We also acknowledge Audrey Breitwieser and Emma Billmyer for excellent research assistance.

#### **Endnotes**

- 1. On the other hand, a limitation of this approach is that the discrete threshold for chronic absenteeism gives no incentives for schools to reduce a student's additional days absent once he or she has missed more than 15 days of
- 2. The analysis is restricted to public schools and charter schools that serve a general population. To be included, a school must report a valid National Center for Education Statistics (NCES) identification code, which allows us to match the schools to administrative data in the Department of Education's Common Core of Data file. The sample of schools is limited to regular public schools that could be categorized under the NCES grade-span definitions for elementary, middle, and high school and whose enrollment numbers were within 100 students in both Common Core of Data and Civil Rights Data Collection. We excluded from this analysis virtual schools, juvenile justice facilities, preschools, and schools that exclusively serve students designated under the Individuals with Disabilities Education Act of 1990.

#### **Appendix**

Average Daily Attendance vs. Chronic Absenteeism

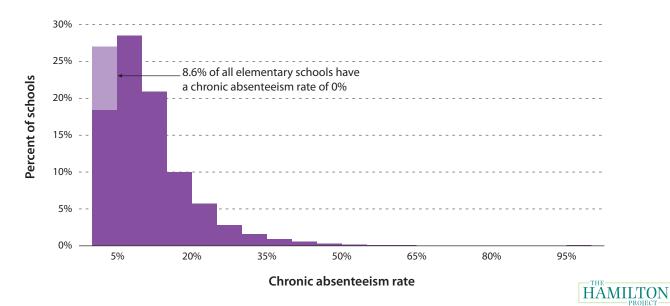


Appendix figure 1 shows average daily absences versus average chronic absenteeism by state. If every student attended school every day of the year, a state's average daily attendance rate would be 100 percent. In the 2011–12 school year, every state reported an average daily attendance rate between 90 percent and just over 96 percent. Average daily attendance does not meaningfully differentiate schools or states. The average of school chronic absenteeism rates varied more widely across states in the 2013–14 school year. If no student in a state were absent 15 days or more, the state's average chronic absenteeism

rate would be 0 percent. There is a small group of states in which the average school has a rate of chronic absenteeism below 10 percent: Idaho, Indiana, Nebraska, North Dakota, South Carolina, and South Dakota. Even at the low end, there is still tremendous room for improvement. There are also a handful of states where more than 1 in 5 students miss at least fifteen days of school per year: Alaska, Oregon, and Washington. The average school chronic absenteeism rate varies more widely across states.

**APPENDIX FIGURE 2.** 

#### National Distribution of Chronic Absenteeism among Elementary Schools, 2013–14



Source: Civil Rights Data Collection 2013-14.

Note: Chronic absenteeism is defined as missing 15 or more days of school in a school year. This figure uses the NCES definition of elementary schools: the lowest grade offered is pre-kindergarten through grade 3 and the highest grade offered is pre-kindergarten through grade 8.

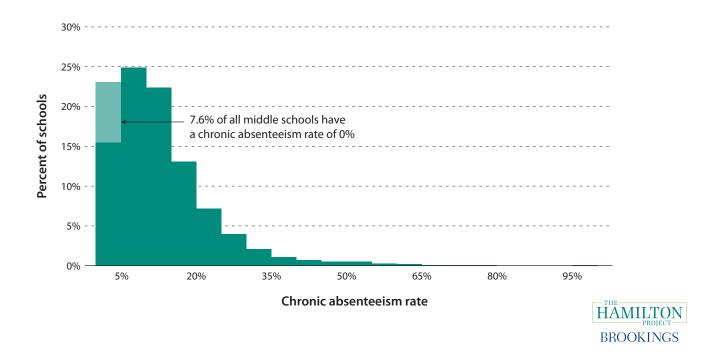
Appendix figure 2 shows the distribution of chronic absenteeism among elementary schools nationwide. Chronic absenteeism is a problem for over 91 percent of elementary schools. Nine percent of schools have a chronic absenteeism rate of zero, while almost one in five elementary schools have a rate of chronic absenteeism above 0 and below 5 percent.

