School Attendance In Kentucky

Research Report No. 449

Office Of Education Accountability

School Attendance In Kentucky

Project Staff

Logan D. Rupard
Chris Riley
Albert Alexander
Deborah Nelson, PhD
Sabrina J. Olds
Christopher B. Joffrion
Bart Liguori, PhD

Bart Liguori, PhD
Research Division Manager

David Wickersham
Deputy Director for the Office of Education Accountability

Research Report No. 449
Interactive Feature: www.lrc.ky.gov/Lrcpubs/interactive/chronicabsenteeism.htm

Legislative Research Commission
Frankfort, Kentucky
lrc.ky.gov

Accepted August 15, 2017, by the
Education Assessment and Accountability Review Subcommittee

Paid for with state funds. Available in alternative format by request.

Foreword

For more than 25 years, the Office of Education Accountability (OEA) has played an important role in reporting on education reform in the Commonwealth of Kentucky. Today, the employees of OEA strive to provide fair and equitable accountability, documenting the challenges and opportunities confronting Kentucky's education system.

In November 2016, the Education Assessment and Accountability Review Subcommittee approved the OEA 2017 study agenda, which included the report you're reading now. This report discusses attendance trends at the state and district levels and includes comparisons to other states. Compared to Kentucky's seven surrounding states, Kentucky has the second highest rate of students who are chronically absent. Additionally, this report finds that chronically absent students have lower outcomes with regard to grade point averages and testing, on average, than other students have.

The Legislative Research Commission comprises more than 400 professionals who work to make the legislative process accessible, informative, and relevant to the citizens of the commonwealth. OEA is an important part of that mission. Thank you for your interest in this report and for your interest in chronic absenteeism in Kentucky.

David A. Byerman
Director

Legislative Research Commission
Frankfort, Kentucky
August 2017

Contents

Tables

Figures

Summary

Background

In November 2016, the Education Assessment and Accountability Review Subcommittee directed that the Office of Education Accountability (OEA) examine school attendance in Kentucky and compare it to attendance in surrounding states. The subcommittee's study agenda also directed OEA to examine the relationship between chronic absenteeism (CA)[a] and educational outcomes. Additionally, OEA was directed to study the impacts of recent legislation, including SB 97 (2013), which raised the age of compulsory attendance to 18, and SB 200 (2014), which overhauled Kentucky's juvenile justice system.

Attending school regularly is important for students. As part of the federal Every Student Succeeds Act of 2015, Kentucky educators, policy makers, and other stakeholders are revising existing accountability and assessment policies that are designed to measure chronic absenteeism. This process provides a good opportunity to review Kentucky data related to school attendance.

This study provides an overview of attendance in Kentucky, including

- national, state, school, and district data for specific student groups;
- educational outcomes associated with chronic absenteeism; and
- challenges—such as student mobility, homelessness, and health issues—to districts' abilities to ensure students attend school regularly.

Staff analyzed published and unpublished student data from the US Department of Education Office for Civil Rights (OCR) and the Kentucky Department of Education. In addition, OEA used an electronic survey to register feedback from school districts concerning attendance issues.

For the majority of this report, CA will be understood to be missing 10 percent or more of time. This level could be met by missing 10 percent of days enrolled or missing 10 percent of each day enrolled. Although the academic literature has not explicitly defined CA, 10 percent was a commonly used measure. For CA in the state, the 10 percent of time missed is equivalent to 17.4 days per school year. This figure was derived from the weighted average of instructional days per school district and district membership. The number of days is representative of the amount of time missed, compared to the number of times missed (that is, the parts of a day students are tardy are included in this measurement). CA also does not differentiate between excused and unexcused absences. Time out of the classroom, for whatever reason, is included in these calculations. When making comparisons to other states, this report will use the definition used by OCR, which is students missing 15 days or more for any reason.

[a] For the purposes of this report, CA can stand for "chronically absent" or "chronic absenteeism."

Major Conclusions And Recommendations

Truancy. Laws on truancy and habitual truancy use definitions found in KRS 159.150. By those definitions, in the 2016 school year over 60 percent of Kentucky students were truant and approximately 40 percent were habitually truant.[b] These values are similar to those experienced in each of the previous 5 school years.

Recommendation 2.1
Under the terms of KRS 159.150, the majority of Kentucky students are truant and more than 40 percent are habitually truant. The prevalence of truancy in Kentucky may reduce the impact of labeling students as truant or habitually truant. The General Assembly should further explore how schools and local boards of education implement KRS 159.150. This may include reviewing and revising KRS 159.150 to redefine truancy in a manner that would assist schools and districts in providing assistance to students who are more likely to suffer negative consequences of poor attendance.

Comparing Kentucky To Surrounding States. Compared to Kentucky's seven surrounding states, Kentucky has the second highest rate of CA overall (third highest for elementary, second highest for middle, and highest for high school).

Concentrations Of Chronic Absenteeism. Kentucky's highest rates of CA are concentrated in eastern Kentucky and in Jefferson County.

Chronic Absenteeism Rates By Demographic Group. When comparing CA rates between race/ethnicities, black students have the highest rates, followed by white students, Hispanic students, and students of other races and ethnicities. Students receiving free or reduced-price lunch have a higher rate of CA than other students have.

Attendance Rates Can Obscure Chronic Absenteeism. Attendance rates can sometimes obscure the CA of individual students within schools. Schools with similar attendance rates can experience substantially different CA rates.

Chronic Absenteeism In Elementary Schools. For K-5 students, CA is highest for students who are in kindergarten and 1st grade. Compared to other levels, elementary schools, on average, experience the lowest rates of chronic absenteeism; however, within elementary schools rates vary between grades. In 2016, 3rd-graders had the lowest rate of chronic absenteeism for all grades, at 8.5 percent. Kindergartners had a rate of 14.7 percent during the same school year, and 1st-graders had a rate of 11.1 percent.

[b] These percentages were based on students enrolled in K-12, regardless of age. Statute restricts truancy to students aged 6 to 18.

Recommendation 2.2
Kentucky school districts, with the support and guidance of the Kentucky Department of Education, should monitor student attendance in kindergarten and 1st grade, as those students are more likely to be chronically absent than other students at the elementary level.

Absences In The First Month Of School. Being absent during the first month of school is a large predictor of a student becoming CA. Absences during the first month of school were associated with chronic absence during the school year. Being absent during the first month of school increases the likelihood, on average, of chronic absence by approximately 11 percentage points, controlling for other characteristics; this was the largest associated predictor in our model.

Recommendation 2.3
Kentucky school districts, with the support and guidance of the Kentucky Department of Education should identify, early in the school year, students at risk of becoming chronically absent.

Mobile Students. Chronically absent and mobile students, on average, score lower on the ACT and K-PREP exams. Students transferring within a single district are particularly affected.

Chronic Absenteeism And Grade Point Averages. CA students have lower grade point averages than other students.

Perceived Impacts Of SB 97 (2013). The majority (52 percent) of survey respondents indicated that SB 97 (2013) had increased the number of truants, and nearly two-thirds (65 percent) said it had increased the number of students entering homeschool. Data also indicated that the number of students entering homeschool has increased over the previous 5 years.

Perceived Impacts Of SB 200 (2014). Approximately 55 percent of survey respondents indicated that SB 200 (2014) had increased the number of student absences.

Number Of Absences At Which Academic Performance Is Affected. Within our analysis, the chronic absenteeism threshold was set at 17.4 days per school year for the state. When measuring the number of absences associated with negative academic performance, however, there was a decline in the 10- to 15-day range. If academic difficulties are appearing before students become chronically absent, the threshold may be too high.

Recommendation 3.1
In drafting 703 KAR 5:270, the Kentucky Department of Education should consider lowering the threshold for chronic absence to 10 absences rather than 10 percent of days enrolled.

As a supplement to this research study, OEA staff used various attendance data to develop an independent, interactive application that allows viewers to review data at the macro and micro levels. Visit www.lrc.ky.gov/Lrcpubs/interactive/chronicabsenteeism.htm to use the application.

Chapter 1

Introduction

Description Of This Study

In November 2016, the Education Assessment and Accountability Review Subcommittee directed that the Office of Education Accountability (OEA) examine school attendance in Kentucky and compare it to attendance in surrounding states. The subcommittee's study agenda also directed OEA to examine the relationship between chronic absenteeism (CA)[a] and educational outcomes. Additionally, OEA was directed to study the impacts of recent legislation, including SB 97 (2013), which raised the age of compulsory attendance to 18, and SB 200 (2014), which overhauled Kentucky's juvenile justice system.

Background

The Every Student Succeeds Act, passed in December 2015, requires states to report chronic absenteeism (CA) rates for schools.

Over the last decade, the potential impacts of CA on educational outcomes have been a salient topic of research. The federal Every Students Succeeds Act (ESSA), passed in December 2015, requires states to report CA rates for schools. This was the first time that federal education law specifically mentioned this measure of attendance.[1]

Research has shown CA to be associated with negative academic consequences, which may be more severe for gap group students.

Research on CA has been conducted primarily in the last decade, with one of the most common findings being that chronically absent students have an increased risk of negative academic consequences.[2] These negative academic consequences can begin to develop in early grades with students who were CA in kindergarten and 1st grade struggling with 3rd-grade-level reading comprehension, and through the development of poor attendance patterns that can persist in later years.[3] Research has also found that students with better attendance in kindergarten or 1st grade had significantly higher 3rd-grade scores in math and English language arts.[4]

Studies have found that being a racial minority, having limited English proficiency, receiving special education services, or coming from a low-income family all make a student more likely to be CA.[5] Evidence suggests that the negative academic consequences associated with CA may be more severe for students

[a] For the purposes of this report, CA can stand for "chronically absent" or "chronic absenteeism."

from the groups listed above, with studies finding that CA increases achievement gaps at the elementary, middle, and high school levels.[6] For instance, low-income students who missed out on "critical literacy instruction" during kindergarten and 1st grade struggled in comparison to CA students from more affluent backgrounds.[7] Conversely, studies have shown low-income students who do not have poor attendance seem to benefit more from instruction compared to students living in higher-income environments who have good attendance records.[8]

The negative implications associated with CA extend beyond the classroom, with research suggesting that students with poor attendance records in later grades exhibit increased dropout rates, higher levels of antisocial behaviors, and higher rates of unemployment once they enter the labor force.[9] Studies have also shown that CA is correlated with reduced rates of postsecondary enrollment.[10]

The youngest and oldest students tend to have the highest rates of CA.

According to a multistate study, gender does not appear to play a role in CA rates.[11] The literature has not been definitive concerning the relationship between ethnicity and CA rates, with some studies stating little to no relationship, while other research shows an increased likelihood of CA for racial minorities.[12] The data suggest that the youngest and the oldest students tend to have the highest rates of CA, and that CA can be concentrated in relatively few schools.[13]

Student mobility and homelessness have also been shown to be associated with higher rates of CA.

Student mobility and homelessness have also been shown to be associated with higher rates of CA, with the odds of being CA calculated at 2.5 times as great for homeless students and more than 4 times as great for students who transferred schools during the school year.[14]

There is limited research on the impact of absences early in the school year on CA rates, but the available literature has shown that the more days students miss during September, the more absences they accrue during the remainder of the school year. For instance, the Baltimore Education Research Consortium found that students who missed fewer than 2 days in September went on to average 10 absences for the entire school year, but students missing between 2 and 4 days in September averaged 25 absences.[15]

Laws And Regulations Relating To School Attendance

According to KRS 158.070, Kentucky schools' minimum term must not be less than 185 days. These 185 days can be composed of student attendance days, teacher professional days, and holidays. Additionally, the student attendance days must be at least 1,062 hours delivered on not less than 170 days. Senate Bill 50, passed during the 2017 Regular Session, amends the requirements for student attendance days beginning with the 2019 school year. The changes will allow an exemption from the 170-day requirement for any local school board of education that adopts a school calendar with the first student attendance day starting no earlier than the Monday closest to August 26. This change will allow local boards of education increased flexibility in distributing their 1,062 hours of instruction time.

Kentucky is among 22 states that have a state definition of truancy; the remaining states either have no definition or leave it up to school districts.

As of 2011, Kentucky is among 22 states that have a state definition of truancy; the remaining states either have no definition or leave it up to school districts.[16] A table detailing every state that has a truancy and habitual truancy law appears in Appendix A. Of the states surrounding Kentucky, Illinois is the only one to define truancy.

Currently, Kentucky uses average daily attendance (ADA) to report attendance for school and districts.[b] [17] ADA is used as the basis for most issues related to school finance. Schools are funded based on an adjusted ADA for use in the Support Education Excellence in Kentucky (SEEK) formula. SEEK ADA uses several adjustments to draw a more complete picture.[c] [18]

[b] Average daily attendance with no adjustments applied is the aggregate days attended by pupils in K-12 divided by the actual number of days the school is in session as reported by the superintendent at the close of the year via the Superintendent's Annual Attendance Report. Full attendance for kindergarten is included. It is also known as the unadjusted ADA. This value is used in most per-pupil calculations for the Finance Report Card.

[c] SEEK ADA is the aggregate days attended by pupils in K-12 divided by the actual number of days the school is in session. The result is adjusted by the following to obtain the prior school year's adjusted ADA: five days with lowest attendance; up to 10 days with low attendance due to weather; noncontract students; over/under age; virtual/performance-based Proficient, eligible suspensions, and eligible expulsions; kindergarten attendance adjustment whereby 50 percent of the full kindergarten attendance days is deducted; and add in two-thirds of the attendance lost if loss was more than 10 percent of total. Each year, student growth may be added; therefore the calculation is the Prior School Year's Adjusted ADA plus the Current School Year's Growth. This ADA value is used to calculate the SEEK funding; therefore, it is also known as the SEEK ADA or Funded ADA.

Districts are also allowed to use up to 10 days each school year for nontraditional instruction (NTI). The current form of the program was approved in 2014. Since that time, the program has grown from 13 districts to 72 districts for the 2017 school year. The NTI program was created to allow districts to minimize disruption during days when school could not be safely operated because of factors such as weather or health issues. During NTI days, all students are expected to participate. Depending on the district, participation can include accessing online coursework, completing a project or paper assignment, or another method of participation. During NTI days, all students are considered present, and ADA is replaced with the previous year's attendance on that day.[19]

High school credits can be awarded in two ways. The more common form is a Carnegie Unit, which is defined as at least 120 hours of instructional time in one subject. The alternative is a performance-based credit. These performance-based credits are defined at the local level, with districts and school being responsible for ensuring that each student's education includes minimum content standards. Attendance is captured with performance-based credits depending on whether the student receives credit. The data used for this report do not include the time that students were in performance-based instruction.

There are a variety of statutes and regulations related to school attendance. Statutes address topics such as school start dates, which children must attend, attendance monitoring, and definitions for truant students. Regulations address the school funding formula. Table 1.1 details some of the more relevant statutes relating to attendance measures. As seen in Table 1.1, KRS 158.070 was amended in 2017. Senate Bill 50 from the 2017 Regular Session added calendar flexibility that districts may use beginning in the 2018-2019 school year. A complete list of attendance-related statutes and regulations appears in Appendix B.

Table 1.1
Pupil Attendance Statutes And Regulations

Statute / Regulation Number	Title/Subject	Description	Effective Date
KRS 157.320	Definitions	Defines average daily attendance, weather-related low-attendance day, percentage of attendance.	7/14/2000
KRS 157.360	Base funding level – Adjustment – Enforcement of maximum class sizes – allotment of program funds	Support Education Excellence in Kentucky (SEEK) calculations and adjustments made are based on pupil attendance, Superintendent's Annual Attendance Report, Growth Factor, Home/Hospital funding, SEEK At Risk Average Daily Membership.	6/25/2013
KRS 158.070	Sets out requirements for school term	Holidays, continuing education, athletic competitions, emergency hours, and service credit. Adds new school calendar option, allowing additional flexibility.	6/29/2017
KRS 159.01(1)(c)	Parent or custodian to send child to school – Age limits for compulsory attendance	Raises compulsory attendance age to 18 for students.	6/25/2013
KRS 159.030	Exemptions from compulsory attendance (homeschools)	Written notice of attendance in nonpublic school must be made to the superintendent in writing.	7/15/2010
KRS 159.140	Duties of pupil personnel director or assistant	Lists duties and powers of directors of pupil personnel; must train district staff who work with attendance.	7/15/2014
KRS 159.150	Definition of truant, habitual truant and being tardy; adoption of truancy policies by local school boards	Definitions, allows boards of education to adopt policies to comply with compulsory attendance laws and to establish sanctions for noncompliance.	7/1/2015
KRS 159.170	Withdrawals and transfers; teachers to report	Covers Kentucky Student Information System, tracking students, and transferring student records	6/26/2007
KRS 161.200	Records to be kept by teachers	Pupil attendance records can be kept in one central location in the school or school district. School district must audit and certify accuracy.	7/13/1990
702 KAR 3:270	SEEK funding formula	SEEK funding formula.	9/8/2008
702 KAR 7:125	Pupil attendance	Establishes a unified method of recording and calculating student attendance. Allows districts to set excused and unexcused absence policies.	3/7/2014

Source: Kentucky Department of Education.

Kentucky Department Of Education

The Kentucky Department of Education (KDE) provides training, guidance, and support to school districts regarding school attendance. KDE also reviews districts' attendance data. At the district level, directors of pupil personnel are responsible for attendance-related issues.

According to a survey OEA sent to all Kentucky school districts, school districts use various tools to increase school attendance. These tools include phone calls, home visits, letters, incentives, and truancy diversion programs to reach students and their families.

The Kentucky Department of Education (KDE) conducts annual attendance review audits. These include one-fifth of school districts each year.

As part of their work, KDE staff conduct annual attendance review audits. Each year, approximately one-fifth of school districts are reviewed. During a review, all of a district's high and middle schools are audited, along with half of the elementary schools. Under this schedule, districts should be audited once in each 5-year period, except for Fayette and Jefferson Counties, which have one-fourth of their schools audited each year. The goal of the process is to assist districts with attendance collection for use in the Superintendent's Annual Attendance Report. Additionally the state auditor's office conducts an annual audit of the KDE process and documentation. The audit by KDE is quite complex. A sample report draft, which includes a description of the report and actions taken, appears in Appendix C.

According to regulation drafts, KDE will begin to use attendance measures in the new accountability system.

Additionally, with upcoming changes prompted by ESSA, regulation drafts indicate that KDE will begin to use attendance-measures in the new school accountability system. Although the exact details of the accountability system have not been finalized, attendance has been discussed as a student level indicator within the transition ready and opportunity and access components. Draft work indicates that CA may be one measurement, with an additional measurement for a percentage of unexcused absences.

Organization Of This Report

Chapter 1 provides a summary of conclusions and major findings, literature review, and background.

Chapter 1 provides a summary of conclusions and major findings, literature review, and background. It also includes definitions for often-used attendance-related terms, as well as a description of data sources used in this study.

Chapter 2 provides an examination of attendance trends.

Chapter 2 provides an examination of attendance trends over the previous 5 school years. These trends are examined for the state as

a whole and for regions within the state; comparisons are also made between Kentucky and surrounding states. Additionally, the chapter includes further analysis on factors that contribute to CA.

Chapter 3 discusses outcomes associated with CA.

Chapter 3 discusses outcomes associated with CA. Additionally, the chapter uses CA to measure the impacts on test scores, students' grade point average (GPA), student promotion, and discipline.

Chapter 4 details the results of a survey conducted by OEA on recent legislation dealing with attendance.

Chapter 4 details the results of a survey conducted by OEA on recent legislation dealing with attendance. This survey was sent to all 173 district superintendents. The chapter also includes responses to survey questions discussing current common attendance issues faced by districts.

Definitions For Study

This section briefly details the terms used in this report.

In this report, CA is used to indicate missing more than 17.4 days for any reason.

Chronic Absenteeism. For the majority of this report, CA is understood to mean missing 10 percent or more of time. This level could be met by missing 10 percent of days enrolled or missing 10 percent of each day enrolled. Although academic literature has not explicitly defined CA, 10 percent was a commonly used measure.[20] For CA in the state, the 10 percent of time missed is equivalent to 17.4 days. This figure was derived from the weighted average of instructional days per school district and district membership. The number of days is representative of the amount of time missed, compared to the number of times missed (that is, the parts of a day students are tardy are included in this measurement). CA also does not differentiate between excused and unexcused absences. Time out of the classroom, for whatever reason, is included in these calculations.

Excused And Unexcused Absences. 702 KAR 7:125 allows local boards of education to determine what constitutes an excused and an unexcused absence; however, the regulation does require suspension to be considered unexcused. Absences for reasons not meeting the excused guidelines count as unexcused absences.

Free Or Reduced-Price Lunch Students. FRPL students are those qualifying for free or reduced-price lunch. Children from families with earnings below 130 percent of the federal poverty level qualify for free-lunch status. Children from families with income between 130 percent and 185 percent of the federal poverty level qualify for reduced-price lunch.[21]

Limited English Proficiency Students. Students identified as having limited English proficiency (LEP) are those who do not speak English as their primary language and who have a limited ability to read, speak, write, or understand English.[22]

Student Mobility. KDE's student information system, Infinite Campus (IC), collects data on student enrollment and end statuses for student enrollment. Changes in enrollment are also recorded in IC. Examples of these changes are

- moving and reenrolling in another Kentucky public district,
- transferring to a school within the district, and
- transferring to another enrollment in same school.[d]

Regions Or Educational Cooperatives. Regional identifiers associated with special educational cooperatives are listed on KDE's School Report Card. Cooperatives include the Central Kentucky Educational Cooperative, Green River Educational Cooperative, Jefferson County Exceptional Child Education Services, Kentucky Educational Development Cooperative, Kentucky Valley Education Cooperative, Northern Kentucky Cooperative for Educational Services (NKCES), Ohio Valley Education Cooperative, Southeast/Southcentral Education Cooperative (SESC), and West Kentucky Educational Cooperative.

Truancy. KRS 159.150 defines truancy:

> Any student who has attained the age of six (6) years, but has not reached his or her eighteenth birthday, who has been absent from school without valid excuse for three (3) or more days, or tardy without valid excuse on three (3) or more days, is a truant … Any student enrolled in a public school who has attained the age of eighteen (18) years, but has not reached his or her twenty-first birthday, who has been absent from school without valid excuse for three (3) or more days, or tardy without valid excuse on three (3) or more days, is a truant.

Habitual Truant. KRS 159.150 defines a habitual truant as any student who has been reported as truant two or more times.

[d] Transferring to another enrollment in the same school is most often associated with moving to, or from, an alternative program housed at the same school.

Major Conclusions

- According to statute, over 60 percent of Kentucky students were truant, with approximately 40 percent meeting the definition for habitual truant in 2016.[e]
- Compared to Kentucky's seven surrounding states, Kentucky has the second highest rate of CA overall (third highest for elementary, second highest for middle, and highest for high school).
- Kentucky's highest rates of CA are concentrated in eastern Kentucky and in Jefferson County.
- When comparing CA rates among races and ethnicities, black students have the highest rates, followed by white students, Hispanic students, and students of other races and ethnicities.
- FRPL students have a higher rate of CA than other students.
- Attendance rates can sometimes obscure the CA of individual students within schools, with the result that schools with similar attendance rates can experience substantially different CA rates.
- For K-5 students, CA is highest for students who are in kindergarten and 1st grade.
- Being absent during the first month of school is a large predictor of a student becoming CA.
- Chronically absent and mobile students, on average, score lower on the ACT and Kentucky Performance Rating for Educational Progress (K-PREP) exams. Students transferring within a single district are particularly affected.
- CA students have lower GPAs than other students.
- The majority (52 percent) of survey respondents indicated that SB 97 (2013) had increased the number of truants, and nearly two-thirds (65 percent) said it had increased the number of students entering homeschool. Data also indicated that the number of students entering homeschool has increased over the previous 5 years.
- Approximately 55 percent of survey respondents indicated that SB 200 (2014) had increased the number of student absences.

[e] These percentages were based on students enrolled K-12, regardless of age. Statute restricts truancy to students aged 6-18.

Data Sources

Staff analyzed data from several sources. This section provides a brief description of those sources. Unless otherwise noted, this report refers to school years by the year in which the school year ends. For example, the 2015-2016 school year is called the 2016 school year.

Student Information System

In conducting the report, staff relied primarily on data from KDE. These included state-, district-, and school-level taken from KDE's School Report Cards from the 2012 through 2016 school years. Student-level data on assessment outcomes, demographic characteristics, discipline, course grades, GPAs, and attendance come from the Kentucky Student Information System.[f]

Survey

During the spring and summer of 2017, OEA staff administered an electronic survey for district officials. The survey asked questions concerning legislation, attendance issues, and district actions to combat problems with attendance. The survey was sent to all 173 district superintendents via email. There was a 100 percent response rate for the survey; however, within the survey, the response rate to individual items varied.

Office Of Civil Rights

The Civil Rights Data Collection (CRDC) is a biennial survey required by the US Department of Education's Office for Civil Rights since 1968. The 2014 CRDC collected data from a universe of all public local educational agencies and schools, including long-term secure juvenile justice facilities, charter schools, alternative schools, and schools serving students with disabilities.[23] The 2014 CRDC survey was the first to collect CA data.

[f] GPAs were analyzed only for high school students, because of the availability of GPA data.

Chapter 2

Attendance Analysis

Introduction

This chapter includes a comparison of Kentucky's CA rate to surrounding states and the nation.

This chapter compares Kentucky's rate of CA to the nation's; comparisons are also made between Kentucky's CA rate and those of its surrounding states. Within the commonwealth, differences are also examined at the regional and school district levels. Although most of the analysis presented in this report will define CA as students missing more than 17.4 school days per school year for any reason, when making comparisons to other states, this report will use the definition used by OCR, which is students missing 15 days or more for any reason.

Kentucky's high school students have the 10th highest rate of CA in the nation. Within the state, the highest rates of CA are concentrated in Jefferson County and the eastern portion of the state.

Kentucky's CA rate of 14.4 percent is near the national average, 13.2 percent. Kentucky has the 23rd highest rate of CA across all levels of schooling. Although Kentucky's CA rate in elementary schools is below the national mean, its high schools have the 10th highest rate of CA in the nation. When compared to neighboring states, Kentucky has a relatively high rate of CA. Within Kentucky, higher rates of CA are concentrated in the eastern part of the state as well as Jefferson County. Northern and western Kentucky experience relatively low rates of CA, compared to the rest of the state.

Within Kentucky, black students and students qualifying for FRPL experience higher rates of CA than other students. Additionally, students receiving either an out-of-school suspension or in-school removal experience higher rates of CA.

Attendance rates can sometimes obscure the CA of individual students within schools, with the result that schools with similar attendance rates can experience substantially different CA rates.

When comparing attendance rate and CA, the results can vary substantially. Attendance rates can sometimes obscure the CA of individual students within schools, with the result that schools with similar attendance rates can experience substantially different CA rates.

Both previous-year CA and absences early in the school year have been shown to be strong predictors of CA. OEA analysis showed that being absent during the first month of school increased the likelihood of becoming CA by 11 percentage points in the 2016 school year. Additionally, nearly two in five of those students who were CA in 2015 were CA again in 2016.

Trends In Attendance

Kentucky has a higher rate of CA than most of its surrounding states.

This chapter compares Kentucky to its seven surrounding states. Kentucky has higher rates of CA at all levels than many of the surrounding states. Overall, Kentucky has the second highest CA rate among these states. This chapter also examines the concentration of CA within Kentucky's schools and regions. Eastern Kentucky and Jefferson County are the two regions experiencing the highest rates of CA. The top 10 percent of schools at each level for highest CA rates are all found in these two areas.

Comparison To Neighboring States And The Nation

Compared to the rest of the nation, in the 2014 school year, Kentucky had the 23rd highest rate of CA across all levels. While Kentucky's overall CA rate is about 1 percentage point higher than the nation's, it particularly struggles at the high school level. As Table 2.1 shows, at the elementary level, Kentucky has the 24th highest rate of CA nationally and the 3rd highest compared to its seven surrounding states. At the high school level, Kentucky has the 10th highest rate in the nation, with 22 percent of students being CA. Among Kentucky and its seven neighboring states, Kentucky high school students have the highest rate of CA and Kentucky middle school students have the second highest rate. Appendix D includes a table with every state and its rate of CA.