About half of elementary schools have a rate of chronic absenteeism between 5 and 15 percent. The remaining fifth of elementary schools have a rate of chronic absenteeism above 15 percent. Looking only at elementary schools, there is clear and meaningful differentiation among schools by rates of chronic absenteeism.

**BROOKINGS** 

APPENDIX FIGURE 3.

National Distribution of Chronic Absenteeism among Middle Schools, 2013–14



Source: Civil Rights Data Collection 2013-14.

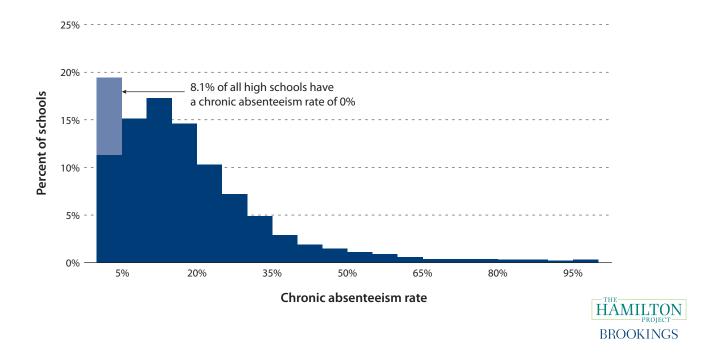
Note: Chronic absenteeism is defined as missing 15 or more days of school in a school year. This figure uses the NCES definition of middle schools: the lowest grade offered is grade 4 through grade 7 and the highest grade offered is grade 4 through grade 9.

Appendix figure 3 shows the distribution of chronic absenteeism among middle schools nationwide. Chronic absenteeism is a problem for over 92 percent of middle schools. About one in six middle schools has a rate of chronic absenteeism above 0 and below 5 percent, and an additional quarter between 5 and 10 percent. One in three middle schools

has a chronic absenteeism rate between 10 and 20 percent. The remaining one in six middle schools have a rate of chronic absenteeism above 20 percent. Looking only at middle schools, there is clear and meaningful differentiation among schools by rates of chronic absenteeism.

APPENDIX FIGURE 4.

National Distribution of Chronic Absenteeism for High Schools, 2013–14



Source: Civil Rights Data Collection 2013-14.

Note: Chronic absenteeism is defined as missing 15 or more days of school in a school year. This figure uses the NCES definition of high schools: the lowest grade offered is grade 7 through grade 12 and the highest grade offered is grade 12.

Appendix figure 4 shows the distribution of chronic absenteeism among high schools nationwide. Chronic absenteeism is a problem for over 91 percent of high schools. A little over one in ten high schools has a rate of chronic absenteeism above zero and below 5 percent. One in three high schools has a rate of chronic absenteeism between 5 and

15 percent. One in four high schools has a chronic absenteeism rate between 15 and 25 percent. One in four high schools has a chronic absenteeism rate above 25 percent. Looking only at high schools, there is clear and meaningful differentiation among schools by rates of chronic absenteeism.

#### References

- Attendance Works. 2015, December 10. "New federal education law includes chronic absence tracking training."
- Balfanz, Robert and Vaughan Byrnes. 2012. "The Importance of Being in School: A report on Absenteeism in the Nation's Public Schools." Center for Social Organization of Schools, Johns Hopkins University, Baltimore, MD.
- Balfanz, Robert, Vaughn Byrnes, and Joanna H. Fox. 2015. "Sent Home and Put Off Track." In *Closing the school discipline gap: Equitable remedies for excessive exclusion*, edited by Daniel Losen. The Civil Rights Project. New York, NY: Teachers College Press.
- Balfanz, Robert, Liza Herzog, and Douglas J. MacIver. 2007.

  "Preventing Student Disengagement and Keeping
  Students on the Graduation Path in Urban Middle-Grades
  Schools: Early Identification and Effective Interventions."

  Educational Psychologist 42 (4): 223–35.
- Blankenship, Tracy and William N. Bender. 2007. "Widely Used Disciplinary Options for Aggressive Kids: Are the Current Approaches Effective?" *Journal of the American Academy of Special Education Professionals* Winter: 5–32.
- Buehler, Melanie H., John Tapogna, and Hedy N. Chang. 2012, June. "Why being in school matters: Chronic absenteeism in Oregon Public Schools." Research brief, Attendance Works.
- Campbell, Donald T. 1976. "Assessing the Impact of Planned Social Change." Reprinted in Paper No. 8, Occasional Paper Series, *Journal of MultiDisciplinary Evaluation* 7 (15): 3-43.
- Carlsson, Magnus, Gordon B. Dahl. Bjorn Ockert, and Dan-Olof Rooth. 2015. 'The Effect of Schooling on Cognitive Skills." *The Review of Economics and Statistics*. 97 (3): 533–547.
- Center on Education Policy. 2007, December. "Choices, Changes, and Challenges: Curriculum and Instruction in the NCLB Era." Center on Education Policy, Washington, DC.
- Chang, Hedy N. and Mariajosé Romero. 2008. "Present, Engaged, and Accounted For: The Critical Importance of Addressing Chronic Absence in the Early Grades." National Center for Children in Poverty, New York, NY.
- Che, Jing, Patty Malgieri, Vicky Ramos, Hannah Page, and Anna Holt. 2015. "Early Elementary On-Track Indicators Leading to Third-Grade Reading Proficiency." Fellowship Capstone Report, Strategic Data Project, Center for Education Policy Research at Harvard University, Cambridge, MA.

- Chiefs for Change. 2016, October. "ESSA Indicators of School Quality and Student Success." Policy Paper, Chiefs for Change, Washington, DC.
- Civil Rights Data Collection (CRDC). 2013–14. "2013–14 Data and Information." Office For Civil Rights, U.S. Department of Education, Washington, DC.
- Cizek, Gregory J. 2001. "More unintended consequences of highstakes testing." *Educational Measurement: Issues and Practice*, 20 (4): 19–27.
- Connolly, Faith and Linda S. Olson. 2012. "Early Elementary
  Performance and Attendance in Baltimore City Schools'
  Pre-Kindergarten and Kindergarten." Baltimore Education
  Research Consortium, Baltimore, MD.
- Darling-Hammond, Linda. 2006. "No Child Left Behind and High School Reform." *Harvard Educational Review*: 76 (4): 642–667.
- Dee, Thomas, and Brian A. Jacob. 2010, Fall. "The Impact of No Child Left Behind on Students, Teachers, and Schools." Brookings Papers on Economic Activity, Brookings Institution, Washington, DC.
- Dee, Thomas S., Brian Jacob, and Nathaniel L. Schwartz. 2013. "The Effects of NCLB on School Resources and Practice." Educational Evaluation and Policy Analysis, 35 (2): 252–79.
- Every Student Succeeds Act (ESSA) of 2015, Pub.L. 114-95 (2015).
- Figlio, David N. 2006. "Testing, crime and punishment." *Journal of Public Economics* 90(4): 837-851.
- Gershenson, Seth. 2016, Spring. "Linking Teacher Quality, Student Attendance, and Student Achievement." *Education Finance and Policy* 11 (2): 125-149.
- Goodman, Joshua. 2014. "Flaking out: Student Absences and Snow Days as Disruptions of Instructional Time." Working Paper No. 20221, National Bureau of Economic Research, Cambridge, MA.
- Gottfried, Michael A. 2010. "Evaluating the Relationship Between Student Attendance and Achievement in Urban Elementary and Middle Schools: An Instrumental Variables Approach." *American Educational Research Journal* 47 (2): 434–65.
- ——— 2014. "Chronic Absenteeism and Its Effects on Students' Academic and Socioemotional Outcomes." *Journal of Education for Students Placed at Risk* 19 (2): 53–75.