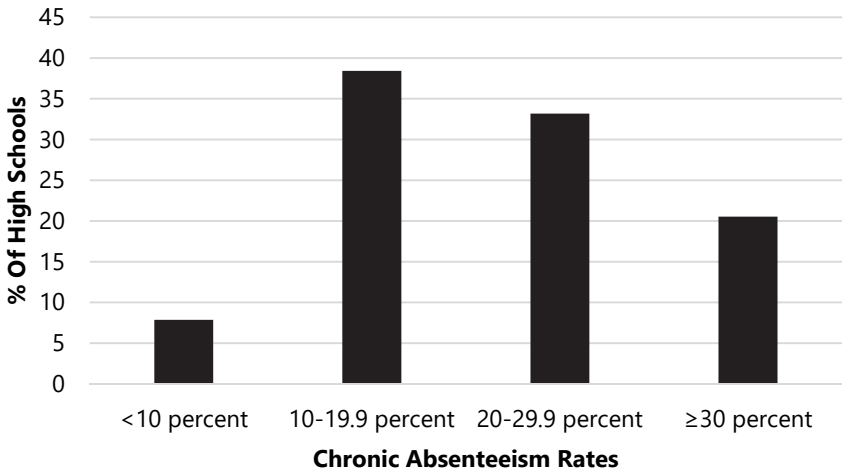
Table 2.1
Neighboring States' Chronic Absenteeism Rates And Their National Ranks
School Year 2014

	Elementary School		Middle School		High School		Overall	
State	**Percent**	**Rank**	**Percent**	**Rank**	**Percent**	**Rank**	**Percent**	**Rank**
OH	12.5%	13	16.0%	8	20.2%	18	15.0%	17
KY	**10.5**	**24**	**13.8**	**19**	**22.0**	**10**	**14.4**	**23**
WV	10.8	22	13.0	25	19.7	22	13.9	25
VA	10.1	32	12.1	29	18.1	28	13.0	28
IL	8.5	43	10.1	39	20.0	19	12.7	30
TN	9.1	40	9.4	44	17.6	31	12.1	34
MO	9.5	36	10.5	37	15.3	40	11.9	37
IN	7.2	48	8.7	47	13.9	44	9.7	48
US	**10.8**	**N/A**	**12.6**	**N/A**	**18.0**	**N/A**	**13.2**	**N/A**

Note: The Office for Civil Rights defines chronic absenteeism as students missing 15 school days or more.
Source: United States. Dep. of Educ. Office for Civil Rights Data Collection. "Civil Rights Data Collection." 2014. Web. Aug. 3, 2017.

Figure 2.A further examines the CA rates in Kentucky high schools during the 2016 school year. Less than 8 percent of high schools had a rate below 10 percent, but more than 20 percent of high schools had a rate greater than 30 percent. Additionally, two high schools had CA rates below 5 percent, and four high schools had CA rates above 50 percent.

Figure 2.A
Distribution Of High School Chronic Absenteeism Rates
School Year 2016



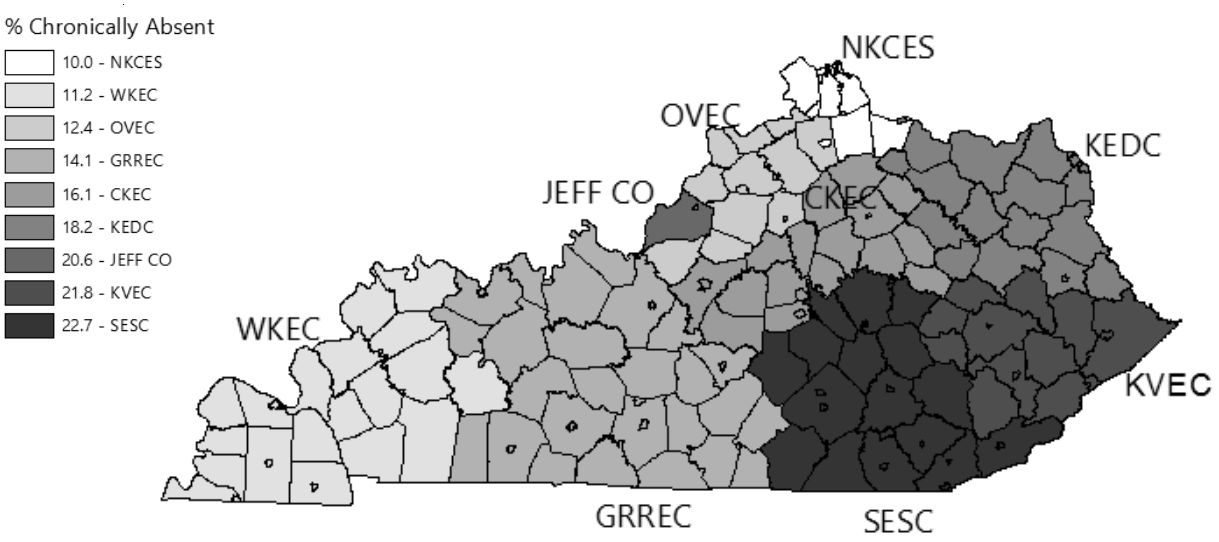
Source: Kentucky Department of Education.

Comparisons Between Regions And Districts

Rates of CA vary substantially between regions of the state.

Rates of CA vary based on geographic region. Using the educational cooperatives listed on the Kentucky Department of Education's School Report Cards, OEA staff compared the rate of CA by region. NKCES had the lowest rate of CA, with 10.1 percent. SESC had the highest rate of CA, at 23 percent. Rates of CA are, on average, higher in eastern Kentucky than in other parts of the state. As seen in Figure 2.B, the cooperatives in eastern Kentucky had the highest rates of CA in school year 2016.

Figure 2.B
Chronic Absenteeism By Educational Cooperative
School Year 2016



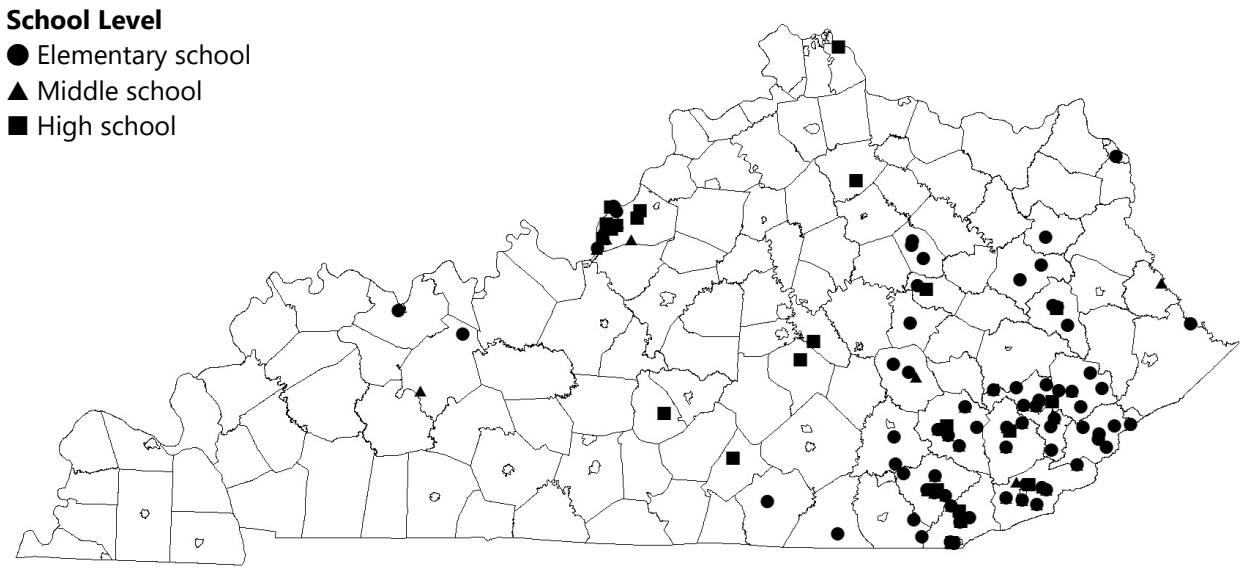
Source: Kentucky Department of Education.

Chronic Absenteeism Concentration In Schools And Districts

While the previous section discussed CA at the co-op level, this section will detail the prevalence in individual schools. This analysis examined schools in the top 10 percent of CA for each school level (elementary, middle, and high). For schools with multiple levels, students were assigned to elementary, middle, or high based on students' grade level.[a] OEA identified 117 schools as being in the top 10 percent (72 elementary, 25 middle, and 20 high schools) of CA. These schools were mostly concentrated in two distinct regions: Jefferson County and eastern Kentucky. Figure 2.C shows the schools that were identified in the top 10 percent of CA for their respective levels.

[a] Grades K-5 were used for elementary, grades 6-8 for middle, and grades 9-12 for high school.

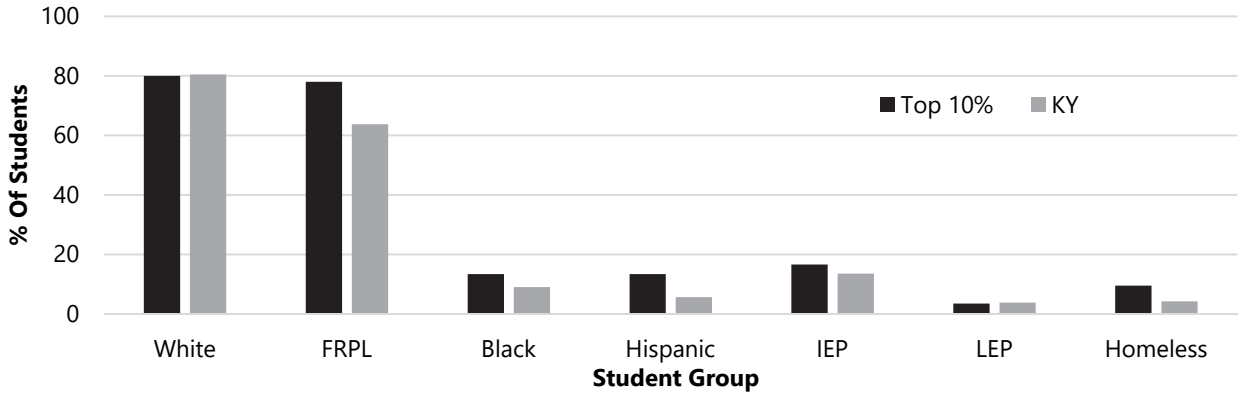
Figure 2.C
Schools Identified In The Top 10 Percent Of Chronic Absenteeism, By Level
School Year 2016



Source: Kentucky Department of Education.

Figure 2.D compares the demographic profile of the highest 10 percent of schools in terms of CA to the state average. When comparing the students at these schools to the state average, schools in the top 10 percent of CA have approximately the same percentage of white students and LEP students as the state average, a higher percentage of students on FRPL, and a higher percentage of black, Hispanic, and homeless students, and students with individualized education programs (IEPs).

Figure 2.D
Comparison Of Highest 10 Percent Of Schools To State, School Year 2016



Note: FRPL= free or reduced-price lunch; IEP = individualized education program; LEP = limited English proficiency.
Source: Kentucky Department of Education.

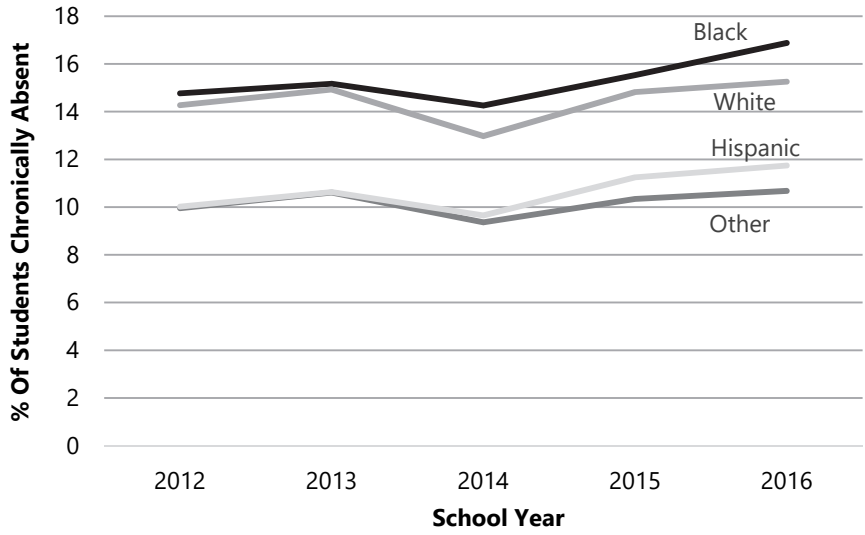
Comparisons On Ethnicity, Programs, Gender, And Discipline

This section examines CA rates by race and ethnicity, program eligibility, gender, and students receiving either an out-of-school suspension or an in-school removal. Student groups were identified using previous research. These include gap groups associated with lower academic performance.

Chronic Absenteeism By Race And Ethnicity

For all races and ethnicities, CA rates have increased over the previous 5 years. For school years 2012-2016, black students had the highest rates, compared to their peers, white students had slightly lower rates, and Hispanic students and those of other races had rates at least 4 percentage points lower. Figure 2.E shows rates of CA by race and ethnicity for school years 2012-2016.

Figure 2.E
Chronic Absenteeism Rates By Race/Ethnicity
School Years 2012 To 2016



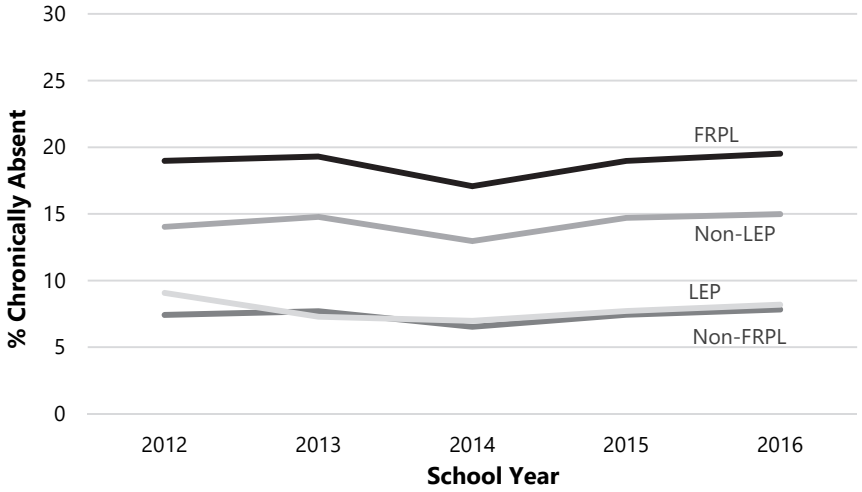
Source: Kentucky Department of Education.

Chronic Absenteeism By Program Eligibility

When examining CA rates for LEP and FRPL programs, FRPL students had higher rates of CA than non-FRPL students, 20 percent and 8 percent, respectively in school year 2016. LEP students are much less likely to be chronically absent than their non-LEP peers, 8 percent compared to 15 percent. LEP students' rates are less than 60 percent of the rates of their non-LEP peers, as shown in Figure 2.F. Figure 2.G details the CA rates for homeless

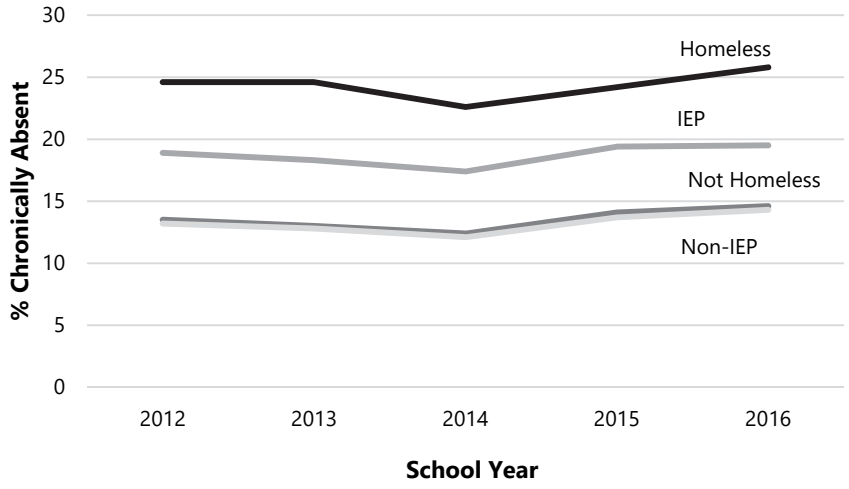
students (25.8 percent in school year 2016), students who are not homeless (14.6 percent), students with an IEP (19.5 percent), and students without an IEP (14.3 percent).

Figure 2.F
Chronic Absenteeism Rates By FRPL And LEP Eligibility
School Years 2012 To 2016



Note: FRPL= free or reduced-price lunch; LEP = limited English proficiency.
Source: Kentucky Department of Education.

Figure 2.G
Chronic Absenteeism Rates
By IEP Eligibility And Homeless Status
School Years 2012 To 2016

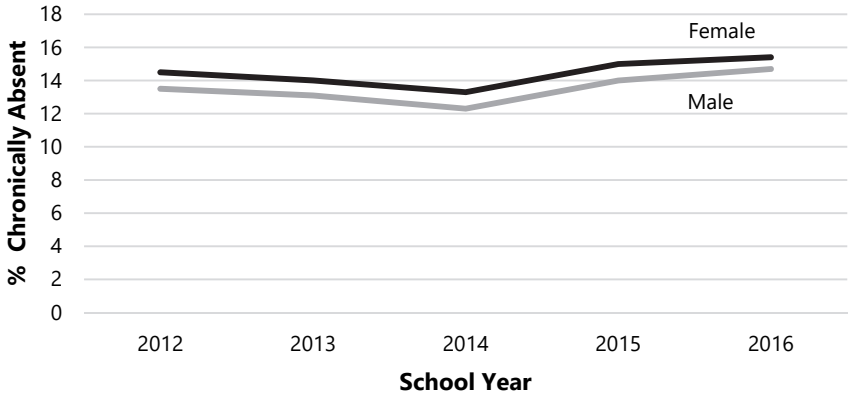


Note: IEP = individualized education program.
Source: Kentucky Department of Education.

Chronic Absenteeism By Gender

When comparing CA rates for gender, female students have a higher rate of CA. As seen in Figure 2.H, over the previous 5 years, the largest difference between male and female students is a single percentage point.

Figure 2.H
Chronic Absenteeism Rates By Gender
School Years 2012 To 2016

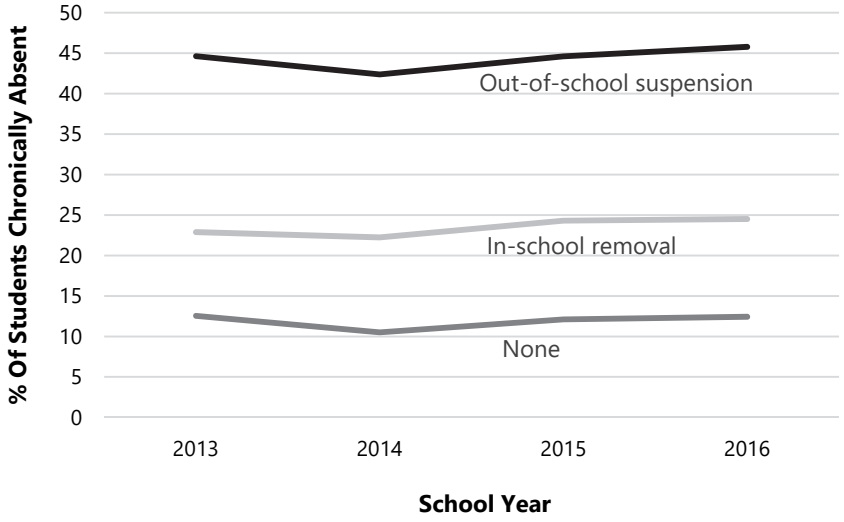


Source: Kentucky Department of Education.

Chronic Absenteeism By Discipline Resolutions

Figure 2.I shows CA rates for students who received an out-of-school suspension, in-school removal, or neither. Often a student receiving one type of discipline event may receive more than one at the same time. Additionally, a student may have received both an in-school removal and out-of-school suspension over the course of a school year. For this analysis, students are included in the out-of-school suspension group if they received an out-of-school suspension, regardless of other punishments. Those students in the in-school removal group have been excluded, as have those students who received an out-of-school suspension in addition to an in-school removal. For those students receiving an out-of-school suspension, over 45 percent were chronically absent in 2016. It is important to note that days missed due to being suspended count as days missed. For students who received an in-school removal, approximately 25 percent were chronically absent. Unlike out-of-school suspensions, time missed due to in-school removal does not count as days missed for the purpose of calculating chronic absenteeism. Those students who did not receive either type of suspension had much lower chronic absenteeism rates than those who did. In 2016, 13 percent of students without a discipline resolution were chronically absent.

Figure 2.I
Chronic Absenteeism Rates By Discipline Resolutions
School Years 2013 To 2016



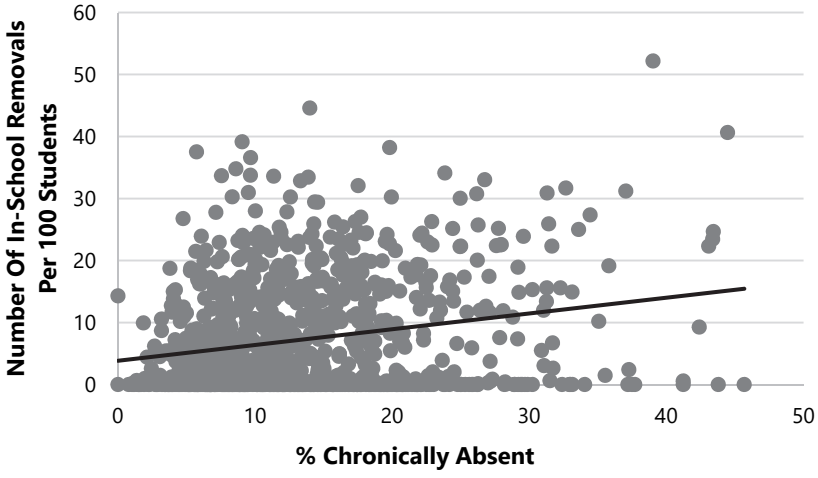
Source: Kentucky Department of Education.

School Chronic Absenteeism And Discipline

There is a weak positive correlation between in-school removals and chronic absenteeism.

Figure 2.J shows the relationship between a school's CA rate and the number of in-school removals reported. The number of in-school removals is on a per-100-student enrollment basis. There is a weak positive correlation between in-school removals and chronic absenteeism.

Figure 2.J
Chronic Absenteeism
And In-School Removal Per 100 Students
School Year 2016

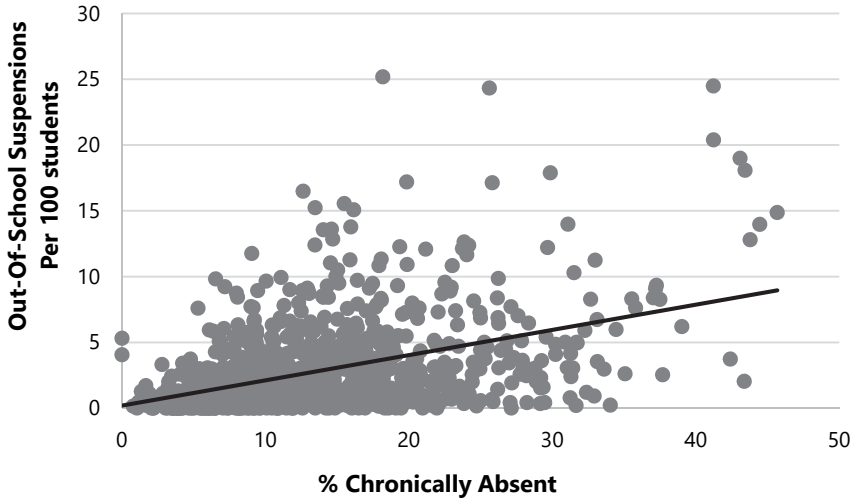


Source: Kentucky Department of Education.

There is a moderate positive correlation between a school's CA rate and its suspension rate.

Figure 2.K shows the number of out-of-school suspensions per 100 students enrolled relative to CA. Again, there is a moderate positive correlation between a school's CA rate and its suspension rate.

Figure 2.K
Chronic Absenteeism
And Out-Of-School Suspensions Per 100 Students
School Year 2016



Source: Kentucky Department of Education.

CA, Average Attendance Rate, And Truancy

School attendance rates can obscure CA rates of individual students within schools. Schools with similar attendance rates can have substantially different CA rates.

Average daily attendance and attendance rates are reported on KDE's School Report Cards. One difficulty with using attendance rates is that attendance rates can sometimes obscure the CA of individual students within schools, with the result that schools with similar attendance rates can experience substantially different CA rates. Although attendance rates are high across the state, CA rates vary drastically.

Attendance Rate

The state's attendance rate has been approximately 95 percent in each of the previous 5 years; however, the state's CA rate has fluctuated over the same period.

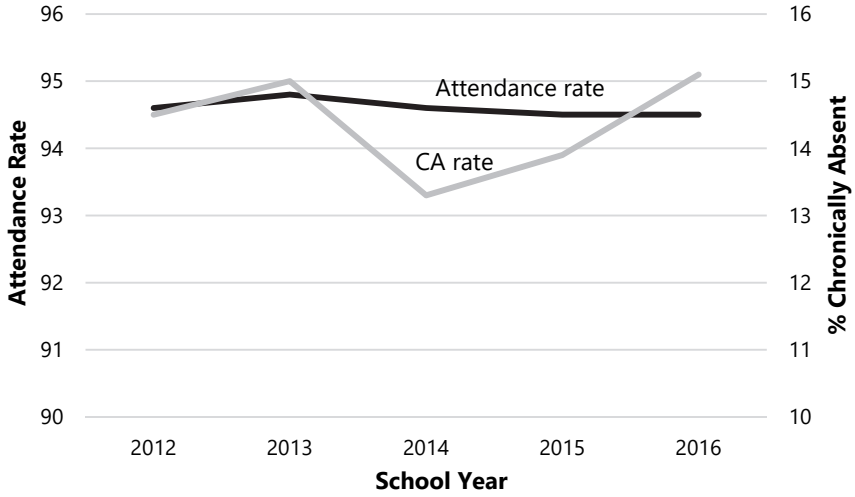
The attendance rate is one measure KDE uses to describe the number of students who attend school on a regular basis.[b] [24] As shown in Figure 2.L, the attendance rate for the state has been high and stable, approximately 95 percent over the previous 5 years.

[b] The attendance rate is simply the proportion of students in attendance during the school year. The percentage is calculated by the sum of present days for all students divided by total present plus absent student days—that is, present/(present+absent).

State Rate Of Chronic Absenteeism

Although attendance rates indicate a consistently high level of success, attendance rates could be misleading. Figure 2.L also shows the CA rates for the same period. Though attendance rates indicate that nearly 19 of 20 students are attending school, chronic absenteeism rates indicate nearly one in six is missing at least 10 percent of school. Theoretically, it is possible for 50 percent of students to be chronically absent with an attendance rate of 95 percent.

Figure 2.L
Kentucky Attendance Rate And Chronic Absenteeism Rate
School Years 2012 To 2016



Source: Kentucky Department of Education.

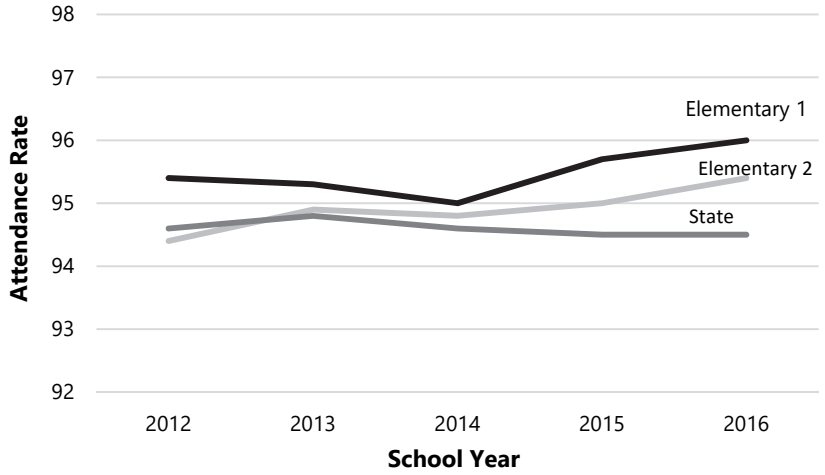
Research has found that schools with an average daily attendance rate higher than 97 percent rarely have a CA problem, and schools with an ADA below 93 percent are very likely dealing with high concentrations of CA.[25] Within Kentucky, 30 schools had an attendance rate of at least 97 percent in 2016. All of those schools were elementary schools. The highest CA rate from those schools was 5.3 percent.

Comparison Of CA Rate And Attendance Rate

The previous figures focused on state averages for CA and attendance rates. Figure 2.M shows the attendance rate for the state and for two elementary schools. Both elementary schools have a higher attendance rate than the state as a whole. Elementary 1 had a 96 percent attendance rate in 2016, and Elementary 2 had an attendance rate of 95.4 percent. Both elementary schools enroll

over 350 students. The schools have identical FRPL rates, but they differ in racial composition.