- Harris, Kamala. 2016. "In school and on track 2016. Attorney General's 2016 report on California's elementary school truancy and absenteeism crisis." Office of the Attorney General, State of California Department of Justice, Sacramento, CA.
- Holmstrom, Bengt, and Paul Milgrom. 1991. "Multitask Principalagent Analyses: Incentive Contracts, Asset Ownership, and Job Design." *Journal of Law, Economics, & Organization* 7 (Special issue): 24–52.
- Individuals with Disabilities Education Act of 1990, Pub. L. 105-17, U.S.C. 11401 et seq. (1990).
- Jacob, Brian A. 2005. "Accountability, Incentives and Behavior: The Impact of High-Stakes Testing in the Chicago Public Schools." *Journal of Public Economics* 89 (2005): 761–96.
- Kearney, Christopher A., and Rachele Diliberto. 2014. "School Absenteeism During Childhood." In *Encyclopedia of Primary Prevention and Health Promotion*. 2nd edition. New York, NY: Springer.
- KewalRamani, Al, L. Gilbertson, M. Fox, and S. Provasnik. 2007. Status and Trends in the Education of Racial and Ethnic Minorities. National Center for Education Statistics, U.S. Department of Education, Washington, DC.
- Ladd, Helen F., and Lucy C. Sorensen. "Returns to Teacher Experience: Student Achievement and Motivation in Middle School." *Education Finance and Policy*. In press.
- Linn, Robert L. 2003. "Accountability: Responsibility and Reasonable Expectations." *Educational Researcher* 32 (7): 3–13.
- MacIver, Martha A. 2011. "The challenge of improving urban high school graduation outcomes: Findings from a randomized study of dropout prevent efforts." *Journal of Education for Students Placed at Risk* 16 (3): 167–84.
- Murnane, Richard J., and John P. Papay. 2010. "Teachers' Views on No Child Left Behind: Support for the Principles, Concerns about the Practices." *Journal of Economic Perspectives* 24 (3): 151–66.
- Neal, Derek, and Diane Whitmore Schanzenbach. 2010. "Left Behind by Design: Proficiency Counts and Test-Based Accountability." *The Review of Economics and Statistics* 92 (2): 263–83.

- Neal, Derek. 2010. "Aiming for Efficiency Rather than Proficiency," *Journal of Economic Perspectives* 24 (3): 119–131.
- New York City Department of Education. 2014. "NYC School Survey." http://schools.nyc.gov/Accountability/tools/survey/default.htm
- ——. 2016, May. "School Quality Reports." New York City Department of Education, New York, NY. http://schools.nyc. gov/Accountability/default.htm
- No Child Left Behind Act of 2001, Pub.L. 107-110 (2002).
- Noltemeyer, Amity L., Rose M. Ward, and Caven McLoughlin. 2015. "Relationship Between School Suspension and Student Outcomes: A Meta-analysis." *School Psychology Review* 44 (2): 224–40.
- Oregon Department of Education. 2015. "Enrollment, Graduates and Dropouts." http://www.ode.state.or.us/search/page/?id=471
- PDK International. 2016, September. "Why school? Americans Speak Out on Education Goals, Standards, Priorities, and Funding." The 48th Annual PDK Poll of the Public's Attitudes Toward the Public Schools, PDK International, Arlington, VA.
- Plank, David N. and Christopher Dunbar, Jr. 2004. "False Start in Michigan: The Early Implementation of the Federal 'No Child Left Behind' Act." Working paper no. 13, Education Policy Center at Michigan State University, East Lansing, MI.
- Ready, Douglas D. 2010. "Socioeconomic Disadvantage, School Attendance, and Early Cognitive Development: The Differential Effects of School Exposure." *Sociology of Education* 83(4): 271–86.
- Rogers, Todd, and Avi Feller. 2016, February 24. "Reducing Student Absences at Scale." Working paper, Harvard University, Cambridge, MA.
- Ryan, James E. 2004, June. "The Perverse Incentives of the No Child Left Behind Act." *New York University Law Review* 79 (June): 932–989.
- Schuler, Nicholas. 2016, October 6. "Significant Activity Report." Office of Inspector General, Chicago Board of Education, Chicago, IL.

- Spradlin, Terry, Katherine Cierniak, Dingjing Shi, and Minge Chen. 2012. "Attendance and Chronic Absenteeism in Indiana: The Impact on Student Achievement." Center for Evaluation and Education Policy, Indiana University, Bloomington, IN.
- U.S. Department of Education. 2009, May. "Michigan Consolidated State Application Accountability Workbook." Office of Elementary and Secondary Education, U.S. Department of Education, Washington, DC.
- ——. 2014. "Chronic Absenteeism in the Nation's Schools." InformED, 2013-14 Civil Rights Data Collection, U.S. Department of Education, Washington, DC.
- ——. 2015, October 7. "Joint letter with Attorney General Loretta Lynch, Secretary of Health and Human Services Sylvia Burwell, and Secretary of Housing and Urban Development Julián Castro discussing information and resources to address chronic absenteeism in schools." U.S. Secretary of Education Arne Duncan, Key Policy Letters, Office of the Secretary, U.S. Department of Education, Washington, DC.

- ——. 2016, May 31. "Elementary and Secondary Education Act of 1965, As Amended by the Every Student Succeeds Act-Accountability and State Plans." Federal Register 81 (104): 34539–621.
- Utah Education Policy Center. 2012, July. "Research Brief: Chronic Absenteeism." Research Brief, Utah Education Policy Center, University of Utah, Salt Lake City, UT.
- West, Martin. 2007. "Testing, learning, and teaching: the effects of test-based accountability on student achievement and instructional time in core academic subjects." In *Beyond the Basics: Achieving a Liberal Education for All Children*. Eds. Chester E. Finn, Jr., and Diane Ravitch. Washington, DC: Thomas B. Fordham Institute.
- West, Martin R., Matthew A. Kraft, Amy S. Finn, Rebecca E. Martin, Angela L. Duckworth, Christopher F. O. Gabrieli and John D.E. Gabrieli. 2016. "Promise and Paradox: Measuring Students' Non-Cognitive Skills and the Impact of Schooling." Education Evaluation and Policy Analysis 38 (1): 148–70.

## Technical Appendix

#### FIGURE 1. DISTRIBUTION OF CHRONIC ABSENTEEISM, 2013–14

In the Civil Rights Data Collection, chronic absenteeism is defined as a student missing 15 or more days of school in a school year. Data on school chronic absenteeism rates from the Civil Rights Data Collection were matched with the Department of Education's Common Core of Data for 2013-14. Schools are identified by their National Center for Education Statistics (NCES) identification number, so schools that lacked the correct NCES identification number were dropped from the sample. Virtual, juvenile justice, vocational, special education, and alternative schools are excluded. Schools where the reported total enrollment numbers in the two datasets differ by more than 101 students are also excluded. A school's rate of chronic absenteeism is calculated by dividing the number of students reported chronically absent by the total number of students. The histogram shows the distribution of the rate of school-level chronic absenteeism in five percentage-point bins. We have separately calculated the share of schools with a chronic absenteeism rate of exactly 0 percent; this group is distinguished within the 0-5 percent histogram bar.

## FIGURE 2. CHRONIC ABSENTEEISM AND SCHOOL OUTCOMES IN NEW YORK CITY, GRADE 4 AND GRADE 8, 2013–14

Chronic absenteeism data from the Civil Rights Data Collection are matched with the New York City Department of Education's data on school climate and standardized test scores for each school in the 2013-14 school year. Math and English Language Arts (ELA) scores are collected statewide through the New York State Common Core ELA and Mathematics tests. School climate data are collected as part of the New York City School Survey. The results of the survey instrument at the school level aggregate the percent of teachers, parents, and students that are satisfied (percent satisfaction) with their school on specific measures: school culture and systems for improvement. School culture is measured by the indicators for a positive learning environment and high expectations; the rating for systems for improvement is measured by the indicators for leveraging resources, teacher support and supervision, goals and action plans, teacher teams and leadership development, and monitoring and revising systems. In this figure, school

climate is a school's average percent satisfaction of school culture and systems for improvement.

Schools in New York City with 4th grade and 8th grade levels are each separated into quartiles of the grade's chronic absenteeism rates. The average value for the percent of students that are proficient in math, proficient in ELA, and the percentage of survey respondents that were satisfied with the school climate are shown for the schools in each quartile.