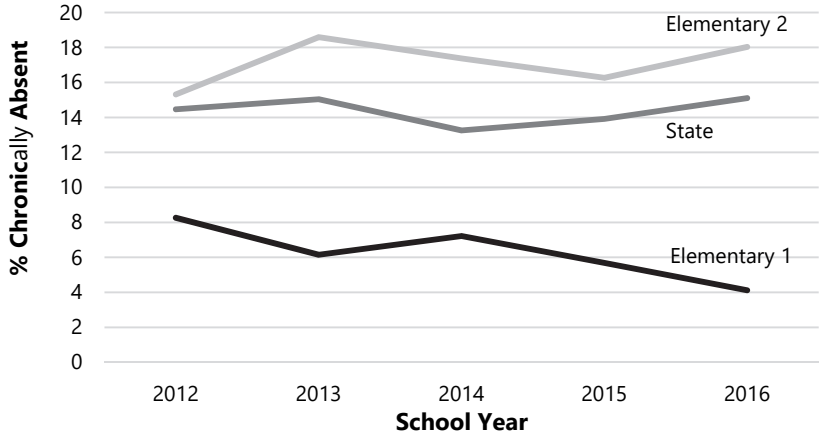
Figure 2.M
Attendance Rate For Two Elementary Schools
School Years 2012 To 2016



Source: Kentucky Department of Education.

Figure 2.N compares the same schools on CA rates instead of attendance rates, and the results are much more varied. For school year 2016, Elementary 1 has a CA rate under 5 percent, whereas Elementary 2 has a CA rate over 18 percent. In other words, in Elementary 1 nearly 1 in 20 students is chronically absent; in Elementary 2 more than 1 out of every 6 students is chronically absent. These are vastly different results as opposed to the relative parity in attendance rate.

Figure 2.N
Chronic Absenteeism Rates For Two Elementary Schools
School Years 2012-2016



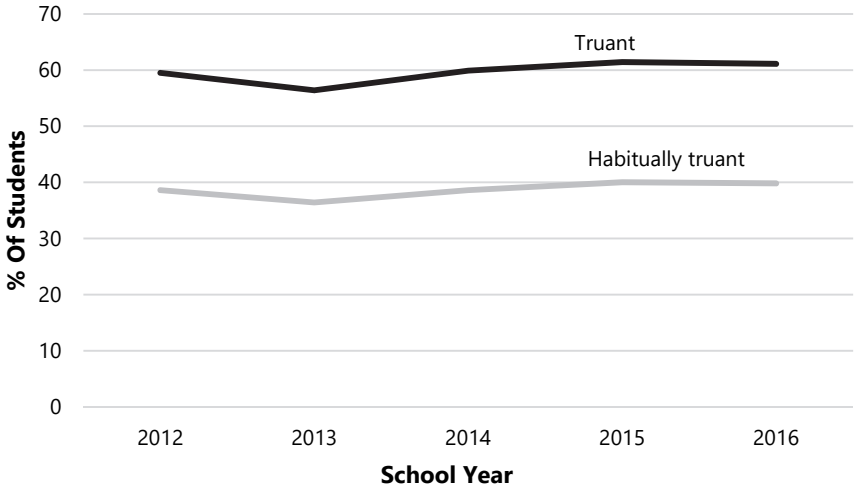
Source: Kentucky Department of Education.

Truancy

Approximately 60 percent of Kentucky students meet the definition for truant each year, while 40 percent are habitually truant.

Truancy is an often-used tool for ensuring that students are attending schools as required. As of 2013, 22 states had a truancy law. In Kentucky, KRS 159.150 defines truancy as 3 or more unexcused absences or tardies in a school year for students aged 6 to 18 years. *Habitually truant* is defined as becoming truant two or more times in a school year. Figure 2.O details the truancy and habitual truancy rates for the previous 5 years. Consistently, approximately 60 percent of K-12 students are identified as truant each year. Additionally, 40 percent of all K-12 students are habitually truant. Explained another way, nearly two-thirds of students who are labeled truant will be habitually truant as well.

Figure 2.O
Truancy And Habitual Truancy Rates
School Years 2012-2016



Source: Kentucky Department of Education.

Recommendation 2.1

Recommendation 2.1

Under the terms of KRS 159.150, the majority of Kentucky students are truant and more than 40 percent are habitually truant. The prevalence of truancy in Kentucky may reduce the impact of labeling students as truant or habitually truant. The General Assembly should further explore how schools and local boards of education implement KRS 159.150. This may include reviewing and revising KRS 159.150 to redefine truancy in a manner that would assist schools and districts in providing assistance to students who are more likely to suffer negative consequences of poor attendance.

Predicting Chronic Absenteeism

This section discusses student level identifiers associated with CA. The ability to predict CA based on student grade, school level (elementary, middle, or high school), absences during the first month of school and previous years' CA status will be examined.

Chronic Absenteeism By Level And Grade

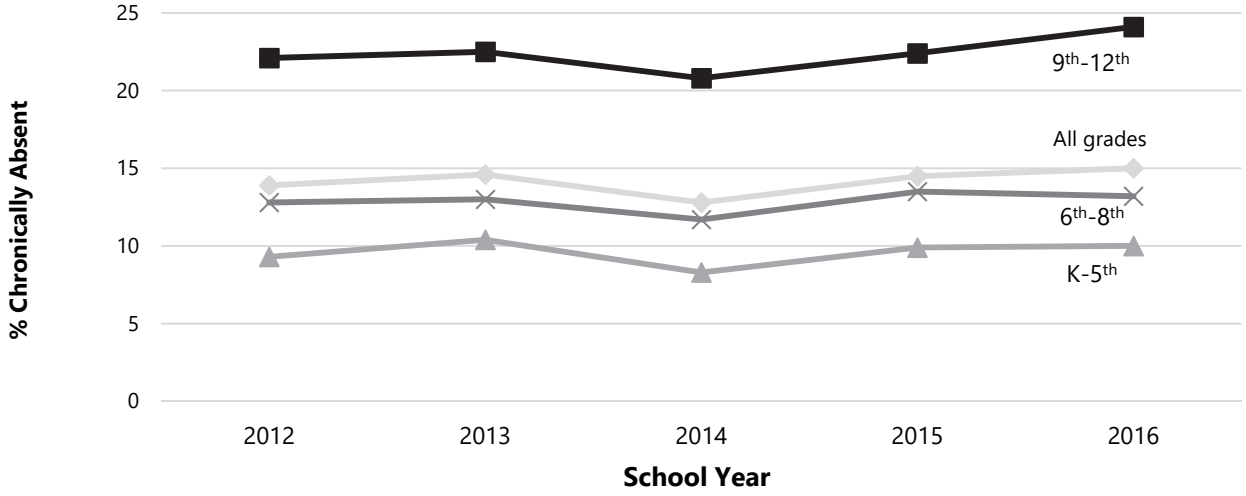
On average, approximately 14 percent of students are CA each year.

The proportion of all students considered chronically absent varied slightly per school year from approximately 13.9 percent in 2012 to 15 percent in 2016. The average chronic absence rate was approximately 14.2 percent from 2012 to 2016.

High school students have the highest rates of CA.

Chronic Absenteeism By Level. Chronic absenteeism rates by grade were aggregated into three levels for this analysis: grades K-5, 6-8, and 9-12.[c] As shown in Figure 2.P, students in grades 9 through 12 had the highest rates of CA in school years 2012 to 2016. During that time, the CA rate increased 2 percent for students in grades 9 through 12; that was the highest increase across all levels of school. K-5 students had the lowest levels of chronic absenteeism at approximately 10 percent on average, while 6th- through 8th-grade students averaged approximately 13 percent.

Figure 2.P
Chronic Absenteeism Rates By Grade Level, School Years 2012 To 2016



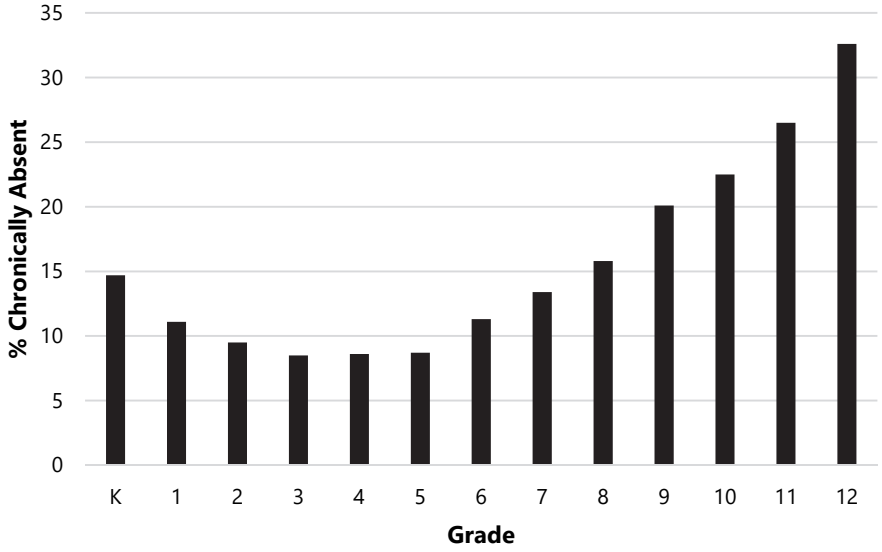
Source: Kentucky Department of Education.

[c] Not all schools and/or districts account for the same collection of grades by level. However, for the purpose of this analysis, student level data was aggregated into the categories described above to represent elementary (K-5th), middle school (6th-8th), and high school (9th-12th); for example, a K-12 school would have students in all three levels and those rates could be different based on the CA rates for students in the three distinct grade ranges.

Within the elementary school level, kindergartners and 1st-graders experience a higher rate of CA than other grades.

Chronic Absenteeism By Grade. The rates of CA varied by grade. Figure 2.Q shows the chronic absenteeism rate for all students in school year 2016. According to the data, 14.7 percent of kindergarten students were chronically absent in 2016. The rates of chronic absenteeism decreased after kindergarten up to 4th grade, which had the lowest rate of chronic absenteeism by grade at 8.6 percent. Students in the 12th grade had a CA rate of 32.6 percent, which was the highest for any grade. The CA rate for 12th-graders was more than double the CA rate for kindergartners and nearly four times as high as the CA rate for 4th-graders. Chronic absence rates then increased each grade from 5 through 12. A full analysis of CA by students' grade and demographic characteristics appears in Appendix E.

Figure 2.Q
Chronic Absenteeism Rates By Grade
School Year 2016



Source: Kentucky Department of Education.

Recommendation 2.2

Recommendation 2.2

Kentucky school districts, with the support and guidance of the Kentucky Department of Education, should monitor student attendance in kindergarten and 1st grade, as those students are more likely to be chronically absent than other students at the elementary level.

Absences Early In The School Year

First-month absences were calculated using student-level absence data supplied by KDE for the 2016 school year.

Each absence during the first month of school increased a student's chances of becoming CA by 11 percentage points.

A linear probability model was designed to determine the increase in probability of being chronically absent. The largest predictor for this analysis was student-level absences of any kind during the first month of school during the 2016 school year. According to the analysis, each absence of any kind during the first month of instruction accounted for an approximately 11 percentage point increase in the probability of a student being chronically absent. Full technical details of the model appear in Appendix F.

Recommendation 2.3

Recommendation 2.3

Kentucky school districts, with the support and guidance of the Kentucky Department of Education, should identify, early in the school year, students at risk of becoming chronically absent.

Chronic Absenteeism From Year To Year

On average, rates of CA increase progressively with each grade after the 4th grade, but this information does not provide answers as to whether an individual student's chronic absence in prior years is associated with that same student being chronically absent in future years.

A student's CA one year increases the chances for that student becoming CA in the following years.

A linear probability model was designed to determine whether prior years' CA rate was associated with CA in 2016. According to the analysis, CA status in each of the prior years increased the probability of CA during the 2016 school year. The CA status during the 2015 school year was the best predictor for 2016 CA status. The model also indicates that if students were chronically absent in each of the prior years within the model, those students would have approximately a 51 percent greater probability of being chronically absent during the 2016 school year before factoring in the other explanatory variables within the model. Full technical details of the model appear in Appendix G.

Chapter 3

Chronic Absenteeism And Outcomes

Introduction

This chapter covers the association between test scores, GPA, promotion, and discipline with CA.

Chapter 2 dealt with the characteristics of CA. This chapter examines the outcomes associated with missing school. To do this, the chapter details the associated outcomes of CA on test scores, GPA, promotion, and discipline.

Outcomes

CA has been shown to be associated with a variety of student outcomes. This section explores how CA is associated with test scores, including ACT and K-PREP. This section will also examine the association between CA and GPAs, promotion, and student discipline.

ACT

The ACT is a standardized test developed by ACT Inc. for the primary purpose of indicating students' readiness for college. Along with the SAT, the ACT is the test most commonly accepted by colleges for college admission. All Kentucky students are required to take the ACT in the 11th grade. Eleventh-graders pay no fee for this required test, but many choose to retake the ACT at their own expense. ACT reports scores of Kentucky students who retake the ACT to KDE. KDE uses students' highest scores in English, math, and reading to compute college readiness for the College and Career Readiness measure.

The ACT tests the knowledge and skills of students in English, math, reading, and science, and it includes an optional writing section. A composite score is determined by averaging the individual subject scores to the nearest whole number. Test scores are numeric, and range from a low of 1 to a high of 36. The average composite score for all Kentucky public school 11th-graders has improved over the course of the observation period from 19.1 in 2012 to 19.6 in 2016.

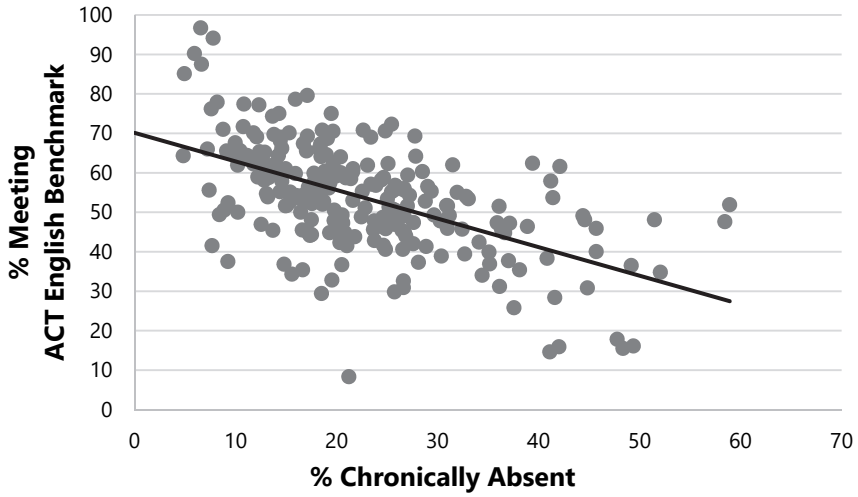
Kentucky's Council on Postsecondary Education set the following benchmark scores for college readiness:

- English, 18
- Reading, 20
- Math, 19

There is a moderate to strong negative correlation between the percentage of CA in a school and the percentage of students meeting college ready benchmarks on the ACT.

ACT And Schools' Chronic Absence Rate. This analysis uses ACT benchmarks set by the Council on Postsecondary Education to evaluate the percentage of students meeting those requirements. Figure 3.A shows the relationship between the percentage of a school's students who are CA and the percentage of students meeting the English ACT benchmark. There is a moderate to strong negative correlation between the percentage of CA in a school and the percentage of students meeting college ready benchmarks in ACT English. While this chart shows only the English component, other subjects show similar trends, as shown in Appendix H.

Figure 3.A
School Chronic Absenteeism And ACT English Benchmarks
School Year 2016



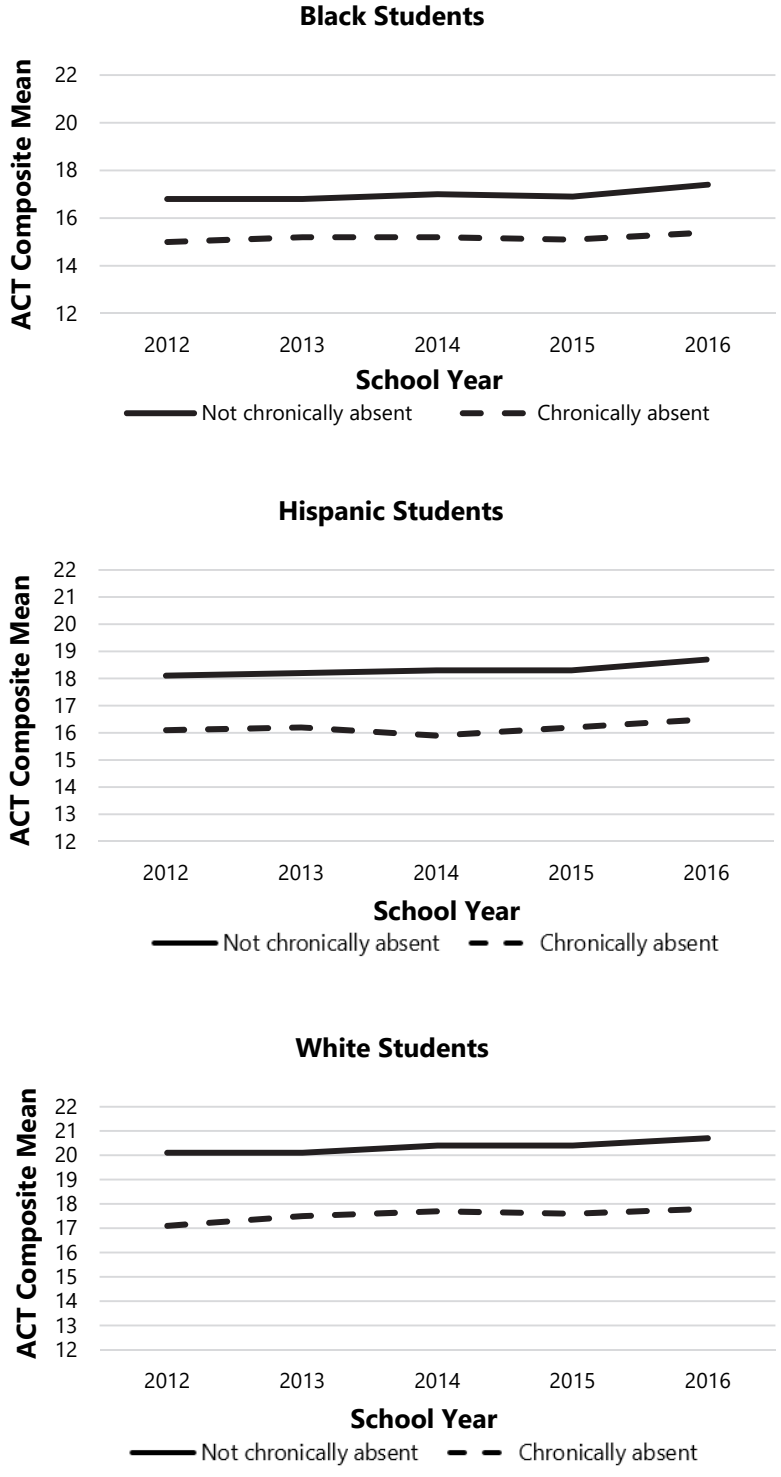
Source: Kentucky Department of Education.

Students who were CA had ACT composite scores almost 3 points below non-CA students.

ACT Composite Scores. This analysis was conducted on 11th-grade Kentucky public high school students who participated in the ACT college readiness assessment from school years 2012 to 2016. CA students had ACT composite scores that were approximately 2.7 points lower than the mean scores for all tested 11th-grade students who were not CA over the course of the observation period.

As illustrated in Figure 3.B, the gap in ACT composite scores for CA students is evident when controlling for the largest racial/ethnic categories of students. While average ACT composite scores did increase for these groups over the course of the observation period, the gap in ACT composite scores, when controlling for CA status within groups, also increased from 2012 to 2016. In 2016, black CA students scored 2 points lower than non-CA black students; this gap was 2.2 points for Hispanic students and 2.9 points for white students.

Figure 3.B
ACT Composite Scores Comparison
Racial Groups By Chronic Absence Status, 11th-Grade Students
School Years 2012 To 2016

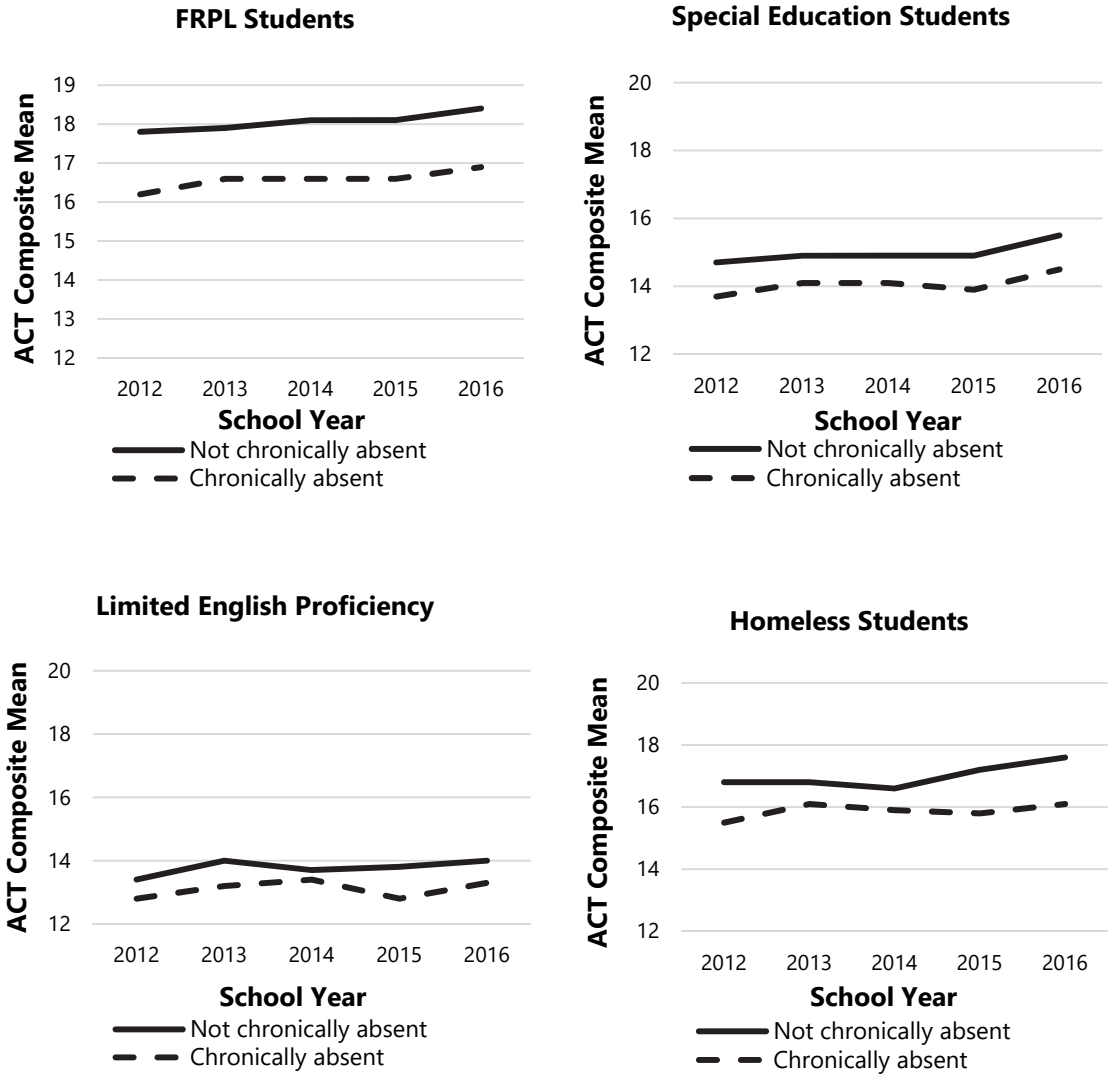


Source: Kentucky Department of Education.

CA students in each gap group score lower than their non-CA peers.

Figure 3.C shows the ACT composite score means when controlling for chronic absence status for students in four subgroups (FRPL, IEP, LEP, and homeless). Chronically absent students in each of these groups had lower average ACT composite scores relative to their non-CA peers, with chronically absent FRPL students scoring 2.5 points lower than non-CA FRPL students in 2016. The gap was smallest for LEP students when controlling for chronic absence on average, but the gap did widen after the 2014 school year.

Figure 3.C
ACT Composite Scores Comparison
Gap Groups By Chronic Absence Status, 11th-Grade Students
School Years 2012 To 2016

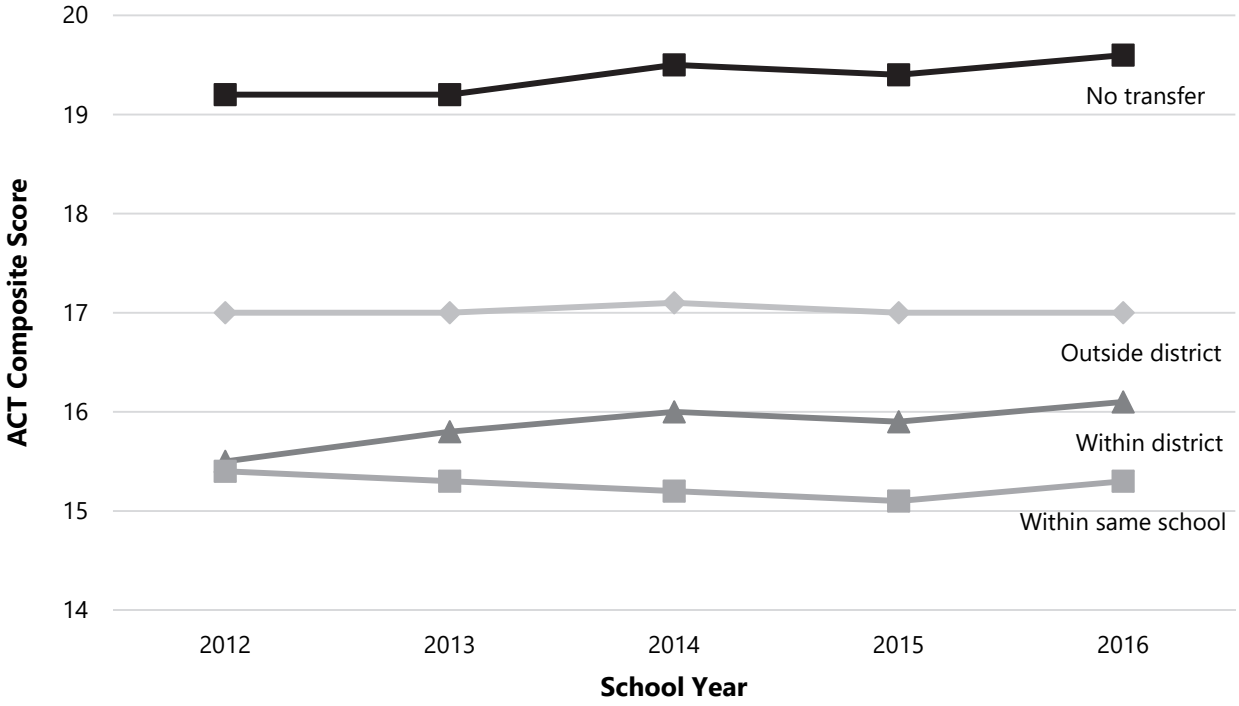


Source: Kentucky Department of Education.

Mobile students scored lower on the ACT than students who had not transferred during the school year.

Mobility And ACT Composite Scores. Students who were considered mobile during the observation period were placed into three categories: students who transferred within their prior district, students who transferred within their same school, and students who transferred outside of their prior district during the school year.[a] Students who transferred within the school year in which they took the ACT test scored considerably lower than students who did not transfer. Figure 3.D illustrates the mean ACT composite scores for students who did not transfer relative to the three transfer groups. Students who transferred within the same school had the largest scoring gap among the transfer groups, scoring more than 4 points lower on average over the observation period relative to those with no transfers. Students with an in-school transfer, controlling for other variables, scored over 2 points lower, and students with an in-district transfer scored 1.3 points lower than students with no transfers. A statistical analysis appears in Appendix I.

Figure 3.D
ACT Composite Scores Comparison, 11th-Grade Students By Transfer Status
School Years 2012 To 2016



Source: Kentucky Department of Education.

[a] Students who transfer within schools are usually those who have transferred to or from some kind of alternative program within the same school.