# FIGURE 3. RELATIONSHIP BETWEEN CHRONIC ABSENTEEISM AND TEST SCORE GROWTH IN OREGON, 2014–15

The data for this figure come from the Oregon Department of Education. In this figure, students are considered to be not chronically absent if they attended 90 percent or more of their enrolled days between the beginning of the 2014-15 school year and May 1, 2015; thus, chronic absenteeism is calculated as one minus "not chronically absent." Elementary and high schools are defined in the Oregon data by the Department of Education and are separated into quartiles of chronic absenteeism rates. The average values for the Math and English Language Arts score growth are shown for the schools in the bottom and top quartiles of chronic absenteeism. The growth indicator measures the growth of all students in grades 3–5 (elementary schools) or grade 11 (high schools) by comparing the improvement in his or her achievement on the statewide assessment with his or her academic peers (i.e. those who have similar historical assessment results). The median growth percentile represents the typical growth of the median student in a given school. To receive a growth indicator rating, a school must have at least 30 students with both a current and a prior Oregon Assessment of Knowledge and Skills score.

# FIGURE 4. RELATIONSHIP BETWEEN CHRONIC ABSENTEEISM AND HIGH SCHOOL ON-TIME GRADUATION IN OREGON AND NEW YORK CITY

#### Oregon

The data for this figure come from the Oregon Department of Education. In this figure, students are considered to be not chronically absent if they attended 90 percent or more of their enrolled days between the beginning of the 2014–15 school year and May 1, 2015; thus, chronic absenteeism is calculated

as one minus "not chronically absent." High schools in Oregon are separated into quartiles of chronic absenteeism rates. A school's rate of on-time graduation is calculated by the share of four-year cohort members who earned a diploma in June of 2015 by chronic absenteeism in this cohort's senior year.

#### New York City

Chronic absenteeism data from the Civil Rights Data Collection are matched with New York Department of Education data on graduation rates. High schools in New York City are separated into quartiles of chronic absenteeism rates, defined as a student missing 15 days or more in the 2013–14 school year. The average values for the graduation rate are shown for the schools in the bottom and top quartiles. A school's rate of on-time graduation is calculated by the share of four-year cohort members who earned a diploma in June of 2015 by chronic absenteeism in this cohort's senior year.

## APPENDIX FIGURE 1. AVERAGE DAILY ABSENCE VS. CHRONIC ABSENTEEISM

Data on school chronic absenteeism and average daily attendance rates from the Civil Rights Data Collection from the 2013–14 school year were used to calculate the average school rate of chronic absenteeism by state. Chronic absenteeism is defined as a student missing 15 or more days of school, while a school's average daily attendance rate shows how many students are at school on average each day. Schools are identified by their National Center for Education Statistics

(NCES) identification number, so schools that lacked the correct NCES ID were dropped from the sample. Virtual, juvenile justice, vocational, special education, and alternative schools are excluded. Schools where the reported enrollment in the two datasets differs by more than 101 students are also excluded. Data on average daily attendance by state in the 2011–12 school year is reported in Table 203.90 of the Digest of Education Statistics 2014.

## APPENDIX FIGURES 2–4. NATIONAL DISTRIBUTION OF CHRONIC ABSENTEEISM BY SCHOOL LEVEL, 2013–14

We start with the same sample as Figure 1 and then narrow it to each school level. We utilize the NCES definition of school grade levels: elementary schools are those in which the lowest grade offered is preschool through grade 3 and the highest is preschool through grade 8; middle schools are those in which the lowest grade offered is grade 4 through grade 7 and the highest is grade 4 through grade 9; and high schools are those in which the lowest grade offered is grade 7 through grade 12 and the highest is grade 12. A school's rate of chronic absenteeism is calculated by dividing the number of students reported chronically absent by the total number of students. These histograms show the distribution of the rate of schoollevel chronic absenteeism in five percentage-point bins among elementary, middle, and high schools. We have separately calculated the share of schools with a chronic absenteeism rate of exactly 0 percent; this group is distinguished within the 0-5 percent histogram bar.

#### Hamilton Project Papers on Education

#### **EDUCATION POLICY PROPOSALS**

• "Increasing Targeting, Flexibility, and Transparency in Title I of the Elementary and Secondary Education Act to Help Disadvantaged Students"

Nora E. Gordon proposes reforms to make the Title I formula more transparent, streamlined and progressive by distributing additional resources to the neediest areas. In addition, she suggests improvements in federal guidance and fiscal compliance outreach efforts so that local districts understand the flexibility they have to spend the resources effectively.

• "Improving Academic Outcomes for Disadvantaged Students: Scaling up Individualized Tutorials"

Roseanna Ander, Jonathan Guryan, and Jens Ludwig propose scaling up a tutorial program that would allow students who have fallen behind grade level to reengage with regular classroom instruction.

• "Staying in School: A Proposal to Raise High School Graduation Rates Among America's Youth"

Derek Messacar and Philip Oreopoulos propose raising the compulsory-schooling age to eighteen and discuss increasing high school completion rates through reengagement of at-risk youth and better enforcement of existing compulsory-schooling laws.

• "Organizing Schools to Improve Student Achievement: Start Times, Grade Configurations, and Teacher Assignments"

Brian A. Jacob and Jonah E. Rockoff discuss three organizational reforms to increase student learning: moving to later start times for older students, encouraging K-8 configurations, and ensuring teachers are assigned the grades and subjects in which they are most effective.

#### **EDUCATION POLICY FACTS**

• "Fourteen Economic Facts on Education and Economic Opportunity"

Diane Whitmore Schanzenbach, David Boddy, Megan Mumford, and Greg Nantz

There are many factors at work in determining educational outcomes; some of these are more easily addressed by policy reforms than others, and not all can be addressed directly within the K-12 education system. The Hamilton Project illustrates the payoffs from increasing educational attainment and the promise of targeted childhood interventions.

"A Dozen Economic Facts About K-12 Education"

Michael Greenstone, Max Harris, Karen Li, Adam Looney, and Jeremy Patashnik

Education is a powerful force for promoting opportunity and growth. It is not surprising that an individual's educational attainment is highly correlated with her income. What might be less obvious is that education is also a significant determinant of many other very important outcomes, including whether individuals marry, whether their children grow up in households with two parents, and even how long they will live. This paper explores both the condition of education in the United States and the economic evidence on several promising K-12 interventions that could improve the lives of Americans.



#### **ADVISORY COUNCIL**

**GEORGE A. AKERLOF** 

**Koshland Professor of Economics** University of California, Berkeley

ROGER C. ALTMAN

Founder & Executive Chairman

Evercore

KAREN ANDERSON

Senior Advisor, Results for America

**Executive Director, Results for All** 

ALAN S. BLINDER

Gordon S. Rentschler Memorial Professor of

**Economics & Public Affairs** 

**Princeton University** 

ROBERT CUMBY

**Professor of Economics** 

**Georgetown University** 

STEVEN A. DENNING

Chairman

**General Atlantic** 

JOHN DEUTCH

Institute Professor

Massachusetts Institute of Technology

CHRISTOPHER EDLEY, JR.