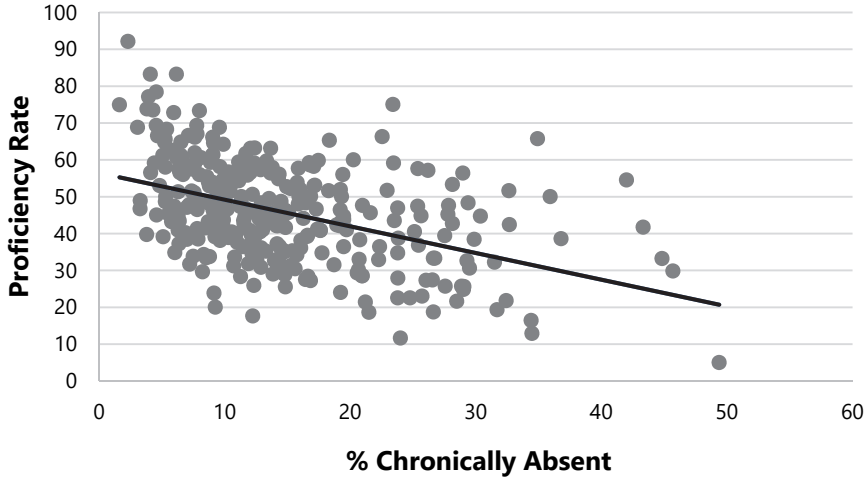
K-PREP

The Kentucky Performance Rating for Educational Progress assessment program was created by the General Assembly as part of Senate Bill 1 in 2009. The program officially began during the 2012 school year and was developed with elements of norm-referenced tests and criterion-referenced tests.[26] This analysis focuses on K-PREP reading and math assessments that were administered to all students in grades 3 through 8 from 2012 to 2016. More than 300,000 students participated in these assessments during each of the years of this time period.

There is a negative correlation between schools' Kentucky Performance Rating for Educational Progress proficiency rates and CA rates.

K-PREP And Schools' Chronic Absence Rates. In addition to ACT scores, this report examines K-PREP proficiency rates. As with ACT benchmarks, there is a negative correlation between schools' K-PREP proficiency rates and CA rates. Figure 3.E shows a moderate negative correlation between middle school math proficiency rates and rates of CA in 2016. Other subjects and levels show similar trends, as shown in Appendix J.

Figure 3.E
Middle School Chronic Absenteeism
And K-PREP Proficiency Rates in Math
School Year 2016



Source: Kentucky Department of Education.

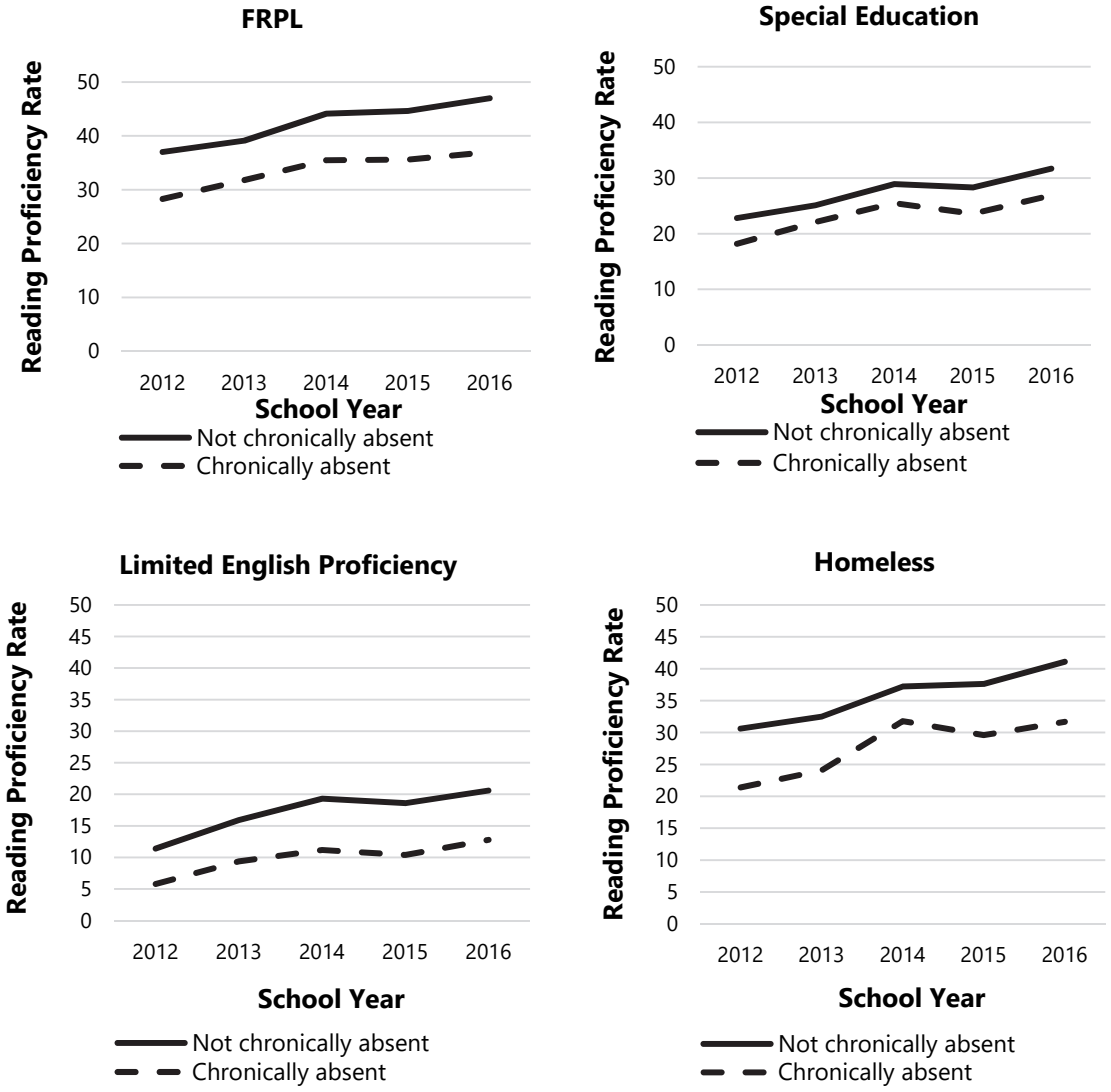
K-PREP Reading. The percentage of all 3rd-grade through 8th-grade students who scored proficient or better on the K-PREP reading assessment has increased steadily from 47.2 percent in 2012 to 55.6 percent in 2016; however, FRPL students and students from racial/ethnic minority groups had K-PREP reading proficiency rates that were in some cases far lower than the

average for all tested students. The gap in proficiency rates widens for all groups when accounting for chronic absence status.

CA students, in every group, had lower proficiency rates than their non-CA peers. The largest gap, 10 percentage points, was seen between CA and non-CA free or reduced-price lunch (FRPL) students.

Figure 3.F illustrates the rates of proficiency for students within programs associated with gaps in achievement by CA status. CA students within each of these groups had lower rates of proficiency than other students. The largest gap was among FRPL students, where chronically absent FRPL students' proficiency rates were 10 percentage points lower than the rates for FRPL students who were not chronically absent during the 2016 school year.

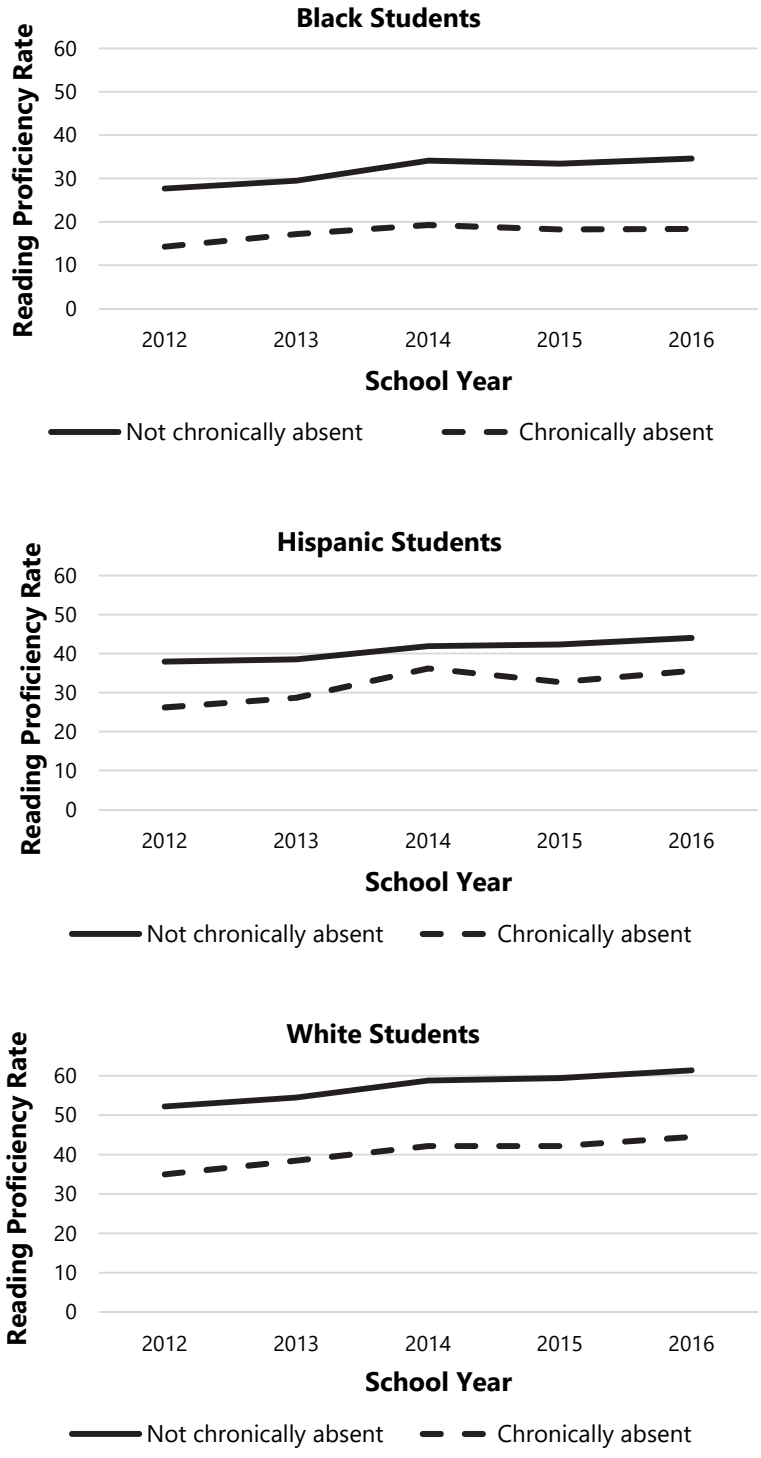
Figure 3.F
K-PREP Reading Assessment Proficiency Rates
For Students In Gap Groups By Chronic Absence Status
School Years 2012 To 2016



Source: Kentucky Department of Education.

When looking at the three largest racial/ethnic groups of students, the gaps in K-PREP reading proficiency rates when accounting for chronic absence status were widest among white students (16.9 percentage points in 2016) and African American students (16.2 percentage point gap in 2016). Figure 3.G illustrates the trends in reading proficiency rates for these racial groups when controlling for chronic absenteeism.

Figure 3.G
K-PREP Reading Assessment Proficiency Rates
Per Largest Racial Groups By Chronic Absence Status
School Years 2012 To 2016

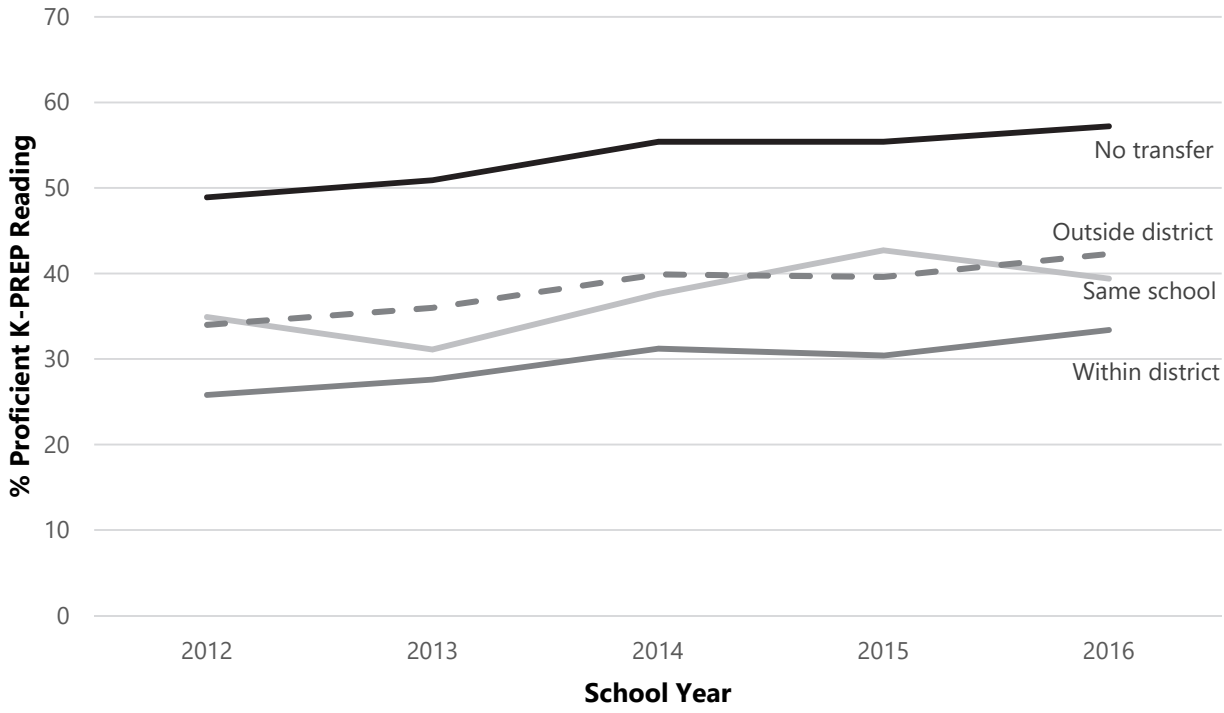


Source: Kentucky Department of Education.

Students who transferred within their district were 24 percentage points below other students in proficiency in reading.

K-PREP Reading Proficiency And Mobility. Students who transferred during the school year struggled, relative to others, in achieving reading proficiency. According to the data, students who transferred within their previous district were proficient in reading 24 percentage points lower on average than students who did not transfer during a given year. Figure 3.H illustrates this proficiency gap over the course of the observation period.

Figure 3.H
Percentage Of Students Scoring Proficient Or Better On K-PREP Reading Assessment By Mobility Status
School Years 2012 To 2016

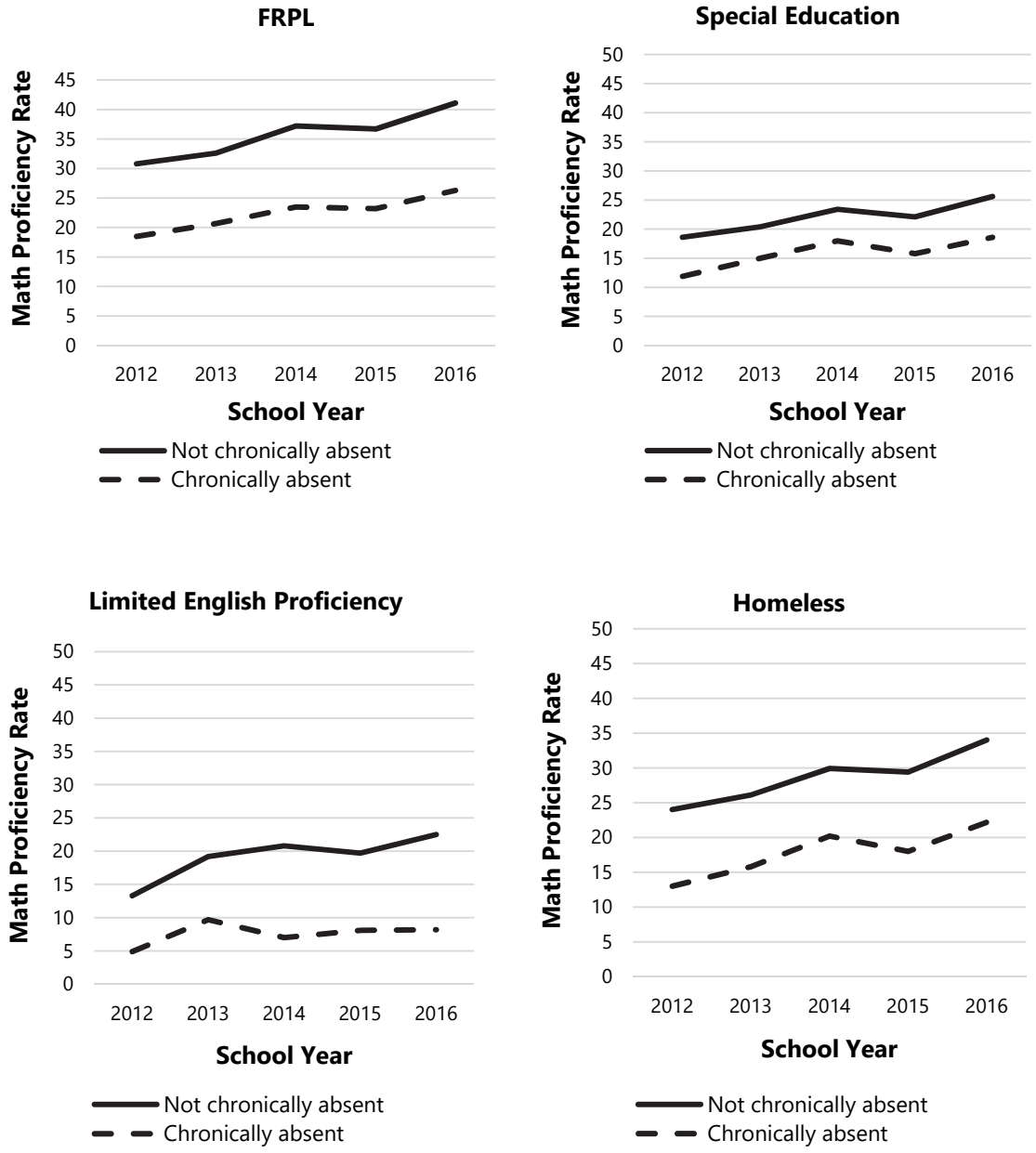


Source: Kentucky Department of Education.

K-PREP Math. Overall, K-PREP math proficiency rates have improved from 40 percent in 2012 to more than 49 percent in 2016. As with the K-PREP reading assessment, students from gap groups had rates of proficiency that were lower than the overall mean, and when controlling for chronic absence status, the rates of proficiency within these groups were lower for students who were chronically absent than for others.

Figure 3.I shows the trends in K-PREP math proficiency for students in known gap groups based on chronic absence status. Chronically absent students within each of the groups shown in Figure 3.I struggled relative to other students.

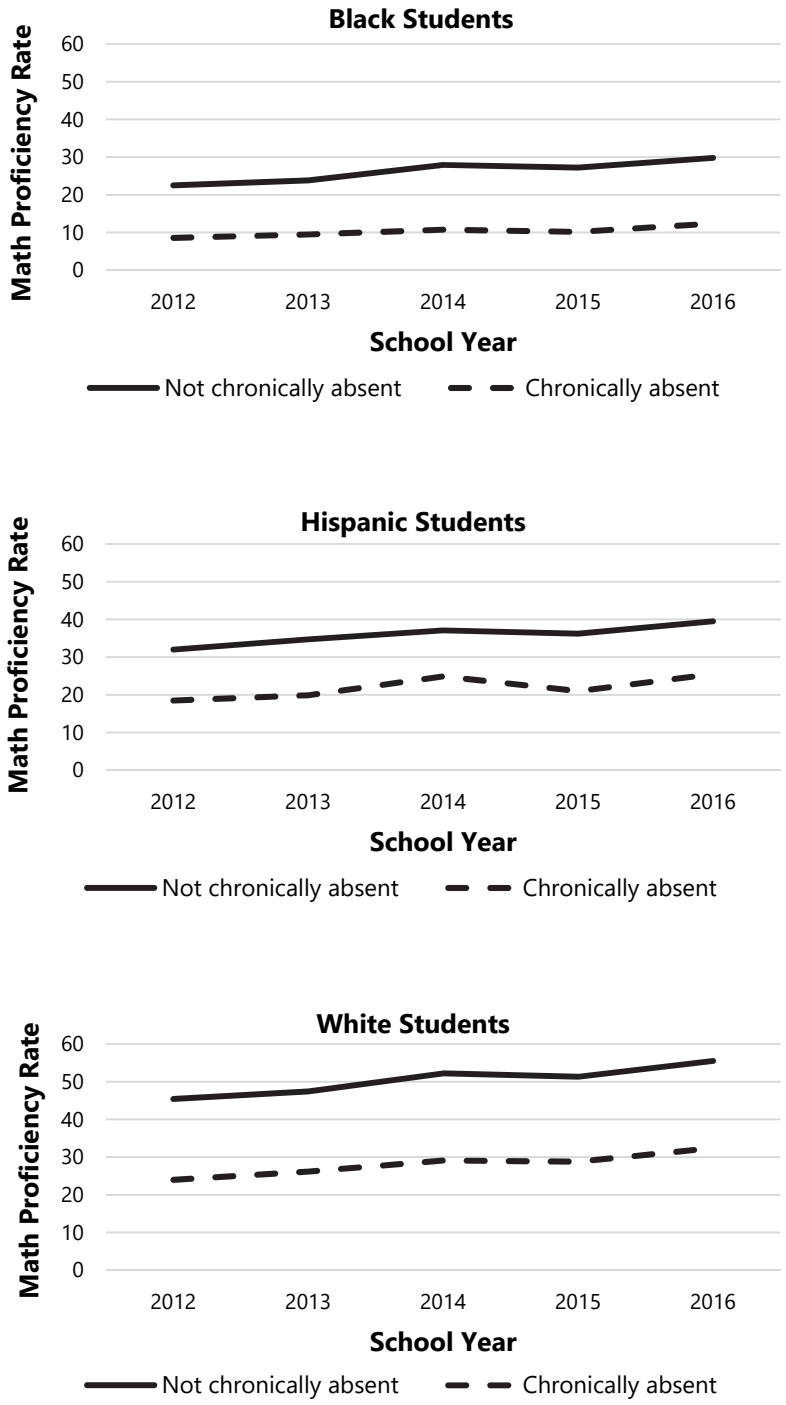
Figure 3.I
K-PREP Math Assessment Proficiency Rates Per Gap Groups
By Chronic Absence Status
School Years 2012 To 2016



Source: Kentucky Department of Education.

Figure 3.J shows the proficiency rates for students from the three largest racial categories and CA status. Chronically absent students within each of these groups struggled relative to those who were not chronically absent over the course of the observation period.

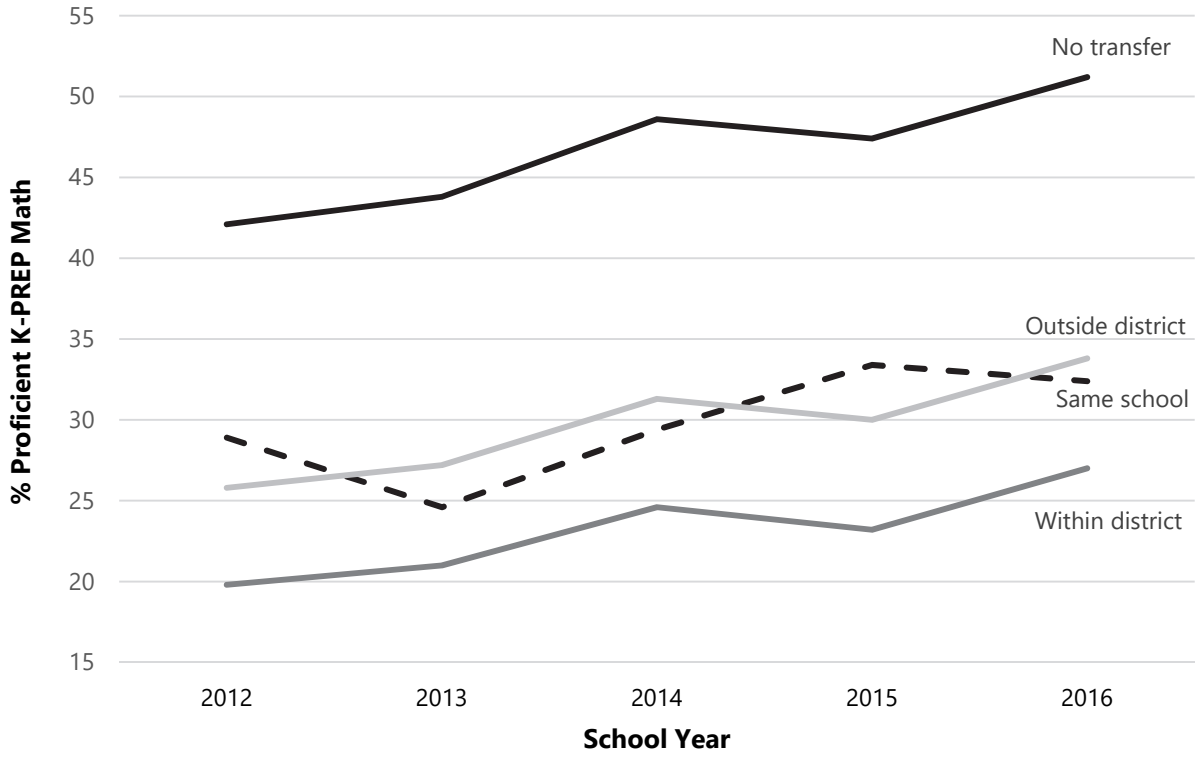
Figure 3.J
K-PREP Math Assessment Proficiency Rates
Per Racial Groups By Chronic Absence Status
School Years 2012 To 2016



Source: Kentucky Department of Education.

K-PREP Math Proficiency And Mobility. Students that transferred during the course of a school year had lower math proficiency rates relative to those that did not transfer. As shown in Figure 3.K, students that transferred outside of their prior district, and those that transferred within their prior district have shown improvement in proficiency rates over the course of the observation period, but the proficiency rate gap for both of these groups increased over time relative to students that did not transfer.

Figure 3.K
Percentage Of Students Scoring Proficient Or Better On K-PREP Math Assessment By Mobility Status School Years 2012 To 2016



Source: Kentucky Department of Education.

Chronic Absenteeism And GPAs

One measure of classroom performance is grade point average, which is widely used but not a perfect metric of performance. The GPA of a student can be used to determine the performance of a student over time across all subjects taken, which is why postsecondary institutions use cumulative high school GPA as an admissions component. Prior research has indicated that students who are CA from the classroom often struggle relative to other

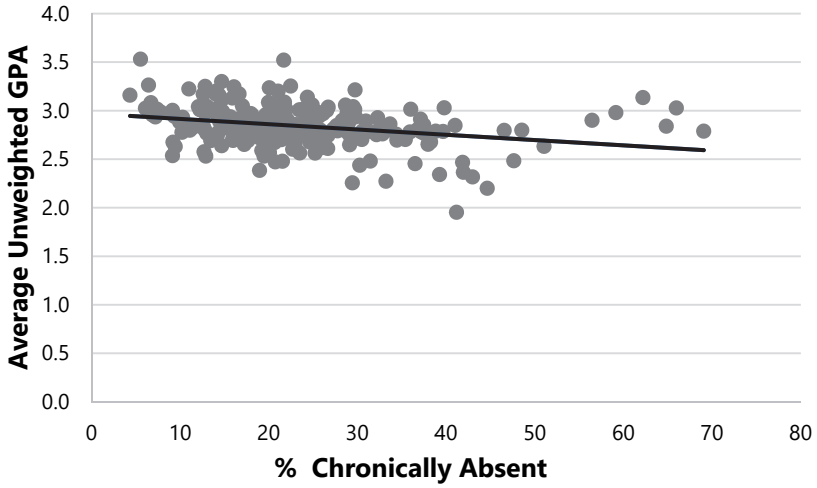
students in many measures of academic performance, including GPAs.[27] This analysis seeks to determine whether CA status affected the GPAs of Kentucky public high school students.

School Chronic Absenteeism And Unweighted GPAs

The correlation between a school's CA rate and unweighted grade point average (GPA) was slightly negative.

While schools' CA rate does seem to correlate strongly with K-PREP and ACT success, it has a weaker association with schools' average GPA. Figure 3.L shows the relationship between CA and the average unweighted GPA for A1 high schools in 2016.[b] The correlation between CA and unweighted GPA was only slightly negative, relative to the previous testing outcomes.

Figure 3.L
Chronic Absenteeism And Unweighted GPA In High Schools
School Year 2016



Note: Each dot represents an A1 high school.
Source: Kentucky Department of Education.

Student Chronic Absenteeism And Unweighted GPAs

Being CA during the school year was associated with a near 0.5-point drop in a high school student's GPA.