Co-President and Co-Founder

The Opportunity Institute

**BLAIR W. EFFRON** 

Partner

Centerview Partners LLC

**DOUGLAS W. ELMENDORF** 

Harvard Kennedy School

JUDY FEDER

Professor & Former Dean

McCourt School of Public Policy

**Georgetown University** 

**ROLAND FRYER** 

Henry Lee Professor of Economics

**Harvard University** 

MARK T. GALLOGLY

Cofounder & Managing Principal

Centerbridge Partners

TED GAYER

Vice President & Director

**Economic Studies** 

The Brookings Institution

TIMOTHY F. GEITHNER

President

**Warburg Pincus** 

RICHARD GEPHARDT

President & Chief Executive Officer

**Gephardt Group Government Affairs** 

ROBERT GREENSTEIN

Founder & President

Center on Budget and Policy Priorities

MICHAEL GREENSTONE

The Milton Friedman Professor in Economics

**Energy Policy Institute at Chicago** 

**University of Chicago** 

**GLENN H. HUTCHINS** 

Co-Founder

Silver Lake

JAMES A. JOHNSON

Chairman

Johnson Capital Partners

LAWRENCE F. KATZ

Elisabeth Allison Professor of Economics

**Harvard University** 

**MELISSA S. KEARNEY** 

**Professor of Economics** 

University of Maryland Nonresident Senior Fellow

The Brookings Institution

**LILI LYNTON** 

**Founding Partner** 

**Boulud Restaurant Group** 

MARK MCKINNON

Former Advisor to George W. Bush

Co-Founder, No Labels

**ERIC MINDICH** 

Chief Executive Officer & Founder

**Eton Park Capital Management** 

**SUZANNE NORA JOHNSON** 

Former Vice Chairman

Goldman Sachs Group, Inc.

PETER ORSZAG

Vice Chairman of Investment Banking

and Managing Director

Nonresident Senior Fellow

The Brookings Institution

**RICHARD PERRY** 

Managing Partner &

**Chief Executive Officer Perry Capital** 

**MEEGHAN PRUNTY Managing Director** 

**Blue Meridian Partners** 

**Edna McConnell Clark Foundation** 

ROBERT D. REISCHAUER

Distinguished Institute Fellow

& President Emeritus

**Urban Institute** 

ALICE M. RIVLIN

**Senior Fellow** 

The Brookings Institution

Professor of Public Policy

**Georgetown University** 

DAVID M. RUBENSTEIN

Co-Founder &

Co-Chief Executive Officer

The Carlyle Group

ROBERT E. RUBIN

Co-Chair, Council on Foreign Relations

Former U.S. Treasury Secretary

LESLIE B. SAMUELS

**Senior Counsel** 

Cleary Gottlieb Steen & Hamilton LLP

SHERYL SANDBERG

**Chief Operating Officer** 

**Facebook** 

**RALPH L. SCHLOSSTEIN** 

**President & Chief Executive Officer** 

**Evercore** 

**ERIC SCHMIDT** 

**Executive Chairman** 

Alphabet Inc.

**ERIC SCHWARTZ** Chairman and CEO

76 West Holdings

THOMAS F. STEYER

**Business Leader and Philanthropist** 

LAWRENCE H. SUMMERS Charles W. Eliot University Professor

**Harvard University** 

PETER THIEL Entrepreneur, Investor, and Philanthropist

LAURA D'ANDREA TYSON

**Professor of Business Administration** 

and Economics

Institute for Business & Social Impact

Berkeley-Haas School of Business

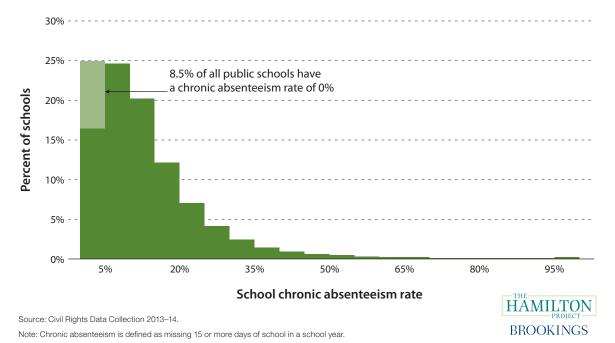
DIANE WHITMORE SCHANZENBACH

Director

#### **Highlights**

The Every Student Succeeds Act (ESSA) requires states to add at least one high-stakes measure of "school quality or student success," known as the fifth indicator, to its statewide accountability system. Based on lessons learned from the No Child Left Behind Act and analyses based on the statutory and draft regulatory requirements under ESSA, The Hamilton Project proposes that states adopt chronic absenteeism as the fifth indicator.

#### National Distribution of Chronic Absenteeism, 2013–14





1775 Massachusetts Ave., NW Washington, DC 20036

(202) 797-6279 www.hamiltonproject.org

**BROOKINGS**