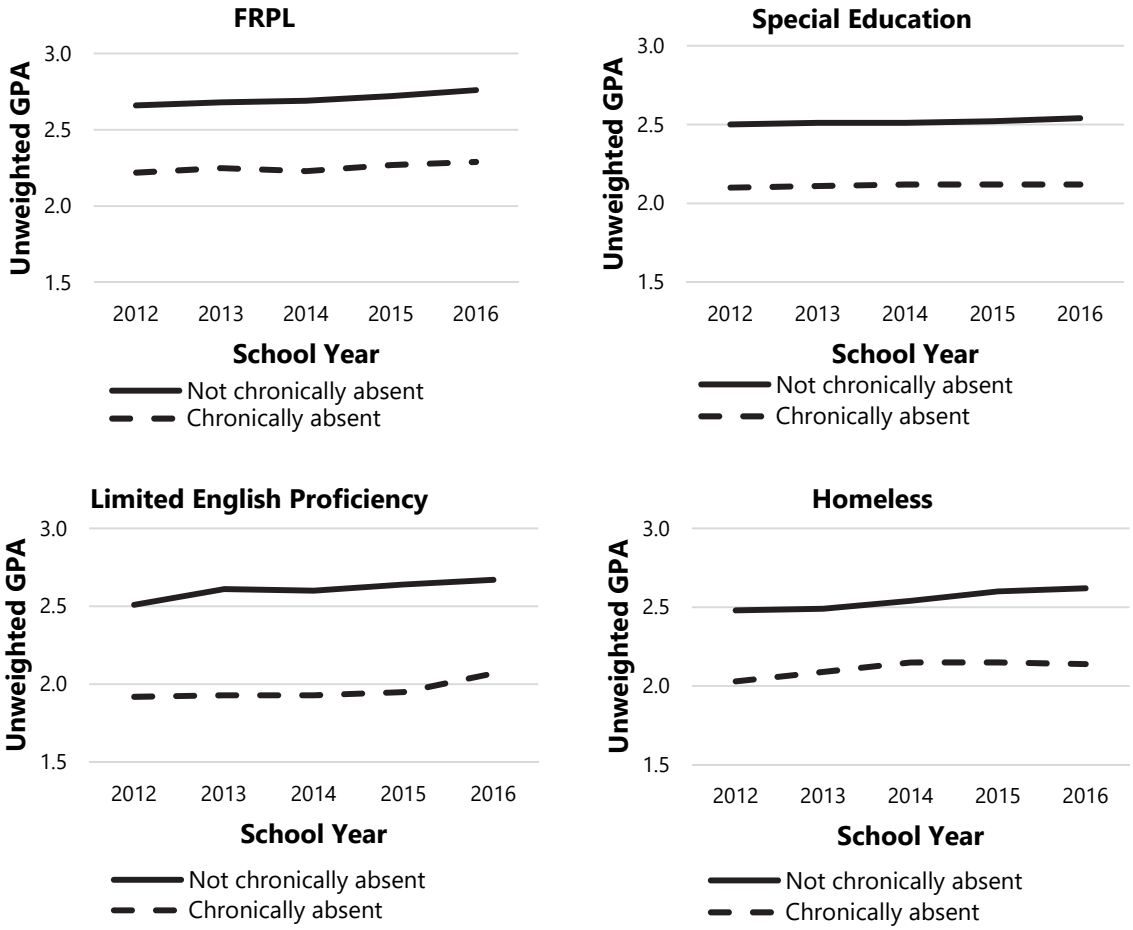
The goal for this portion of the analysis is to determine whether CA was associated with lower unweighted GPAs of various subsets within this population during school years 2012 through 2016. The population for this analysis includes Kentucky public high school students across all districts, and excludes kindergarten through 8th grade due to the lack of reported GPAs for those students. The average unweighted GPA for this population of students was 2.84 during the 2016 school year. Controlling for

[b] A1 schools are those not operated by or as part of another school. Examples of schools that are not A1 schools are alternative schools or career and technical schools.

other variables, being CA during the school year was associated with a near 0.5-point drop in GPA. A detailed analysis appears in Appendix K.

Figure 3.M illustrates the gap in unweighted GPAs for CA students within subsets of the high school population relative to non-CA students who were served by the same programs. The gap was widest among CA LEP students (0.6 GPA points in 2016) and homeless students (0.48 GPA points in 2016) relative to their non-CA peers.

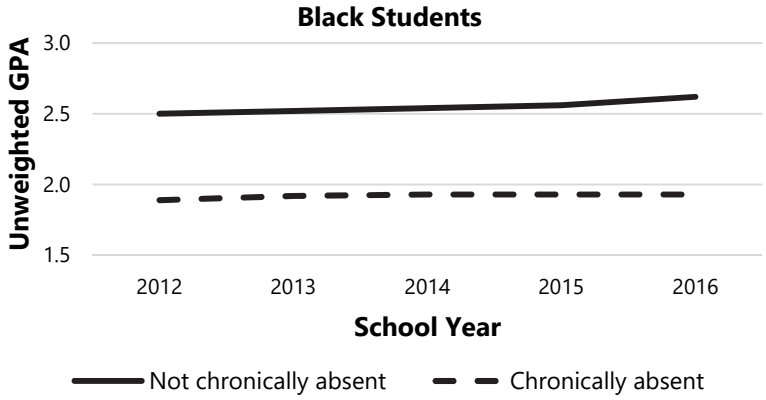
Figure 3.M
Unweighted GPAs For High School Gap Group Students By Chronic Absence Status
School Years 2012 To 2016

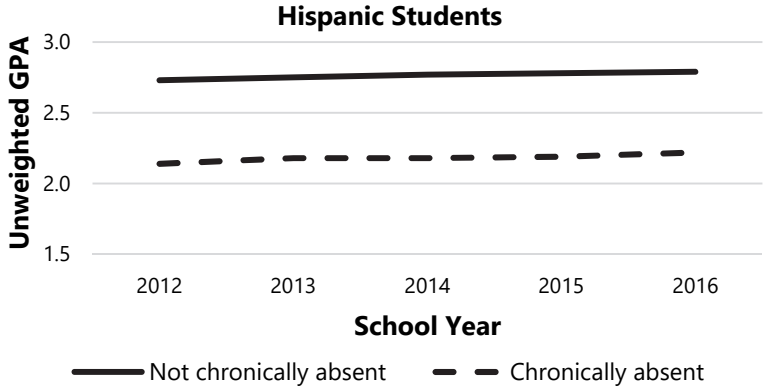


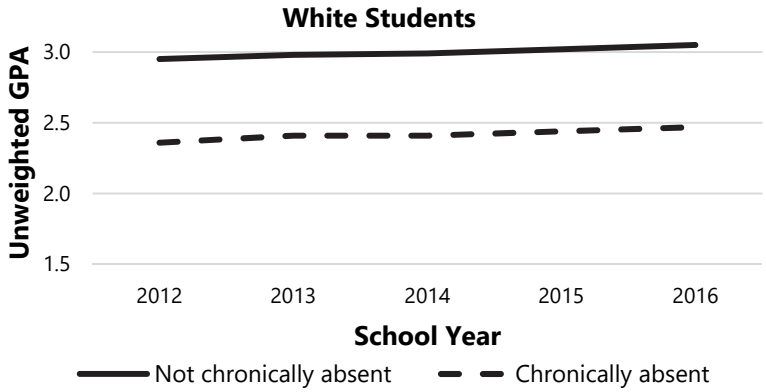
Source: Kentucky Department of Education.

Figure 3.N shows unweighted GPAs of high school students from the three most populous racial groups in Kentucky by CA status.

Figure 3.N
Unweighted GPAs For High School Students
Per Racial Group By Chronic Absence Status
School Years 2012-2016







Source: Kentucky Department of Education.

Relationship Between Absence Levels And Outcomes

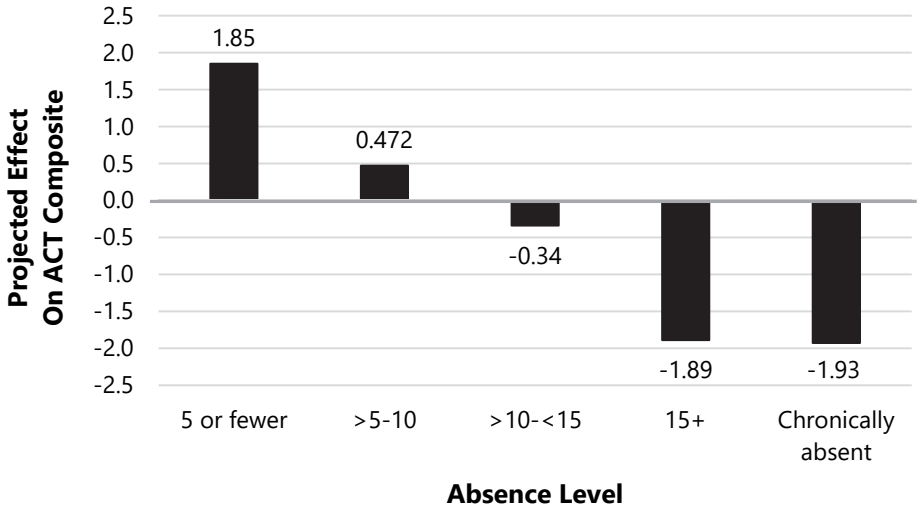
The analysis thus far has looked at the negative outcomes associated with CA, but this portion of the analysis seeks to determine at what absence level outcomes begin to become negatively affected. Statistical modeling was used on ACT composite scores, unweighted GPAs, and K-PREP reading and math assessments to ascertain the projected range of absences in which these outcomes become negative.[c] According to the models, the projected turning point at which the listed outcomes begin to become negative is between 10 and 15 absences of any kind. Further details for the models used within this section of the report appear in Appendix L.

ACT

In various outcomes, missing 10 days was negatively associated with academic performance.

Ordinary least squares (OLS) regression models were used to determine the projected effect that various levels of absences had on ACT composite scores for 11th-grade students. Figure 3.O illustrates the projected effect on ACT composite scores by absence level. The models project that students who miss between 10 and 15 days can expect to score approximately 0.34 points lower than the average ACT composite score for the control group.

Figure 3.O
Projected Effect Of Absence Levels On ACT Composite Scores For 11th-Grade Students
School Year 2016



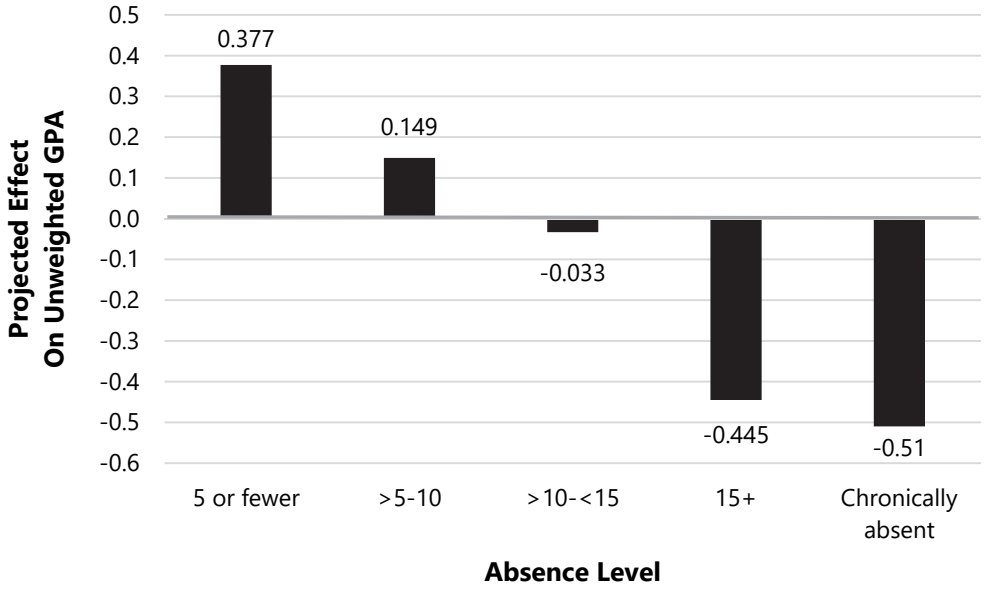
Source: Kentucky Department of Education.

[c] The models used controlled for FRPL, IEP, LEP, and homeless status, as well as demographic controls for race/ethnicity and gender.

Unweighted GPA

This portion of the analysis also used an OLS regression model to determine the potential effects of various absence levels on the unweighted GPAs of the 9th- through 12th-grade population during the 2016 school year. Figure 3.P shows that the projected effect on unweighted GPAs begins to become negative at 10 to 15 absences.

Figure 3.P
Projected Effect Of Absence Levels On Unweighted GPAs
9th-Grade Through 12th-Grade Students
School Year 2016

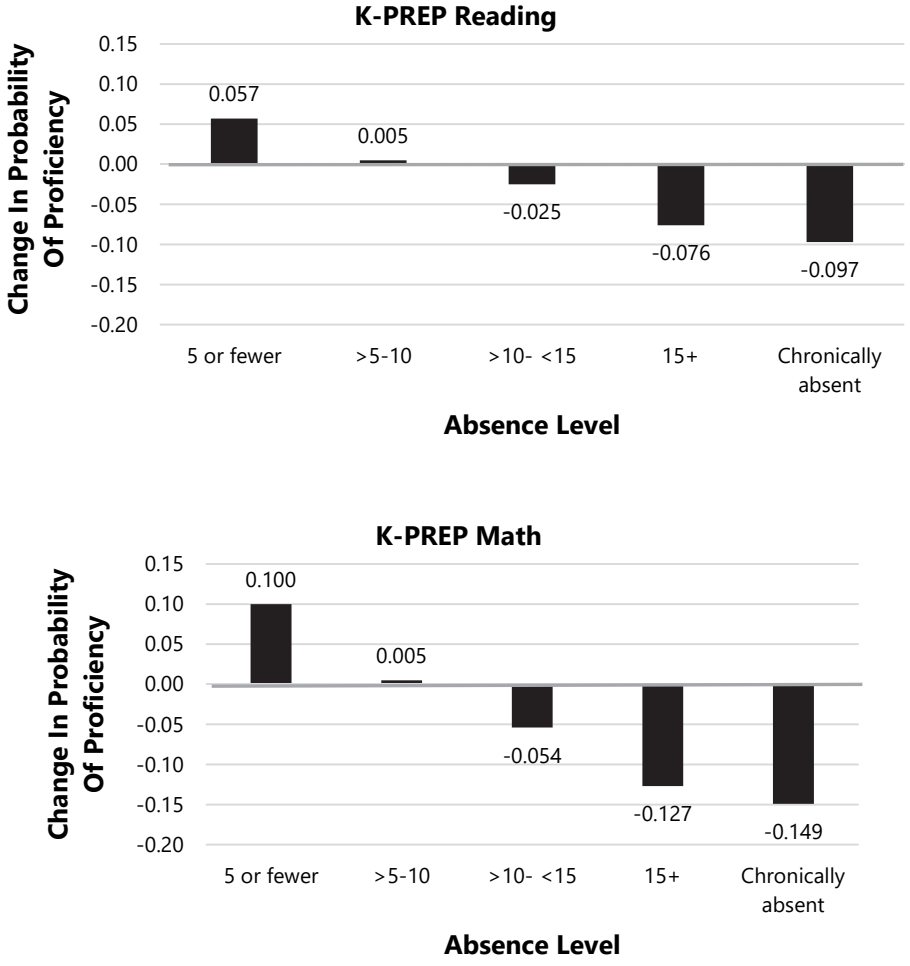


Source: Kentucky Department of Education.

K-PREP

The analysis for the K-PREP reading and math assessments used a linear probability model to determine the potential effects that various absence levels had on the probability that a student would score proficient or better on either assessment. Figure 3.Q illustrates the K-PREP performance based on the absence levels. As with GPAs, students begin showing a negative relation when reaching 10 to 15 absences.

Figure 3.Q
Projected Effect Of Absence Levels On K-PREP Reading And Math Proficiency Rates, 3rd-Grade Through 8th-Grade Students
School Year 2016



Source: Kentucky Department of Education.

In K-PREP, GPA, and ACT, educational performance becomes negative for students reaching 10 or more absences. To more effectively help students, it may make more sense to set the CA threshold at fewer days.

Recommendation 3.1

Recommendation 3.1

In drafting 703 KAR 5:270, the Kentucky Department of Education should consider lowering the threshold for chronic absence to 10 absences rather than 10 percent of days enrolled.

Chronic Absenteeism And Promotion

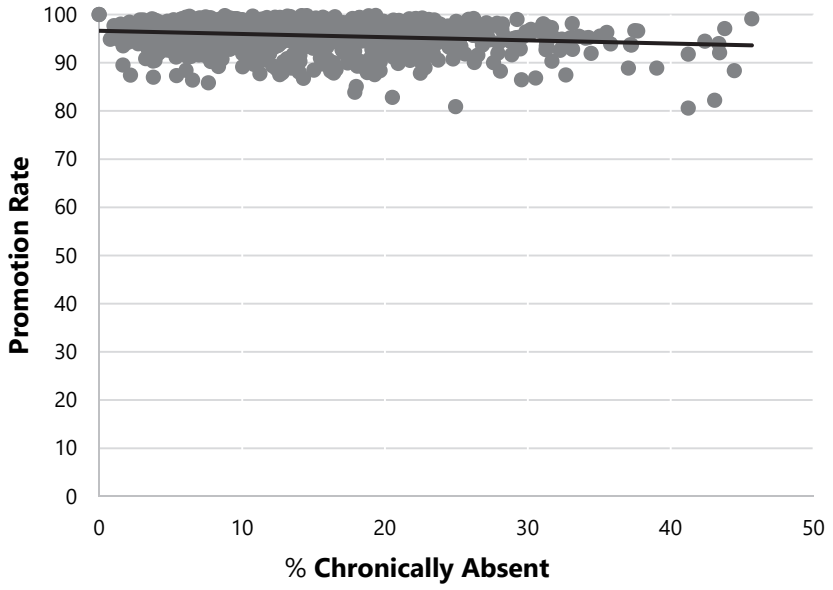
Student test scores and GPAs are not the only indicators of student success. Grade promotion can be examined to analyze whether students are advancing grades each year. This section details how CA is associated with student grade advancement, or promotion. Kentucky does not have performance threshold requirements that define promotion for the state. The requirements for promotion to a higher grade vary by district. For this analysis, staff counted a student as being promoted if the student was coded within the supplied data as being in a higher grade during the next school year.[d] In some cases students were promoted more than one grade level.

School Chronic Absenteeism And Promotion

There is a very weak negative correlation between school promotion rates and CA.

There is a very weak negative correlation between school promotion rates and CA. Figure 3.R shows this relationship. The weak correlation may be due to lack of variation among school promotion rates; the majority of schools have promotion rates above 95 percent.

Figure 3.R
Chronic Absenteeism And Promotion
School Year 2015



Source: Kentucky Department of Education.

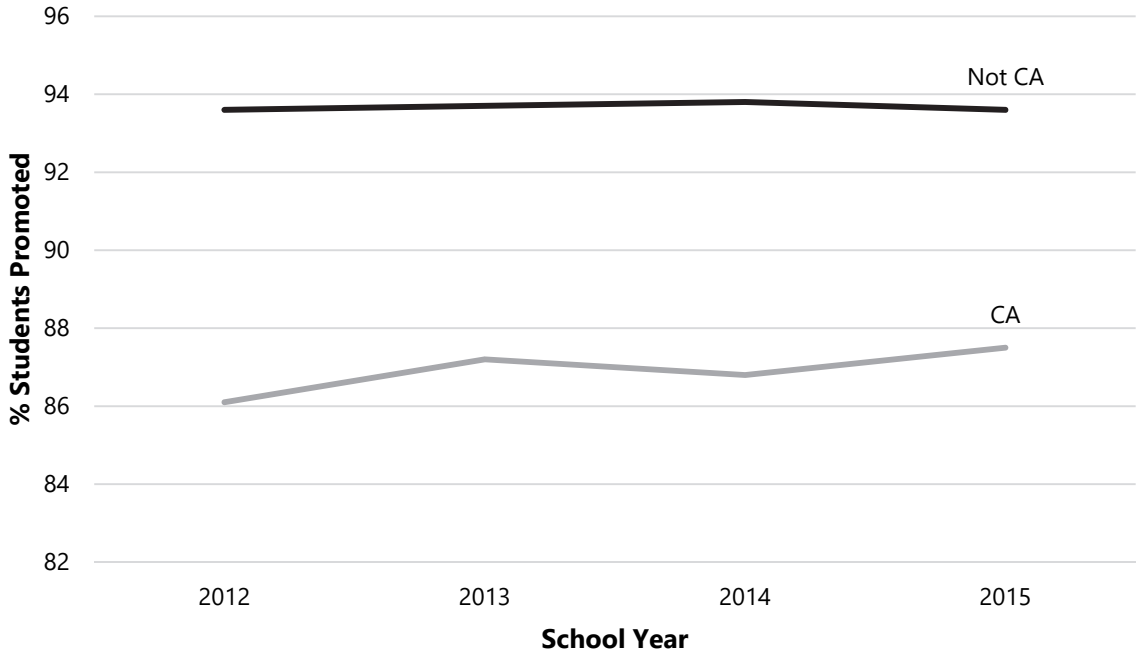
[d] For this section, promotion measures the percentage of students advancing to a higher grade in the following school year. For example, if a student was in the 2nd grade in 2012 and the 3rd grade in 2013, the student was considered promoted.

Student Chronic Absenteeism And Promotion

There was a 6.1 percentage point gap in 2015 between CA and non-CA students in regard to grade promotion.

Students who were in kindergarten through 11th grade during school years 2012 through 2015 were included in the analysis to determine whether CA affected promotion rates.[e] Rates of promotion for all grades were examined by CA status, and Figure 3.S shows that promotion rates for all students who were not CA has held steady at approximately 94 percent over the course of the observation period. Promotion rates for CA students have lagged behind the rate for non-CA students, but the gap between the two populations has narrowed from a high of 7.5 percent during the 2012 school year down to approximately 6.1 percent in school year 2015. The rate of promotion for CA students has improved from 86.1 percent in 2012, to 87.5 percent in 2015.

Figure 3.S
Promotion Rates By Chronic Absence Status, Grades K–11
School Years 2012 To 2015



Note: Twelfth-grade students are not included in this analysis.
Source: Kentucky Department of Education.

[e] Promotion data for 12th grade was not available. Promotion data for 2016 was not available at the time of this analysis.

There is a promotion gap between CA and non-CA students in nearly every grade. The largest was the 9th grade, with a 14.2 percentage point difference during the 2015 school year.

There is a gap between CA students and others with regard to grade promotion, though the gap is not equal for all students. The promotion rate gap was the widest for 9th-grade CA students; on average, roughly 78 percent of CA 9th-graders were promoted relative to roughly 93 percent of non-CA 9th-graders. Table 3.1 shows the promotion rates by CA status for school year 2015.

Table 3.1
Average Promotion Rates By Chronic Absence Status
School Year 2015

Grade	Non-CA Promotion Rate	CA Promotion Rate	Promotion Rate Gap
Kindergarten	91.4%	88.4%	3.0%
1	90.2	86.5	3.7
2	93.7	92.9	0.8
3	95.0	94.5	0.5
4	95.5	95.6	-0.1
5	95.2	94.5	0.7
6	95.9	94.7	1.2
7	96.1	94.4	1.7
8	95.3	94.4	0.9
9	92.5	78.3	14.2
10	91.5	79.6	11.9
11	90.6	79.2	11.4

Source: Kentucky Department of Education.

Chapter 4

Attendance Policies

Introduction

This chapter covers survey results related to districts' perception of legislation dealing with attendance, as well as attendance issues affecting districts.

OEA administered a survey during the spring of 2017 to gather feedback from districts about legislation and attendance issues. This chapter discusses recent legislation that increased the compulsory attendance age from 16 to 18, recent juvenile justice reform, and district responses indicating how these changes have affected their work. Specifically, OEA asked about SB 97 (2013), which raised the age for compulsory attendance, and SB 200 (2014), which focused on juvenile justice reform. Respondents reported that SB 97 did not drastically affect schools. The dropout rate in Kentucky has declined since SB 97 was passed; however, students leaving public schools and enrolling in homeschooling has increased. With regard to SB 200, participants had more negative reactions. The majority of respondents indicated they thought SB 200 had increased the number of absences, and of those that commented, nearly 90 percent answered negatively to an open-ended question.

Compulsory Attendance (Senate Bill 97, 2013)

Senate Bill 97, passed in 2013, raised the compulsory attendance age from 16 to 18 years.

The Kentucky General Assembly passed SB 97 in 2013. SB 97 allowed school districts to voluntarily raise the compulsory attendance to age 18. Once 55 percent of districts had adopted a policy extending compulsory attendance requirements to 18, all districts were required to adopt a policy extending compulsory attendance requirements to 18. The requirement would be effective with the school year beginning 4 years after the 55 percent threshold was met. As of January 14, 2015, all districts had adopted this policy.[28] Table 4.1 shows the results of a survey OEA sent to all district superintendents concerning the impact of SB 97 on their districts. The results of that survey are discussed in the sections below.

Table 4.1
SB 97 (2013) OEA Survey Responses

What was the impact of SB 97 in your district on:	Decrease	None	Increase
The number of dropouts?	46.8%	39.1%	14.1%
The number of truant students?	7.6	40.8	51.6
The number of students entering a homeschool?	2.6	32.1	65.4
Disciplinary events?	7.1	55.1	37.8
The high school graduation rate?	11.5	47.8	40.8
ACT scores?	11.7	66.2	22.1
K-PREP EOC reading scores?	14.9	68.8	16.2
K-PREP EOC math scores?	12.3	66.9	20.8
Classroom learning environment?	18.1	68.4	13.5
Student GPAs?	16.9	76.6	6.5

Note: Percentages may not sum to 100 because of rounding. EOC = end of course.
Source: OEA survey.

Graduation

With regard to graduation rates, 12 percent of respondents answered that SB 97 caused a decrease in graduation rates, 48 percent indicated there was no impact, and 41 percent responded that it led to an increase in high school graduation rates. One respondent indicated that the legislation "has kept some students in school to graduate that might have not have otherwise."

Discipline

The OEA survey asked two questions regarding discipline. The first addressed whether SB 97 affected the number of disciplinary events. To that question, 7 percent of respondents reported a decrease in the number of events, 55 percent reported no impact, and 38 percent reported an increase. A district superintendent, who believed that SB 97 had increased disciplinary events, stated, "Keeping students until 18 has caused classroom learning environment to decrease resulting in finding alternative classroom settings for students." The second question asked about the impact of SB 97 on the quality of the classroom learning environment; 18 percent of respondents indicated a decrease, 68 percent indicated no impact, and 14 percent indicated an increase.

Student Performance

The survey contained four questions about student performance. The first addressed how SB 97 affected ACT scores. Most of the respondents, 66 percent, indicated that there was no impact. Additionally, 68 percent of respondents answered that there was no

impact on either K-PREP English II or Algebra II end-of-course tests. Also, nearly 77 percent of respondents indicated that there was no impact on student GPAs.

Attendance

A majority of survey respondents indicated that SB 97 had led to an increase in the number of truant students. Additionally, 65 percent indicated an increase in the number of students enrolling in homeschool due to SB 97.

The survey asked specifically about the impact on the number of student dropouts, truant students, and students entering homeschool. With regard to dropouts, 47 percent of respondents indicated a decrease in the number of students dropping out, 39 percent reported no impact, and 14 percent answered that there was an increase. For the number of truant students, 8 percent of responders indicated a decrease, 41 percent reported no impact, and 52 percent responded that SB 97 had caused an increase. When answering whether SB 97 had affected the number of students entering a homeschool, 3 percent of respondents indicated a decrease, 32 percent reported no impact, and 65 percent indicated an increase. A survey respondent indicated that "Our students have figured out that they can homeschool at any age. This allows them to skirt around the increased dropout age."

District Concerns

When answering the open-ended question regarding SB 97, several districts' respondents expressed concerns both with the number of students withdrawing to homeschool, and with the accountability of homeschools in the state. Since the passage of SB 97, there has been a decrease in the high school dropout rate; however, the percentage of students leaving traditional public high schools for homeschools has increased at a higher rate than the rate of students leaving traditional middle and elementary schools for homeschools. Table 4.2 shows the previous 5-year trend.

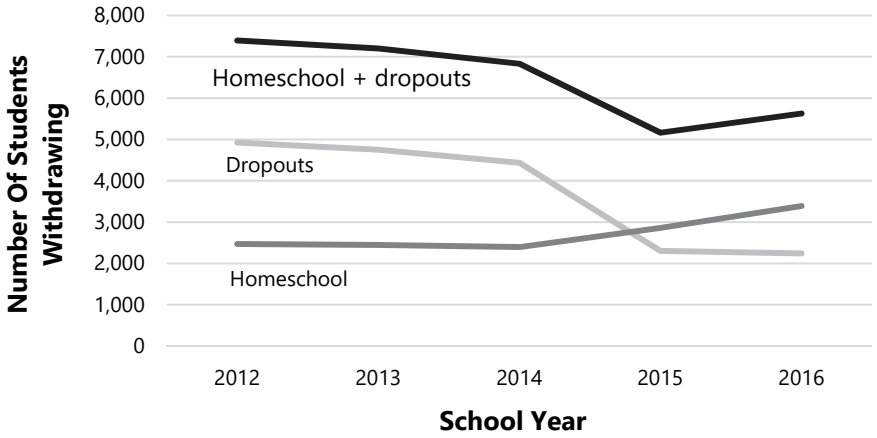
Table 4.2
Number Of Students Who Transfer To Homeschool Or Drop Out
School Years 2012 To 2016

	Grades K-8,	Grades 9-12	
Year	Homeschool Transfers	Dropouts	Homeschool Transfers
2012	2,116	4,922	2,470
2013	2,404	4,750	2,447
2014	2,488	4,436	2,396
2015	2,537	2,303	2,858
2016	2,685	2,239	3,389
% change	26.9%	-54.5%	37.2%

Source: Kentucky Department of Education.

The total number of students transferring to homeschool or dropping out has decreased over the time period. Over the previous 5 years, the number of students transferring to homeschool has increased by nearly 1,500 students, or 32 percent; the number of students dropping out has decreased by nearly 2,700 students, or 55 percent. The trends for high school appear in Figure 4.A.

Figure 4.A
High School Dropout And Homeschool Transfers
School Years 2012 To 2016



Source: Kentucky Department of Education.

Juvenile Justice Reform (SB 200, 2014)

SB 200, passed in 2014, overhauled Kentucky's juvenile justice system.

SB 200 overhauled Kentucky's juvenile justice system and amended or created new obligations for the Administrative Office of the Courts, the Department of Juvenile Justice, the Justice and Public Safety Cabinet, the Cabinet for Health and Family Services, KDE, court-designated workers, county attorneys, District Courts, Family Courts, school resource officers, school security officers, each local school, and directors of pupil personnel. SB 200 amended or created 55 statutes.[29] SB 200 also established Family, Accountability, Intervention, and Response (FAIR) teams to work in collaboration with the Cabinet for Health and Family Services to develop enhanced case management plans for juveniles before they are referred to court.[a] [30]

[a]Court-designated workers (CDWs) refer cases to the FAIR teams when youths are assessed as having high needs, are struggling in diversion, fail to appear, or decline diversion. Directors of pupil personnel can, after consultation with the CDW, refer a case directly to the FAIR team. The FAIR teams provide oversight to the work of the CDW and determine the appropriate responses. Court remains an option for youths who are unsuccessful in this process, as does a referral to the Department for Community Based Services for a dependency, abuse or neglect investigation.

Table 4.3 shows the results of a survey OEA sent to all district superintendents concerning the impact of SB 200 on their districts. The results of that survey are discussed in the sections below.

Table 4.3
SB 200 (2014) OEA Survey Responses

What was the impact of SB 200 in your district on:	Decrease	None	Increase
The number of absences?	8.5%	37.6%	53.9%
Disciplinary events?	7.4	51.5	41.1

Source: OEA survey.

Attendance

A majority of respondents indicated that SB 200 had increased the number of absences.

The OEA survey asked about the impact of SB 200 on the number of absences. Approximately 8 percent of respondents indicated that it had decreased the number of absences, 38 percent responded that there was no impact, and 54 percent responded that it had increased the number of absences.

Discipline

When asked whether SB 200 affected the number of disciplinary events, 7 percent of respondents indicated that it had decreased the number of events, 52 percent indicated that there was no impact, and 41 percent answered that it had increased the number of disciplinary events.

District Concerns

In an open-ended survey question, 90 percent of respondents included negative comments regarding SB 200.

The survey contained an open-ended question allowing respondents to provide comments related to SB 200. Of the 50 responses to the question, nearly 90 percent answered negatively, and only 1 district responded favorably to the question. Nearly all of the comments discussed districts' lack of leverage over truant students. Additionally, some districts mentioned that they found the law well intentioned, but that additional services required had not been provided. An assistant superintendent remarked:

> Our attendance has been negatively impacted by the FAIR Team process—it allows students to miss many additional days prior to any action being taken without even mentioning the limited success with 18-year-olds.

A director of pupil personnel from a different district commented:

> The schools were already using any/all available resources prior to FAIR Team. Nothing else is left. Six months more

talking to/about isn't changing results. We need drug counseling/treatment options. We need the judges to be able to set consequences that worked until SB 200. For diversion—waste of time. School rules are simple. This has forced districts to look for more alternative options with no funding services. Before SB 200 the school and justice system had more ability to deal with student behavioral issues.

School And District Attendance

Difficulties Schools Are Facing

In an open-ended survey question, over a third of responses indicated that a combination of the court system, recent legislation, or lack of consequences were issues.

The OEA survey included an open-ended question allowing districts to list any current attendance issues they face. The responses were read and coded based on themes that emerged in the responses. Table 4.4 details some of the most common responses. Over a third of districts that responded to the open-ended question indicated that the court system, recent legislation, or the lack of consequences hampered their abilities to handle truant students. One district superintendent noted that "[n]o meaningful action seems to be taken when charges are filed for truancy." Several of the responses noted that students and/or parents realized they were unlikely to face punishment for attendance issues, which reduced schools' options for requiring students to attend.

In an open-ended survey question, nearly a third of responses indicated that CA or truancy were issues.

The next most common response was linked to an increase in the number of days students miss. Over 30 percent of responses indicated that truancy or CA was an issue. Almost 18 percent of responses indicated that family or home issues were an obstacle. Examples included families not valuing education; homelessness; poverty; and neglect. Nearly 15 percent of responses indicated that older students had attendance issues, 11 percent stated that health problems negatively affected attendance, 8 percent cited doctors' notes, and almost 5 percent listed homeschool as an issue.

Table 4.4
OEA Survey Common Responses For Attendance Issues Affecting Districts
School Year 2017

Issues	Number Of Responses	Percent Of Responses
Court/legislation/lack of consequences	45	36.6%
Truancy/CA	40	32.5
Family/home	22	17.9
Older students	18	14.6
Health	13	10.6
Doctor	10	8.1
Homeschool	6	4.9

Source: OEA survey.

Steps Schools And Districts Are Using To Improve Attendance

About half of responses to an open-ended survey question indicated that the respondents engaged in family outreach to address attendance issues.

The survey also asked districts to detail any programs they are using to address attendance issues. Half of the 126 respondents who gave an open-ended response (63, or 50 percent) indicated that they often engaged in family outreach through letters, phone calls, and in some cases, home visits. Approximately 20 percent of answers mentioned offering students incentives such as stickers for younger students and additional activities for high schoolers. Over 10 percent of responses specifically mentioned truancy diversion programs. About 7 percent of respondents indicated that they had started offering additional academic options, including performance-based learning and credit recovery options. Approximately 5 percent listed providing school nurses and/or mental health services as a tool, and two districts responded that social workers were being used to increase attendance. Table 4.5 details some of the solutions offered.

Table 4.5
District Responses To OEA Survey On District Actions To Address Attendance Issues

Actions	Number Of Responses	Percent Of Responses
Home visits/family outreach	63	50.4%
Student incentives	24	19.2
Truancy diversion programs	16	12.8
Additional academic offerings	9	7.2
Health services	7	5.6
Social workers	2	1.6

Source: OEA survey.

Appendix A

State Truancy And Habitual Truancy Laws

State	Definition Of Truancy	Definition Of Habitual Truancy
Alabama	No statewide definition	No statewide definition
Alaska	No statewide definition	No statewide definition
Arizona	Truancies are unexcused absences for at least one class period during the school day (Ariz. Rev. Stat. sec. 15-803).	Habitually truant students are truant for at least 5 school days within a school year (Ariz. Rev. Stat. sec. 15-803).
Arkansas	No statewide definition	No statewide definition
California	Any pupil subject to compulsory full-time education or to compulsory continuation education who is absent from school without valid excuse 3 full days in 1 school year or tardy or absent for more than any 30-minute period during the school day without a valid excuse on three occasions in 1 school year, or any combination thereof, is a truant and shall be reported to the attendance supervisor or to the superintendent of the school district (Cal. Educ. Code sec. 48260). Any pupil who has once been reported as a truant and who is again absent from school without valid excuse 1 or more days, or tardy on 1 or more days, shall again be reported as a truant to the attendance supervisor or the superintendent of the district (Cal. Educ. Code sec. 48261).	A student is deemed a habitual truant if the student has been reported as a truant three or more times in 1 school year. No student will be deemed a habitual truant unless an appropriate district officer or employee has made a conscientious effort to hold at least one conference with a parent or guardian of the pupil and the pupil himself, after the filing of either of the reports required by Ca. Educ. Code sec. 48260 or Cal. Educ. Code sec. 48261 (Cal. Educ. Code sec. 48262). A student is deemed a chronic truant if the pupil is subject to compulsory full-time education or to compulsory continuation education and is absent from school without a valid excuse for 10 percent or more of the school days in 1 school year, from the date of enrollment to the current date, provided that the appropriate school district officer or employee has complied with sections 48260, 48260.5, 48261, 48262, 48263, and 48291 (Cal. Educ. Code sec. 48263.6).
Colorado	No statewide definition	A student between 7 and 16 years old having four unexcused absences from public school in any 1 month or 10 unexcused absences from public school during any school year is habitually truant. Absences due to suspension or expulsion are considered excused absences (Colo. Rev. Stat. sec. 22-33-107).

State	Definition Of Truancy	Definition Of Habitual Truancy
Connecticut	Truants are children age 5 to 18, enrolled in a public or private school with four unexcused absences from school in any month or 10 unexcused absences from school in any school year (Conn. Gen. Stat. sec. 10-198A).	Habitual truants are children age 5 to 18, enrolled in public or private schools, with 20 unexcused absences within a school year (Conn. Gen. Stat. sec. 10-200).
Delaware	Truant means a student who has been absent from school without valid excuse for more than 3 school days during a school year (Del. Code Ann. tit. 14 sec. 2721).	No statewide definition
Florida	No statewide definition	A habitual truant is a student who has 15 unexcused absences within 90 calendar days with or without the knowledge or consent of the student's parent and is subject to compulsory school attendance (Fla. Rev. Stat. sec. 1003.01).
Georgia	No statewide definition	No statewide definition
Hawaii	No statewide definition	No statewide definition
Idaho	No statewide definition	A habitual truant is a student who—in the judgment of the board of trustees—has repeatedly violated the attendance regulations established by the board, or any child whose parents or guardians have failed or refused to cause the child to comply with the state's compulsory attendance law (Idaho Code sec. 33-206).
Illinois	A truant is a child subject to compulsory school attendance and who is absent without valid cause for a school day or portion thereof (105 Ill. Comp. Stat. sec. 26-2a).	A child subject to compulsory school attendance and who is absent without a valid excuse from school for 10 percent or more of the previous 180 regular attendance days is a chronic or habitual truant (105 Ill. Comp. Stat. sec. 26-2a).
Indiana	No statewide definition	No statewide definition
Iowa	No statewide definition	No statewide definition
Kansas	No statewide definition	No statewide definition

State	Definition Of Truancy	Definition Of Habitual Truancy
Kentucky	Any student who has been absent from school without valid excuse for 3 or more days, or tardy without valid excuse on 3 or more days, is a truant. Being absent for less than half of a school day is regarded as being tardy (KRS 159.150).	Any child who has been reported as a truant two or more times is a habitual truant (KRS 159.150). Any child who has been found by the juvenile court to have been reported as a truant two or more times in 1 year is a habitual truant (KRS 600.020). Per annotations: While *habitual truant* is defined differently in KRS 159.150 and KRS 600.020, the statutes may be reconciled by district courts and pupil personnel directors.
Louisiana	The term *tardy* includes but is not limited to leaving or checking out of school unexcused prior to the regularly scheduled dismissal time at the end of the school day but does not include reporting late to class when transferring from one class to another during the school day (La. Stat. Ann. 17:233).	A student is considered habitually absent or habitually tardy after all reasonable efforts by any school personnel, truancy officer, or other law enforcement personnel have failed to correct the condition after the fifth unexcused absence or fifth unexcused tardy within any school semester (La. Stat. Ann. 17:233).
Maine	A person required to attend school or alternative instruction under Maine's compulsory school attendance law is truant when an absence of a half day is not excused (Me. Stat. Tit. 20-A, sec. 3272).	A person is habitually truant if he or she is required to attend school or alternative instruction and has attained the equivalent of 10 full days of unexcused absences or 7 consecutive school days of unexcused absences during a school year (Me. Stat. Tit. 20-A, sec. 3272).
Maryland	No statewide definition	No statewide definition
Massachusetts	No statewide definition	No statewide definition
Michigan	No statewide definition	No statewide definition
Minnesota	No statewide definition	A habitual truant is a child under the age of 16 years who is absent from school without lawful excuse for 7 school days in elementary school, or for one or more class periods on 7 school days in middle, junior high, or high school. A child who is 16 or 17 years of age who is absent from school without excuse for one or more class periods on 7 school days and who has not lawfully withdrawn from school is a habitual truant (Minn. Stat. sec. 260C.007).

State	Definition Of Truancy	Definition Of Habitual Truancy
Mississippi	No statewide definition	No statewide definition
Missouri	No statewide definition	No statewide definition
Montana	No statewide definition	No statewide definition
Nebraska	No statewide definition	No statewide definition
Nevada	A pupil who has one or more unapproved absences from school is considered truant (Nev. Rev. Stat. sec. 392.130).	Any child who has been declared a truant three or more times within one school year will be declared a habitual truant (Nev. Rev. Stat. sec. 392.140).
New Hampshire	Truancy means unexcused absence from school or class (N.H. Rev. Stat. Ann. sec.189:35-a).	Ten half days of unexcused absence during a school year constitutes habitual truancy (N.H. Rev. Stat. Ann. sec.189:35-a).
New Jersey	No statewide definition	No statewide definition
New Mexico	Truant means a student who has accumulated five unexcused absences within any 20-day period (N.M. Stat. Ann. sec. 22-12-9). An unexcused absence of two or more classes up to 50 percent of an instructional day is counted as one half-day absence, and the unexcused absence of more than 50 percent of an instructional day is counted as one full-day absence (N.M. Stat. Ann. Sec. 22-12-9).	A student who has accumulated the equivalent of 10 or more unexcused absences within a school year is a habitual truant (N.M. Stat. Ann. sec. 22-12-9).
New York	No statewide definition	No statewide definition
North Carolina	No statewide definition	No statewide definition
North Dakota	To be deemed in attendance, a student may not be absent from school without excuse for more than 3 consecutive school days in the first half or the second half of a school or school district's calendar, 6 half days in either the first half or the second half of a school or school district's calendar; or 21 class periods. (N.D. Cent Code 15.1-20-02.1).	No statewide definition
Ohio	No statewide definition	No statewide definition
Oklahoma	No statewide definition	No statewide definition
Oregon	No statewide definition	No statewide definition
Pennsylvania	No statewide definition	Habitually truant means absence for more than 3 school days or its equivalent following the first notice of truancy given under 24 Pa. Cons. Stat. sec. 13-1354 (24 Pa. Cons. Stat. sec. 13-1333).

State	Definition Of Truancy	Definition Of Habitual Truancy
Rhode Island	No statewide definition	No statewide definition
South Carolina	A child ages 6 to 17 years meets the definition of a truant when the child has three consecutive unlawful absences or a total of five unlawful absences (S.C. Code Ann. Regs. 43-274).	A habitual truant is a child age 12 to 17 years who fails to comply with the intervention plan developed by the school, the child, and the parent(s) or guardian(s) and who accumulates two or more additional unlawful absences. A chronic truant is a child ages 12 to 17 years who has been through the school intervention process, has reached the level of a habitual truant, has been referred to Family Court and placed on an order to attend school, and continues to accumulate unlawful absences (S.C. Code Ann. Regs. 43-274).
South Dakota	No statewide definition	No statewide definition
Tennessee	No statewide definition	No statewide definition
Texas	No statewide definition	A student commits an offense if he is required to attend school under Texas' compulsory school attendance law and fails to attend school on 10 or more days or parts of days within a 6-month period in the same school year or on 3 or more days or parts of days within a 4-week period (Tex. Educ. Code Ann. sec. 25.094).
Utah	*Absence* or *absent* means failure of a school-age minor assigned to a class or class period to attend the entire class or class period. A school-age minor may not be considered absent under this part more than one time during 1 day. *Truant* means absent without a valid excuse. *Truant minor* means a school age minor who is subject to the state's compulsory education law, and is truant (is absent from school without a valid excuse). (Utah Code Ann. sec. 53A-11-101).	*Habitual truant* means a school-age minor who is at least 12 years old, is subject to compulsory education requirements, and is truant at least 10 times during the school year or fails to cooperate with efforts on the part of school authorities to resolve the minor's attendance problem (Utah Code Ann. sec. 53A-11-101).
Vermont	No statewide definition	No statewide definition
Virginia	No statewide definition	No statewide definition
Washington	No statewide definition	No statewide definition
West Virginia	No statewide definition	No statewide definition

State	Definition Of Truancy	Definition Of Habitual Truancy
Wisconsin	*Truancy* means any absence of part or all of one or more days from school during which the school attendance officer, principal or teacher has not been notified of the legal cause of the absence by the student's parent or guardian. It also means intermittent attendance carried on for the purpose of defeating the intent of Wisconsin's compulsory school attendance law (Wis. Stat. sec. 118.16).	A student who is absent from school without an acceptable excuse for part or all of 5 or more school days during a school semester is considered habitually truant (Wis. Stat. sec. 118.16).
Wyoming	An unexcused absence is the absence—as defined in the policies of the local board of trustees—of any child required to attend school when such absence is not excused to the satisfaction of the board of trustees by the parent or guardian (Wyo. Stat. Ann. sec. 21-4101).	Any child with five or more unexcused absences in any 1 school year is a habitual truant (Wyo. Stat. Ann. sec. 21-4-101).

Source: Education Commission for the States.

Appendix B

Attendance And Calendar Laws And Regulations, 2017

Statute/Regulation Number	Title/Subject	Brief Description	Effective Date
KRS 156.160(3)	Certification of homeschools	Voluntary compliance with state standards can result in certification by the Kentucky Board of Education	7-29-2017
KRS 157.200	Transportation is a related service for students with individualized education programs (IEPs)	Students with IEPs should have transportation on their related services page to be coded T5	7-12-2012
KRS 157.270	Instruction in child's home or hospital (HH)	Sets requirements for how instruction is delivered and how HH attendance is counted for Support Education Excellence in Kentucky (SEEK) purposes	7-13-1990
KRS 157.320	Aggregate days include total days students are suspended or expelled	State Resolution Codes SSP1, SSP2, SSP3	7-14-2000
KRS 157.350	Eligibility of districts for SEEK funding for children of district employees	Children of district employees may attend school in that employee's school district	7/15/2014
KRS 157.360	Base funding level – Adjustment – enforcement of maximum class sizes – allotment of program funds	SEEK calculations and adjustments made based on pupil attendance, Superintendent's Annual Attendance Report, Growth Factor, HH funding, SEEK at-risk average daily membership	6-25-2013
KRS 157.370	Allotment of transportation units	Transportation funding, T-codes	7-15-1996
KRS 158.030	Age and; parent petition for early entry to school	School board to adopt policy for parent to request early entry to school even if child does not meet entrance age requirement	6-24-2015
KRS 158.060	School month and school day – duty-free lunch period – nonteaching time for teachers	20 days = one school month; school day at least 6 hours	7-14-2000
KRS 158.070	Requirements for school term	Holidays, continuing education, athletic competitions, emergency hours and service credit	6-29-2017

Statute/Regulation Number	Title/Subject	Brief Description	Effective Date
KRS 158.080	Private and parochial schools – courses – term (includes homeschools)	Classes shall be taught in English and include basic Kentucky core content; term shall not be shorter than term of public school	7-15-1996
KRS 158.100	School district to provide educational programs	Approved high school program required for students who have not received high school diploma until they are age 21	7-15-2014
KRS 158.120	Nonresident pupils – tuition	Requirements for nonresident contracts between school districts; appeal process if school districts cannot agree	7-15-1996
KRS 158.144	Adult caregiver with whom minor student resides may, by affidavit, establish authority to make school-related decisions for minor student (caregiver affidavit model)	Affidavit shall be valid in school district in which caregiver resides, but school official charged with enrolling a minor shall not honor affidavit if official has reasonable grounds to believe that it is presented solely to enroll minor for purpose of • access to athletics programs; or • circumventing school assignment, attendance, or boundaries policies of school district to gain access to curricula, services, or programs unique to a particular school and not offered at other schools the minor would be eligible to attend	7-15-2014
KRS 158.150	Suspension or expulsion of pupils	Requirements for suspension or expulsion of pupils, definitions, due process, exceptional children, Admissions and Release Committee, primary students	7-12-2006
KRS 158.293	Military Burial Honor Guard Program	Secondary students may participate; local board may make this part of instructional program, and students can be counted present; if no board policy, absences are excused/exempt	7-1-2000

Statute/Regulation Number	Title/Subject	Brief Description	Effective Date
KRS 158.294	Veteran's Service Organization Burial Honor Guard	Secondary students may participate; local board may make this part of instructional program, and students can be counted present; if no board policy, absences are excused/exempt	7-1-2002
KRS 159.010	Parent or custodian to send child to school	Compulsory attendance age raised to 18, includes High School Equivalency Diploma Program for students aged 17	6-29-2017
KRS 159.030	Exemptions from compulsory attendance (homeschools)	Written notice of attendance in nonpublic school must be made in writing to superintendent	7-15-2010
KRS 159.035	Students are considered in attendance under listed conditions	4-H, Educational Enhancement Opportunities, Armed Forces Day, Armed Forces Rest and Relaxation Day – students are considered present for these activities; amount of excused absence time is limited	7-15-2016
KRS 159.040	Attendance at private and parochial schools	Open to inspection by directors of pupil personnel (DPPs) at all times	7-15-1996
KRS 159.051	No pass, no drive	Students may have driver's license revoked for academic deficiency; process for revocation	6-26-2007
KRS 159.140	Duties of pupil personnel director	Lists DPPs' responsibilities, duties; and powers; must train district staff who work with attendance	7-15-2014
KRS 159.150	Definition of truant, habitual truant, and being tardy; adoption of truancy policies by local school boards	Definitions; allows boards of education to adopt policies to comply with compulsory attendance laws and establish sanctions for noncompliance	7-1-2015
KRS 159.160	Attendance reports to superintendent	Parents must report pupils in attendance in homeschool within 2 weeks of beginning of school year	7-13-1990
KRS 159.170	Withdrawals and transfers – teachers to report	Covered by Kentucky Student Information System (KSIS) – tracking students and transferring student records	6-26-2007

Statute/Regulation Number	Title/Subject	Brief Description	Effective Date
KRS 161.200	Records to be kept by teachers	Pupil attendance records can be kept in central location in school or district; district must audit and certify accuracy	7-13-1990
KRS 164.7885	Annual submission of high school students for Kentucky Educational Excellence Scholarship (KEES)	Student data required for KEES is listed	6-24-2015
KRS 405.023	Establishes KinCare Support Program	Establishes statewide toll-free telephone number to grandparents and other caregivers who are caring for minors who are not their biological children	7-15-2014
KRS 405.024	Adult caregiver with whom minor resides may, by affidavit, establish authority to make health care treatment and school-related decisions for minor	Dated signatures of minor's parents, de facto custodian, guardian, or legal custodian indicating their approval of caregiver's ability to authorize provision of health care treatment to minor and to make school-related decisions.	7-15-2014
KRS 600.070	Release of educational records	Juvenile justice system requests for student records to be complied with	7-5-2014
601 KAR 13:070	Requirement for student licensing and compliance with KRS 159.051	No Pass, No Drive program sets out requirements for student drivers	11-7-2008
702 KAR 3:270	SEEK funding formula	Transportation codes must be properly recorded in KSIS (T1-T5)	9-8-2008
702 KAR 5:100	Handicapped (IEPs) – reimbursement for special transportation	T5 codes, ensures that students with special needs are accommodated	10-14-1990
702 KAR 7:125	Pupil attendance	Clarifies attendance requirements	3-7-2014
702 KAR 7:140	School day and year schedule	Master bell schedule must be on file at district and schools	1-5-2015
704 KAR 3:305	Minimum requirements for high school graduation	Performance based and virtual courses; attendance credit	3-7-2014

Statute/Regulation Number	Title/Subject	Brief Description	Effective Date
704 KAR 5:060	Early entry of 5- and 6-year-olds into primary program for compulsory attendance purposes	Waiver process for primary students to enter school early	2-7-1991
704 KAR 7:090	Homeless Children Education Program	Nonresident students may not participate in McKinney-Vento program	10-7-1993
704 KAR 7:120	Home/hospital instruction	Requirements for how students qualify for HH services (with or without IEPs), educational services, and attendance	4-22-2005
OAG 82-44	Exceptions to Kindergarten Entry Age	Students enrolled in other states' kindergarten programs who transfer to Kentucky are enrolled in Kentucky kindergarten	1982
42 USC sec. 725(2) and (6) and sec. 103(a)(1)	McKinney-Vento: Homeless Education	Federal enrollment guidelines for homeless students	3-8-2002
2017 RS HB 471 and bill summary	Charter schools (regulations will be added as soon as they are fully approved)	Funding; charter school questions and answers	7-29-2017
2017 RS HB 520 and bill summary	Charter schools (regulations will be added as soon as they are fully approved)	Enabling legislation; charter school questions and answers	7-29-2017

Source: Kentucky Department of Education.

Appendix C

Kentucky Department Of Education
2016-17 Attendance Review Report—Draft

Executive Summary

Attendance reviews are conducted each year by three (3) Kentucky Department of Education (KDE) Division of District Support field staff on approximately one fifth of Kentucky school districts. 702 KAR 7:125 gives specific guidance to districts on the requirements of attendance reporting. One quarter of the schools in both Jefferson and Fayette County are reviewed each year. In the other districts, all high schools and middle schools are reviewed, and one half of the elementary schools are reviewed. The goal of the process is to assist districts with proper attendance accounting to ensure quality student attendance data prior to the Superintendents Annual Attendance Report (SAAR). The State Auditor's office conducts an annual audit of the KDE process and documentation. The state's vendor for accounting of student attendance data is Infinite Campus. The Kentucky Student Information System is referred to as the KSIS.

Process Summary

Describe how school districts know especially what KDE will be looking for.

KDE posts the Attendance Review Program Form on the web page, and field staff work with the DPPs in their assigned districts to make sure they have the required information in hand prior to their attendance review. The KBE regulation in 702 KAR 7:125 guides what is in the program form? The program form is kept current and is available on the KDE Web site.

Describe where and how the districts get the data:

Attendance data are accumulated through the KSIS. The KSIS calculates attendance each day for each student enrolled, based on the requirements of 702 KAR 7:125. The metrics for how pupil attendance is calculated are explained in the Pupil Attendance Manual on the KDE Web site.

Explain how the student attendance data gets to KDE:

Local school districts submit student attendance data electronically to KDE for the Growth Factor Report and the Superintendents Annual Attendance Report (SAAR). The Growth Factor Report includes data for the first two school months and is a subset of SAAR. The data show Aggregate Days reported by school and grade. The report also reflects the Average Daily Attendance (ADA) and the membership data for each school in the district for the first two months of school. The SAAR includes attendance data for the entire school year. The report is submitted electronically to KDE by June 30 of each school year. The reports include attendance, membership, and enrollment data by grade.

- Growth Factor and January Growth Factor Data
- SAAR Data

Describe the steps taken by KDE to review the data:

The attendance review of local schools verifies that schools are implementing the following requirements:

- Supplying the required amount of instructional time to students;
- Using the student Entry and Exit log;
- Recording and reconciling data properly in the KSIS (Entry and Exit log);
- Verifying that teachers in grades 7-12 are taking period attendance in the KSIS every day;
- Assigning students the proper transportation codes in the KSIS and maintaining documentation;
- Completing required paperwork and processes prior to placing students on Home and Hospital instruction in the KSIS, and maintaining documentation;
- Verifying nonresident contracts, including children of district employee (CDE) attendance in the KSIS;
- Verifying proper use of withdrawal codes in the KSIS;
- Ensuring correct set up of Virtual/Performance based courses in the KSIS for student attendance;
- Reconciling the district's master bell schedule with the instructional time in the school schedule;
- Verifying proper use of the state attendance codes (EHO, AFD, AFR, etc.) in the KSIS.

Describe the process for correcting the problem:

1. An Attendance Review Report is provided to each district.
2. The review report lists each discrepancy found, the statute or regulation related to the discrepancy as well as the action(s) necessary to correct the discrepancy.
3. After KDE identifies discrepancies in student attendance data, school district staff must correct all of the errors prior to submitting the SAAR for that school year.
4. District staff are given a reasonable amount of time to resolve all discrepancies, and field staff are available for technical assistance.
5. KDE field staff perform an onsite follow-up visit in the district to verify that all corrections in the review report are made, and certify this to the Division staff.
6. Once all corrections are verified, the district is notified by KDE staff that the attendance review is closed for the school year.

Current Audit Cycle

The districts reviewed during 2016-2017 can be seen in Table C.1.

Table C.1
School Districts Reviewed By Kentucky Department Of Education, 2016-2017

Region and School Districts		
West Kentucky And JCPS	**East Kentucky And FCPS**	**Central/Northern Kentucky**
Butler County	Barbourville Independent	Adair County
Crittenden County	Elliott County	Boone County
Jefferson County	Fayette County	Campbellsville Independent
Logan County	Fleming County	Covington Independent
Lyon County	Harrison County	Cumberland County
Ohio County	Jackson County	Danville Independent
McLean County	Leslie County	Frankfort Independent
Marshall County	Lewis County	Gallatin County
Mayfield Independent	Madison County	Henry County
Muhlenberg County	Paintsville Independent	Ludlow Independent
	Pendleton County	McCreary County
	Pikeville Independent	Somerset Independent
	Pineville Independent	Southgate Independent
	Powell County	Taylor County
	Williamsburg Independent	Woodford County

Summary of 2016-2017 Attendance Review Findings

Discrepancies were found at all 40 districts reviewed during the 2016-2017 school year. The largest percentage of errors was found in the use of the Entry/Exit logs by students/adults, the recording of the Entry/Exit log data into the KSIS, and period attendance not being taken in the KSIS by teachers. These can be seen in Table C.2.

Table C.2
Types And Number Of Discrepancies Found During Review, 2016-2017

Type Of Discrepancy	Number Of Findings
Students/parents do not use the entry/exit log, or required information is missing	77
Sign in/Sign out log data (from the student Entry/Exit log) is not entered into Campus by school attendance clerk	55
Period attendance is not taken by teachers (middle/high students)	54
T5 Transportation codes are assigned to ineligible students (without IEPs)	32
Transportation codes are not verified/documented properly	27
Withdrawal codes are set up incorrectly	24
Home and Hospital requirements are not met or documentation is insufficient	19
Performance Based/Virtual course attendance is set up incorrectly	19
Master Bell Schedule at the district does not match instructional day schedules in schools	18
District attendance codes are not properly mapped in Campus	18
No documentation is on file for AFD/AFR/EHO days	15

Appendix D

State Chronic Absenteeism Rates And Ranks
2014

	Elementary School		Middle School		High School		Total	
State	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank
AK	21.2%	1	21.9%	4	27.3%	4	23.5%	3
AL	10.7	23	12.6	27	16.9	34	12.6	31
AR	10.4	27	10.9	36	13.0	48	11.6	38
AZ	15.8	7	16.0	7	13.6	46	15.6	14
CA	9.8	34	9.9	43	14.1	43	11.3	43
CO	11.2	20	14.2	16	23.0	8	16.0	12
CT	12.0	17	13.6	21	19.0	26	14.4	22
DC	19.8	2	24.5	1	52.4	1	29.6	1
DE	10.4	26	13.3	24	20.2	16	14.8	19
FL	13.9	11	14.8	15	20.2	17	16.1	11
GA	7.6	46	10.3	38	16.4	37	11.0	44
HI	17.8	6	18.8	6	23.5	6	19.6	5
IA	8.8	41	11.5	32	18.8	27	12.6	32
ID	8.1	45	8.2	50	10.0	51	9.5	50
IL	8.5	43	10.1	39	20.0	19	12.7	30
IN	7.2	48	8.7	47	13.9	44	9.7	48
KS	10.1	30	12.0	30	19.9	21	14.1	24
KY	10.5	24	13.8	19	22.0	10	14.4	23
LA	10.8	21	13.7	20	17.3	33	13.2	27
MA	10.4	25	11.9	31	16.1	38	12.6	33
MD	12.4	14	13.5	22	20.4	14	14.9	18
ME	11.3	19	13.9	17	20.3	15	14.6	20
MI	19.7	3	22.2	3	16.9	35	17.9	7
MN	8.7	42	11.3	34	16.7	36	11.9	36
MO	9.5	36	10.5	37	15.3	40	11.9	37
MS	11.4	18	13.9	18	23.4	7	15.8	13
MT	14.1	10	15.0	12	21.1	12	17.3	9
NC	10.1	31	13.5	23	19.6	23	13.7	26
ND	7.6	47	8.5	48	11.3	49	9.7	49
NE	6.1	51	8.4	49	17.4	32	10.5	47
NH	9.7	35	12.5	28	17.9	29	12.9	29
NJ	10.2	29	10.9	35	15.8	39	12.0	35

	Elementary School		Middle School		High School		Total	
State	**Percent**	**Rank**	**Percent**	**Rank**	**Percent**	**Rank**	**Percent**	**Rank**
NM	9.4	38	8.8	46	13.2	47	10.8	46
NV	14.9	8	15.7	9	21.8	11	17.8	8
NY	9.8	33	11.5	33	13.7	45	10.9	45
OH	12.5	13	16.0	8	20.2	18	15.0	17
OK	9.3	39	10.0	42	14.9	41	11.6	39
OR	19.1	4	20.6	5	28.4	3	22.6	4
PA	12.2	15	14.9	14	20.9	13	15.2	16
RI	14.5	9	15.0	11	25.6	5	18.9	6
SC	7.0	50	8.1	51	10.9	50	8.4	51
SD	8.2	44	9.2	45	17.6	30	11.5	41
TN	9.1	40	9.4	44	17.6	31	12.1	34
TX	7.1	49	10.1	41	19.3	24	11.5	40
UT	12.8	12	15.0	13	19.2	25	15.6	15
VA	10.1	32	12.1	29	18.1	28	13.0	28
VT	9.5	37	10.1	40	14.4	42	11.4	42
WA	18.8	5	22.2	2	33.6	2	24.5	2
WI	12.2	16	15.1	10	23.0	9	16.1	10
WV	10.8	22	13.0	25	19.7	22	13.9	25
WY	10.2	28	12.7	26	20.0	20	14.5	21

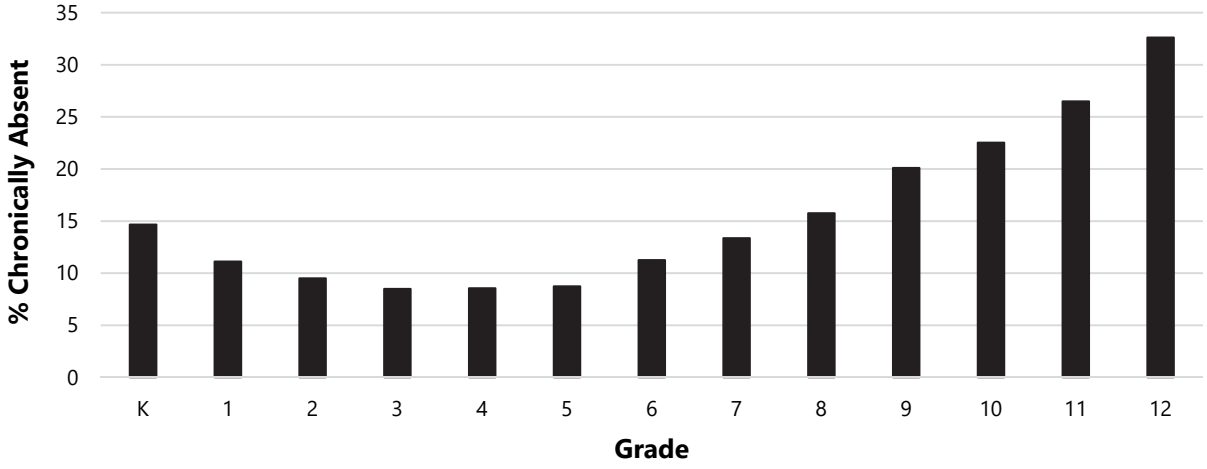
Note: The Office for Civil Rights Data defines CA as students missing more than 15 school days.
Source: United States. Dept. of Educ. Office for Civil Rights Data Collection, 2014.

.

Appendix E

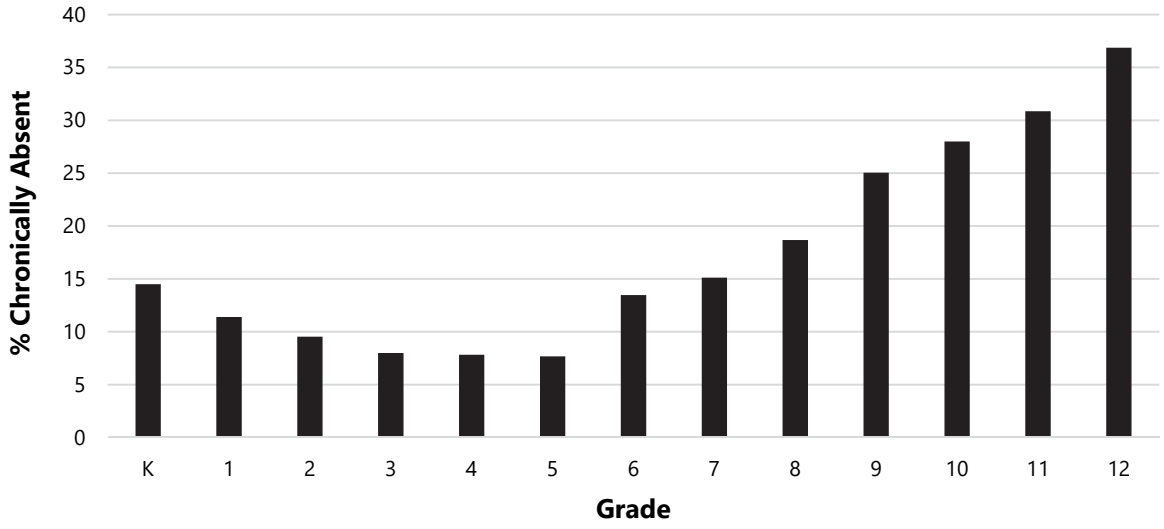
Chronic Absenteeism By Grade And Race/Ethnicity, School Year 2016

Figure E.A
Chronic Absenteeism By Grade, All Students
School Year 2016



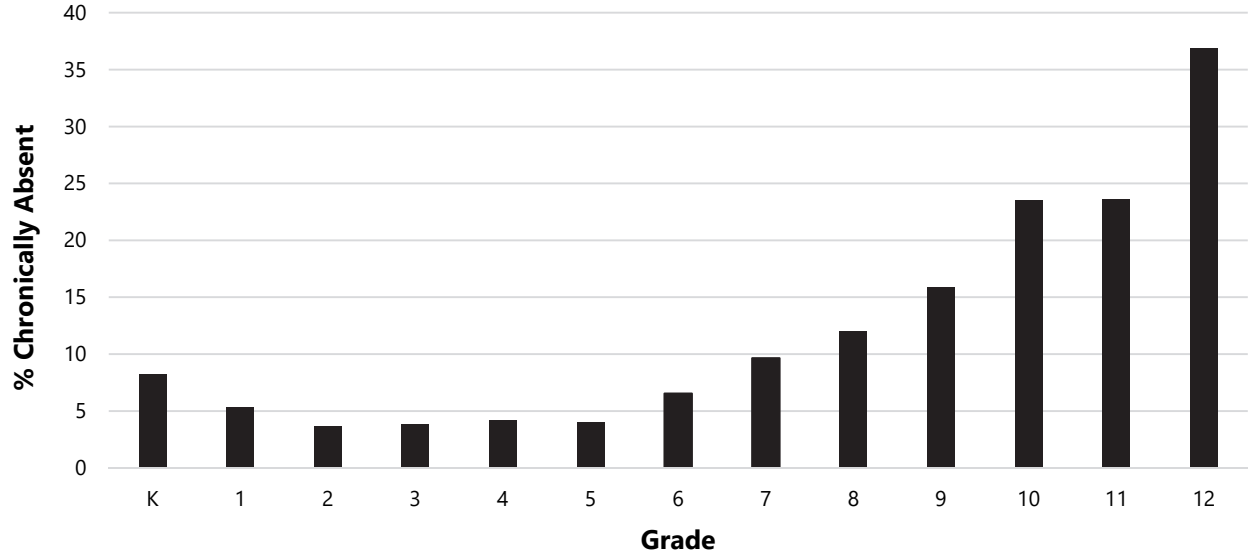
Source: Kentucky Department of Education.

Figure E.B
Chronic Absenteeism By Grade, Black Students
School Year 2016



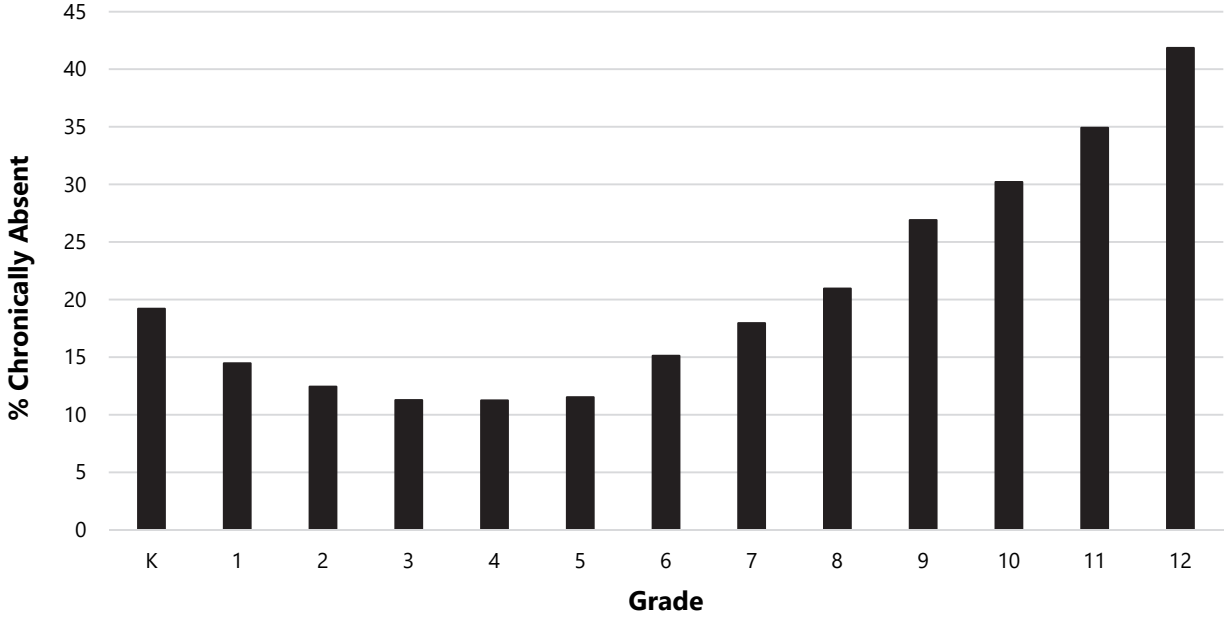
Source: Kentucky Department of Education.

Figure E.C
Chronic Absenteeism By Grade, Limited English Proficiency Students
2016



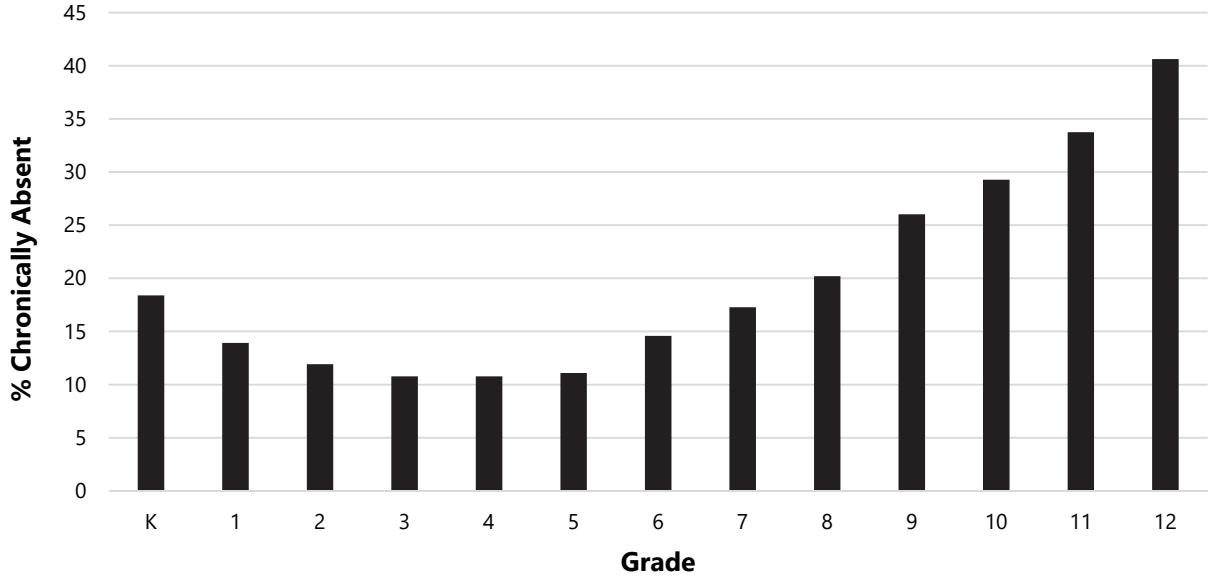
Source: Kentucky Department of Education.

Figure E.D
Chronic Absenteeism By Grade, Free Or Reduced-Price Lunch Students
School Year 2016



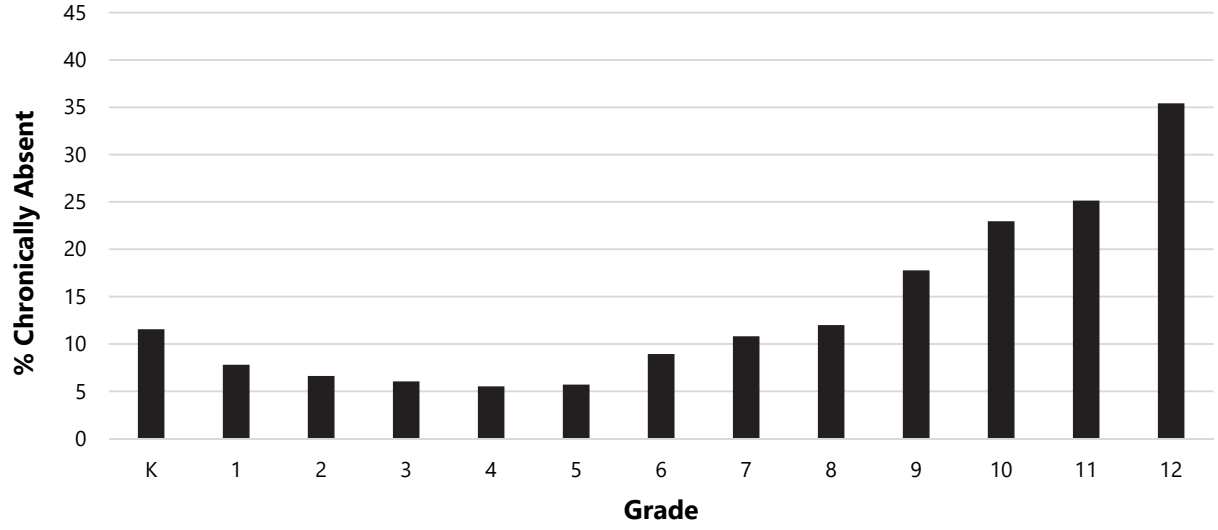
Source: Kentucky Department of Education.

Figure E.E
Chronic Absenteeism By Grade, Gap Group Students
School Year 2016



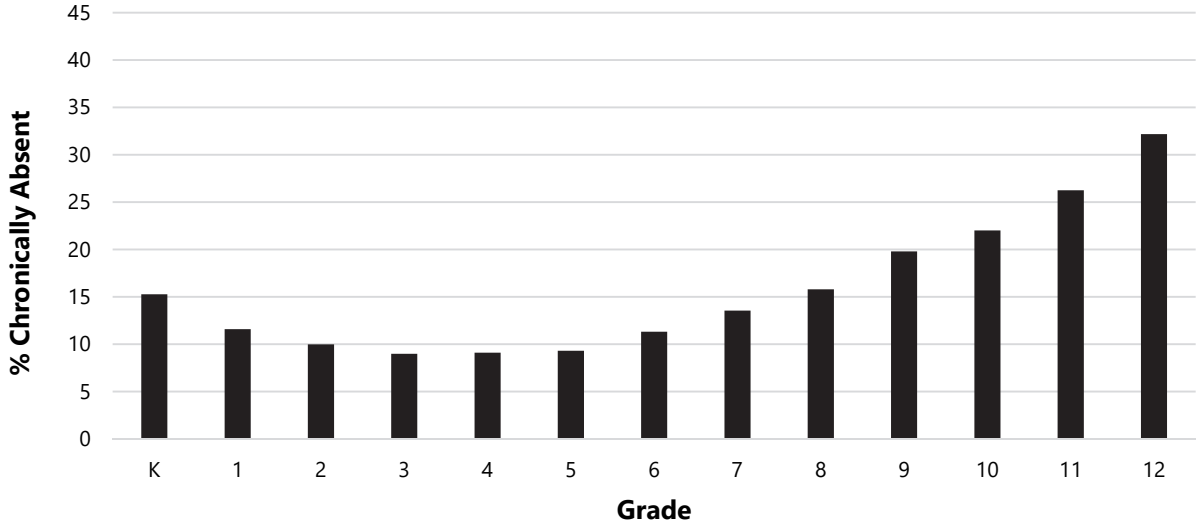
Note: Gap Group represents the students mandated by federal guidelines: African-American, Hispanic, Native American, poverty (students qualifying for free or reduced-price lunch), limited English proficiency students, and students with disabilities.
Source: Kentucky Department of Education.

Figure E.F
Chronic Absenteeism By Grade, Hispanic Students
School Year 2016



Source: Kentucky Department of Education.

Figure E.G
Chronic Absenteeism By Grade, White Students
School Year 2016



Source: Kentucky Department of Education.

Appendix F

First-Month Absences' Impacts On Chronic Absenteeism

First-month absences were calculated using student level absence data supplied by KDE for the 2016 school year.

A model was designed to determine the increase in probability of being chronically absent. The largest predictor for this analysis was student-level absences of any kind during the first month of school of the 2016 school year.

According to the analysis, each absence of any kind during the first month of instruction accounted for an approximately 11 percentage point increase in the probability of a student's being chronically absent. The results appear in Table 2.2.

Table F.1
Percentage Point Effect Of Explanatory Variables
On Chronic Absenteeism Relative To The Control Group Mean
2016 School Year

Dependent Variable	Explanatory Variables	Percentage Point Effect On Chronic Absenteeism
Chronic absenteeism	First-month absences	10.9%
	FRPL status	7.3
	Homeless status	4.4
	IEP status	1.4
	Being male	-0.5
	Two or more races	-2.4
	Hispanic/Latino	-2.7
	Asian	-3.7
	LEP status	-4.4
	African American*	0.1
	Other race**	-0.5
	Control group mean	1.2%

Note: Percentages have been rounded to the nearest tenth of a percent. FRPL= free or reduced-price lunch; IEP = individualized education program; LEP = limited English proficiency.
*African American status was not statistically significant in this model.
**Other race includes Native American and Alaska natives as well as native Hawaiians or students from other Pacific islands. Other race status was not statistically significant in this model.
Source: Kentucky Department of Education.

Appendix G

Chronic Absenteeism From Year To Year

On average, rates of chronic absenteeism increase progressively with each grade after the 4th grade, but this information does not provide answers as to whether an individual student's chronic absence in prior years has any effect on that same student being chronically absent in future years.

The analysis used CA status during the previous school years to predict CA status for the 2016 school year.

According to the analysis, CA status in each of the prior years included increased the probability of CA during the 2016 school year. However, the CA status during the 2015 school year was the best predictor for 2016 CA status.

Table G.1
Percentage Point Effect Of Prior Years Chronic Absence Status On The Probability Of Being Chronically Absent During School Year 2016

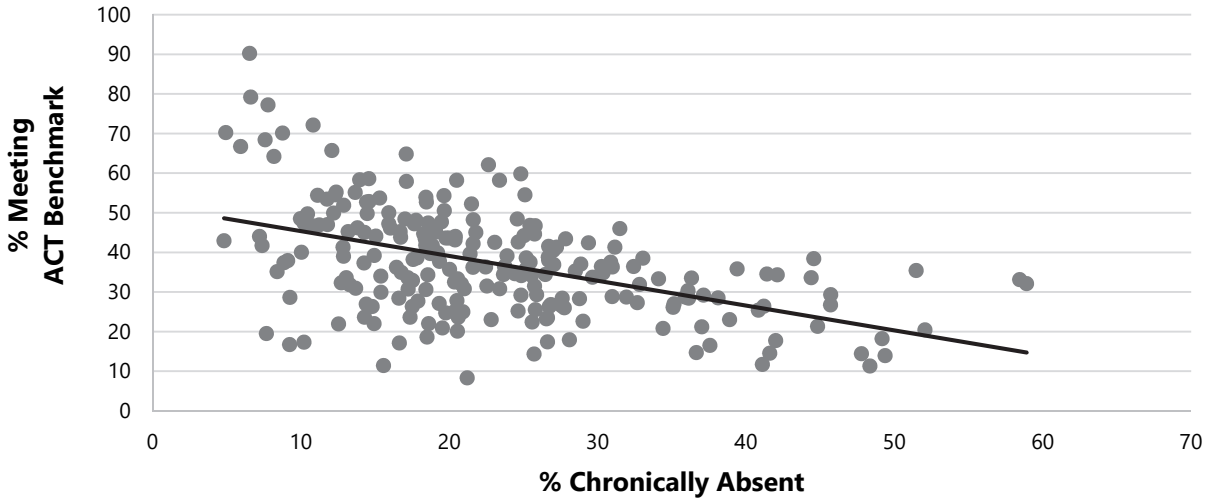
Explanatory Variables*	Effect On Probability Of Being Chronically Absent During 2016
Chronic absence status 2015	37.6%
Chronic absence status 2014	9.6
FRPL status	4.7
Chronic absence status 2013	3.6
Homeless status	1.8
IEP status	1.2
Being male	-0.2
Two or more races	-0.4
African American	-0.6
LEP status	-1.3
Hispanic/Latino	-1.4
Asian	-2.8
Control group mean	2.8%

Note: Percentages have been rounded to the nearest tenth of a percent.
FRPL= free or reduced-priced lunch; IEP = individualized education program; LEP = limited English proficiency.
*The explanatory variables for American Indian/Alaska Natives and Native Hawaiians were not statistically significant according to the model, and they were omitted from the table.
Source: Kentucky Department of Education.

Appendix H

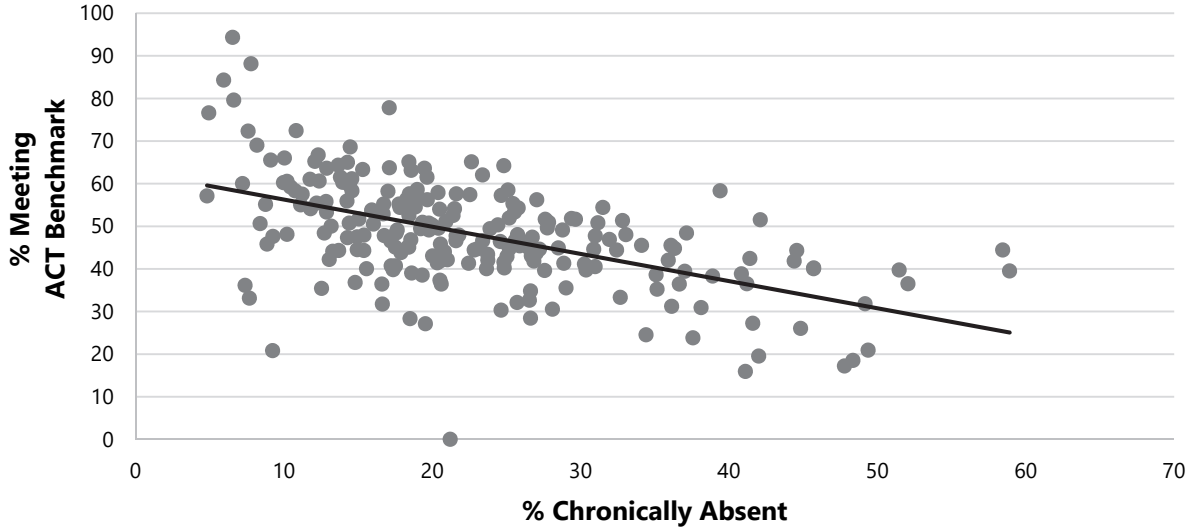
Chronic Absenteeism And ACT Benchmarks, School Year 2016

Figure H.A
School Chronic Absenteeism Rates And ACT Math Benchmark
School Year 2016



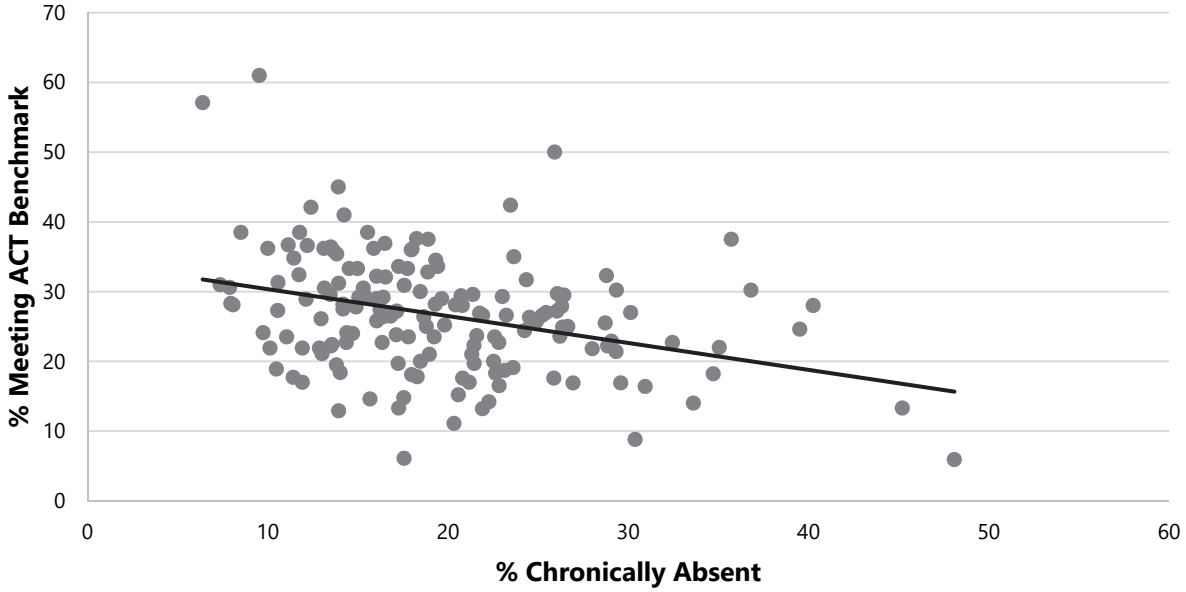
Note: Kentucky's Council on Postsecondary Education set the benchmark score college readiness of 19 in math.
Source: Kentucky Department of Education.

Figure H.B
School Chronic Absenteeism Rates And ACT Reading Benchmark
School Year 2016



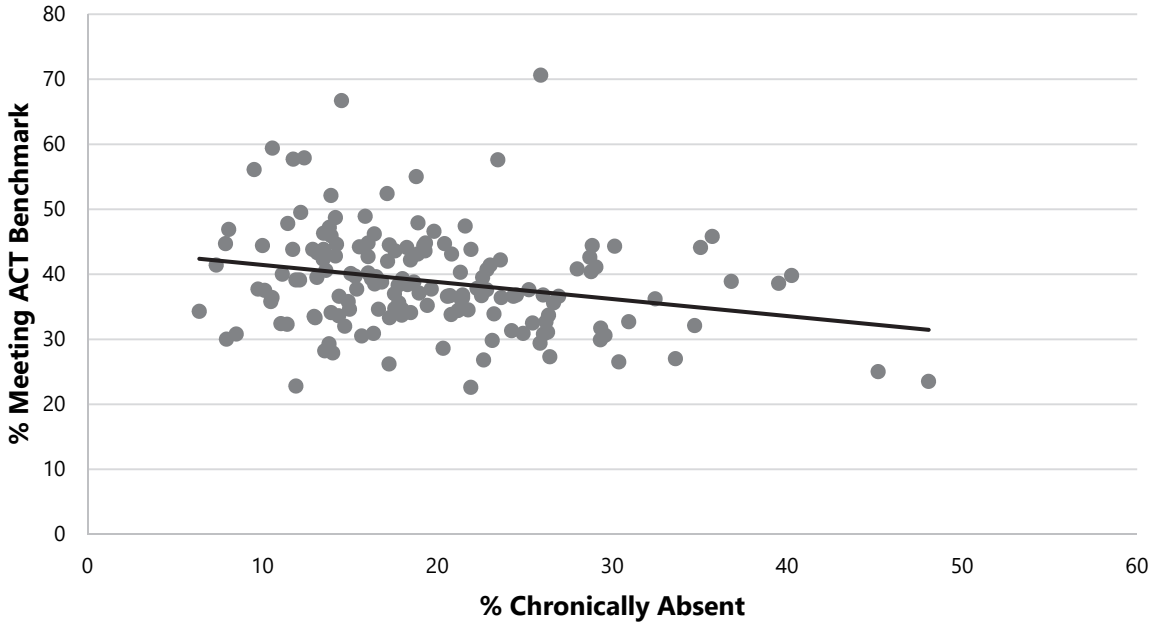
Note: Kentucky's Council on Postsecondary Education set the benchmark score college readiness of 20 in reading.
Source: Kentucky Department of Education.

Figure H.C
District Chronic Absenteeism Rates And ACT Math Benchmark
School Year 2016



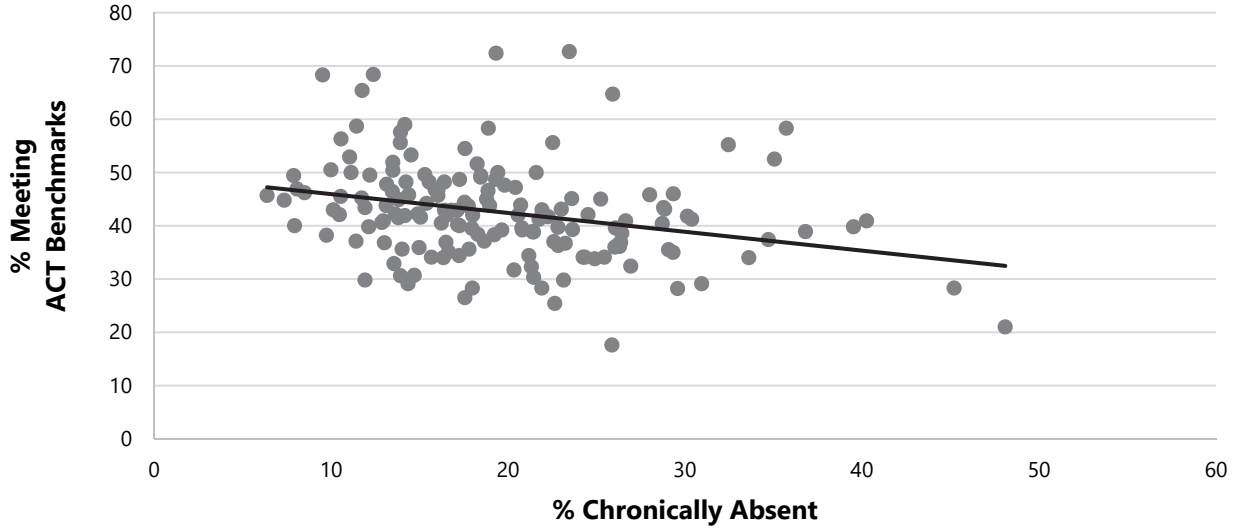
Note: Kentucky's Council on Postsecondary Education set the benchmark score college readiness of 19 in math.
Source: Kentucky Department of Education.

Figure H.D
District Chronic Absenteeism Rates And ACT Reading Benchmark
School Year 2016



Note: Kentucky's Council on Postsecondary Education set the benchmark score college readiness of 20 in reading.
Source: Kentucky Department of Education.

Figure H.E
District Chronic Absenteeism Rates And ACT English Benchmark
School Year 2016



Note: Kentucky's Council on Postsecondary Education set the benchmark score college readiness of 18 in English.
Source: Kentucky Department of Education.

Appendix I

Chronic Absence And ACT Modeling

Statistical Modeling

Ordinary least squares regression models were used in order to gain further insight into the potential relationship between chronic absenteeism and ACT composite scores. The full model is structured according to the Model 4 equation, with ACT composite scores as the dependent variable. The explanatory variables of note are chronic absence status (βCA) and mobility status ($\beta MOBILITY$). The subgroup categories for free and reduced-price lunch (FRPL), individualized education program, limited English proficiency, and homeless students are represented (βGAP), as well as demographic group controls ($\beta DEMO$).[a] The intercept of the equation line (α) and the residual error term (ε) complete the equation.

$$\textit{Model 1: ACT Composite} = \alpha + \beta CA + \varepsilon$$
$$\textit{Model 2: ACT Composite} = \alpha + \beta CA + \beta MOBILITY + \varepsilon$$
$$\textit{Model 3: ACT Composite} = \alpha + \beta CA + \beta MOBILITY + \beta GAP + \varepsilon$$
$$\textit{Model 4: ACT Composite} = \alpha + \beta CA + \beta MOBILITY + \beta GAP + \beta DEMO + \varepsilon$$

Models 1 through 4 were constructed using a step-wise process to determine the percentage of the variance (R-squared in the table below) explained by the various categories of explanatory variables relative to the dependent variable for each model. The intercept (α) also represents the ACT composite score mean for the control groups within the models.[b] As shown in Table I.1, Model 4 suggests that chronic absence status (with the other variables held constant) had a negative relationship with the control group mean of approximately 1.8 points. Thus students from this group would be projected to average 20.5 on the ACT composite test.[c]

The models are designed to be additive. Therefore, more than one explanatory variable may be associated with a particular group of students. For instance, in Model 4 FRPL students with chronic absence status would have ACT composite scores that were approximately 4.3 points lower than the control group mean on average.[d] The model determined that only one of the explanatory variables, a student being Asian, was associated with a positive change (2.2 points) relative to the control group mean.

[a] The demographic group controls for models 3 and 4 include whether the student was African American, Asian, Hispanic, two or more races, or other race (which includes American Indian and Pacific Islanders), and the models also control for gender.
[b] For example, the control group for Model 4 is a white, female student who was not chronically absent, did not transfer, and was not a member of an achievement gap group.
[c] Control group mean (22.3) + chronic absence status (-1.8) = 20.5 with all other variables held constant.
[d] Control group mean (22.3) + chronic absence status (-1.8) + FRPL status (-2.5) = 18.0 with all other variables held constant.

Table I.1
ACT Composite Score Model Regression Table
School Year 2016

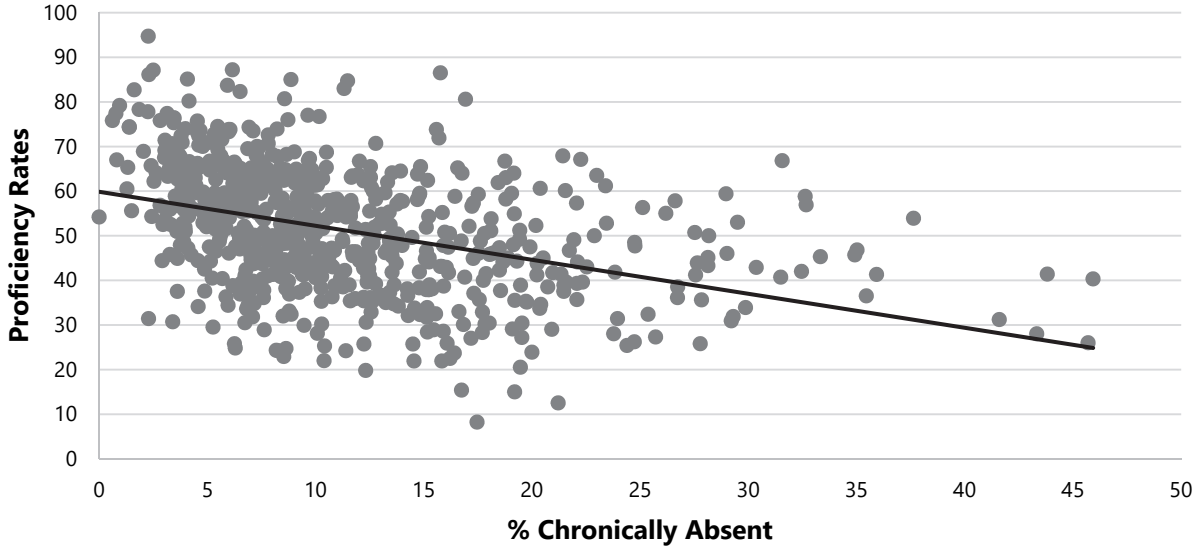
	ACT Composite Score Models							
	Model 1		Model 2		Model 3		Model 4	
Controls	Beta Coefficient	Standard Error	Beta Coefficient	Standard Error	Beta Coefficient	Standard Error	Beta Coefficient	Standard Error
Chronic absenteeism	-2.76	0.053	-2.53	0.053	-1.76	0.049	-1.82	0.049
Within district transfer			-2.23	0.148	-0.89	0.084	-0.70	0.083
Transferred same school			-3.49	0.201	-2.63	0.182	-2.20	0.180
Outside district transfer			-0.97	0.058	-0.53	0.053	-0.56	0.053
FRPL					-2.72	0.043	-2.51	0.043
Special education					-3.82	0.075	-3.65	0.074
English learners					-4.59	0.188	-4.83	0.196
Homeless					-0.45	0.138	-0.40	0.136
Male							-0.64	0.041
Asian							2.22	0.174
African American							-2.05	0.070
Hispanic/Latino							-0.38	0.106
Two or more races*							--	--
Other race**							-1.15	0.496
Intercept (α)***	20.3		20.4		21.9		22.3	
R-Squared	0.058		0.077		0.224		0.246	
Number of observations	44,405		44,405		44,405		44,405	

Note: The racial group of white students is excluded from the output, but this group represents the comparison group for the other race/ethnicity variables.
FRPL = free or reduced-price lunch.
*Two or more races was not statistically significant at the $p < 0.05$ level in Model 4.
**The variable for other race was not statistically significant at the $p < 0.05$ level in this model.
***The intercept (α) represents the control group mean ACT composite score for each model.
Source: Kentucky Department of Education.

Appendix J

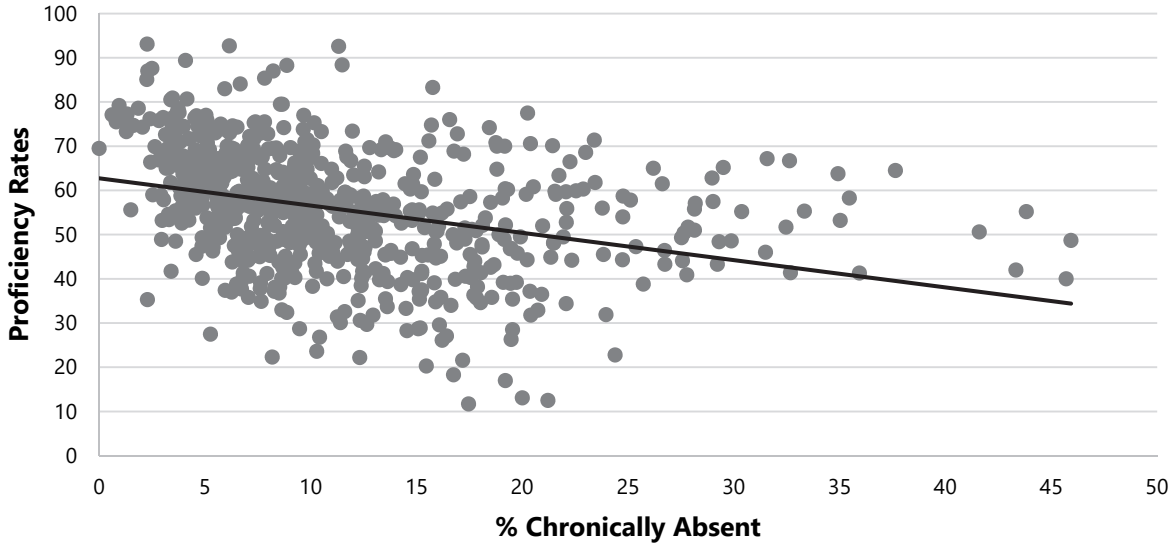
Chronic Absenteeism And K-PREP Proficiency, School Year 2016

Figure J.A
Elementary School Chronic Absenteeism And K-PREP Proficiency Rates In Mathematics
School Year 2016



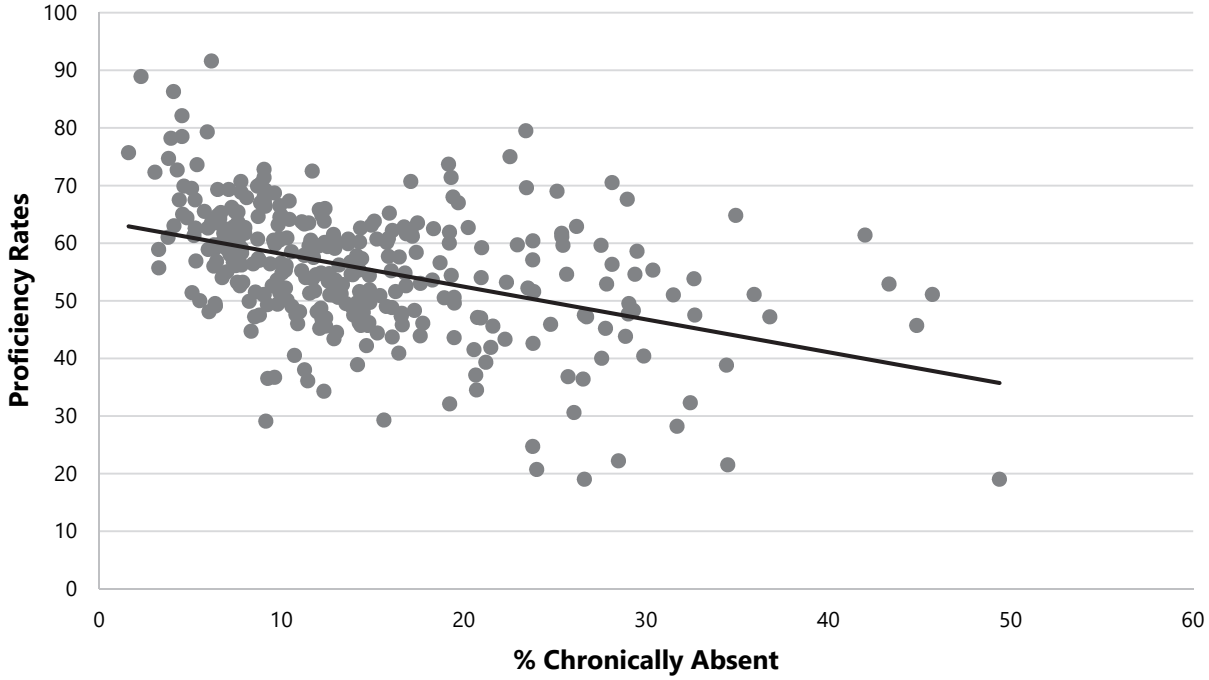
Source: Kentucky Department of Education.

Figure J.B
Elementary School Chronic Absenteeism And K-PREP Proficiency Rates In Reading
School Year 2016



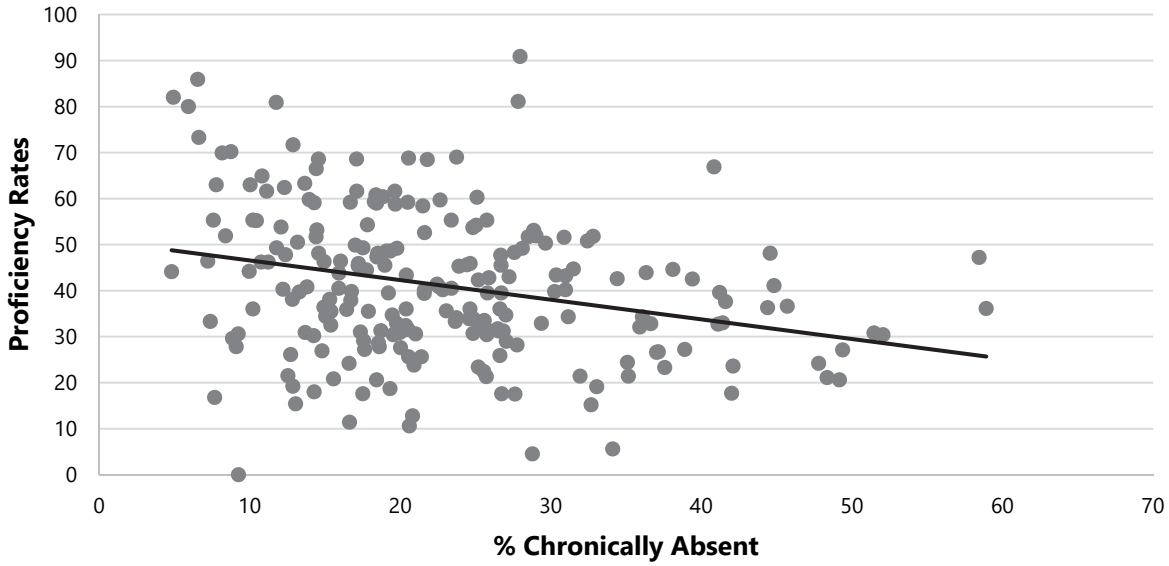
Source: Kentucky Department of Education.

Figure J.C
Middle School Chronic Absenteeism And K-PREP Proficiency Rates In Reading
School Year 2016



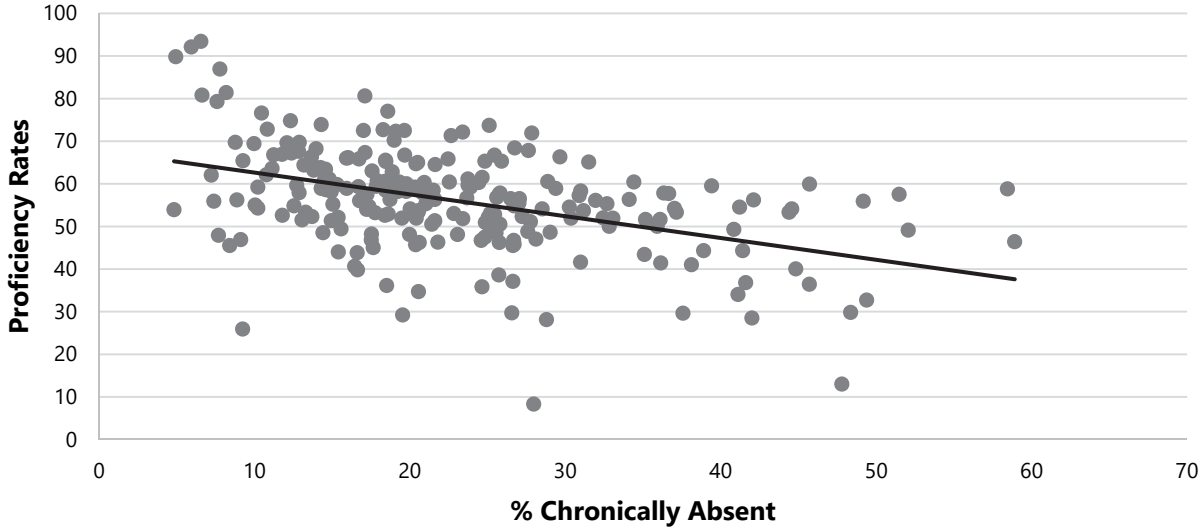
Source: Kentucky Department of Education.

Figure J.D
High School Chronic Absenteeism And K-PREP Proficiency Rates In Mathematics
School Year 2016



Note: Algebra II was used for high school mathematics.
Source: Kentucky Department of Education.

Figure J.E
High School Chronic Absenteeism And K-PREP Proficiency Rates In Reading
School Year 2016



Note: English II was used for High School Reading.
Source: Kentucky Department of Education.

Appendix K

Chronic Absence And GPA Modeling

Statistical Modeling

Ordinary least squares regression models were used in order to gain further insight into the relationship between chronic absence status and unweighted grade point averages (GPAs) for Kentucky public high school students. The models are structured according to equations listed below, where the dependent variable in each model is unweighted GPAs and chronic absence status (βCA) and student mobility ($\beta MOBILITY$) represent the explanatory variables of note. The subgroup categories for free and reduced-price lunch, individualized education program, limited English proficiency, and homeless students are represented (βGAP), as well as demographic group controls ($\beta DEMO$).[a] The residual error term (ε) finishes out the equation.

$$\textbf{Model 1: } \textit{Unweighted GPA} = \alpha + \beta CA + \varepsilon$$
$$\textbf{Model 2: } \textit{Unweighted GPA} = \alpha + \beta CA + \beta MOBILITY + \varepsilon$$
$$\textbf{Model 3: } \textit{Unweighted GPA} = \alpha + \beta CA + \beta MOBILITY + \beta GAP + \varepsilon$$
$$\textbf{Model 4: } \textit{Unweighted GPA} = \alpha + \beta CA + \beta MOBILITY + \beta GAP + \beta DEMO + \varepsilon$$

Models 1 through 4 were constructed using a stepwise process to determine the percentage of the variance (R-squared in the tables below) explained by the various categories of explanatory variables relative to the dependent variable for each model.[b] For Model 4 the mean unweighted GPA for the control group of students (α) was 3.44, which also represents the intercept of the regression line.[c] Table K.1 displays the projected effect of the explanatory variables on unweighted GPAs. Chronic absence status was projected to have a negative relationship with the control group mean of approximately 0.47 GPA points. Student mobility was broken out into three methods of student transfer, with transferring within the same school having the largest negative relationship with unweighted GPAs at approximately 0.54 GPA points. Each of the explanatory variables were statistically significant within each model, and Model 4 explained more than 27 percent of the variance between the dependent variables and the explanatory variables.

[a] The demographic group controls include whether the student was African American, Asian, Hispanic, two or more races, or other race (which includes American Indian and Pacific Islanders), and the models also control for gender.
[b] For instance, Model 1 in Figure K.1 explained roughly 10 percent of the variance associated with unweighted GPAs, while Model 4 explained more than 27 percent of the variance.
[c] The control group mean for Model 4 is a white, female student who was not chronically absent, did not transfer, and was not a member of an achievement gap group.

Figure K.1
Regression Output For Unweighted GPA Models, Grades 9 To 12
School Year 2016

	Unweighted GPA Models							
	Model 1		Model 2		Model 3		Model 4	
Controls	Beta Coefficient	Standard Error	Beta Coefficient	Standard Error	Beta Coefficient	Standard Error	Beta Coefficient	Standard Error
Chronic absenteeism	-0.61	0.004	-0.56	0.004	-0.46	0.004	-0.47	0.004
Within district transfer			-0.24	0.005	-0.20	0.005	-0.16	0.005
Transferred same school			-0.68	0.014	-0.61	0.013	-0.54	0.013
Outside district transfer			-0.15	0.004	-0.09	0.004	-0.10	0.003
FRPL					-0.38	0.003	-0.35	0.003
Special education					-0.33	0.006	-0.25	0.005
English learners					-0.19	0.012	-0.16	0.012
Homeless					-0.11	0.009	-0.10	0.009
Male							-0.37	0.003
Asian							0.36	0.013
African American							-0.33	0.005
Hispanic/Latino							-0.11	0.008
Two or more races							-0.14	0.010
Other race							-0.14	0.033
Intercept (α)*	2.99		3.02		3.24		3.44	
R-Squared	0.101		0.131		0.206		0.274	
Number of observations	202,038		202,038		202,038		202,038	

Note: Beta coefficients have been rounded to the nearest one-hundredth. FRPL= free or reduced-price lunch. Each of the variables within these models were statistically significant at the $p < 0.01$ level.
* The intercept (α) represents the control group mean unweighted GPA for each of the models.
Source: Kentucky Department of Education.

Appendix L

Chronic Absence And K-PREP Modeling

Statistical Modeling

Linear probability regression models were used in order to gain further insight into the relationship between chronic absenteeism and student proficiency on the K-PREP reading and math assessments for Kentucky 3rd- through 8th-grade public school students. The models were structured according to equations listed below, where the dependent variables are K-PREP reading proficiency and K-PREP math proficiency; chronic absence status (*βCA)* and student mobility (*βMOBILITY)* represent the explanatory variables of note.[a] The subgroup categories for free or reduced-price lunch (FRPL), individualized learning program, limited English proficiency, and homeless students are represented (β*GAP*), as well as demographic group controls (β*DEMO*).[b] The residual error term (ε) finishes out the equations. Tables L.1 and L.2 represent the models for K-PREP reading and K-PREP math, respectively.

Model 1: K-PREP Proficiency = α + βCA + ε
Model 2: K-PREP Proficiency = α + βCA + βMOBILITY + ε
Model 3: K-PREP Proficiency = α + βCA + βMOBILITY + βGAP + ε
Model 4: K-PREP Proficiency = α + βCA + βMOBILITY + βGAP + βDEMO + ε

Models 1 through 4 were constructed using a stepwise process to determine the percentage of the variance (R-squared in the tables below) explained by the various categories of explanatory variables relative to dependent variable for each model. The intercept (α) also represents the K-PREP proficiency rate mean for the control group within each of the model equations.[c] As shown in Table L.1 and Table L.2, the Model 4 equations suggest that chronic absence status (with the other variables held constant) had a negative relationship with the control group proficiency rate means for both of the K-PREP assessments. Student proficiency for chronically absent students was projected to be 9 percentage points lower in reading (Table L.1) and 14 percentage points lower on the math assessment (Table L.2).

The models are designed to be additive. Therefore, more than one explanatory variable may be associated with a particular group of students. For instance, in Model 4 FRPL students with chronic absence status would have proficiency rates on the K-PREP reading assessment that were approximately 28 percentage points lower than the control group mean on average.[d] The models determined that only one of the explanatory variables, a student being Asian, was

[a] The model equations were run separately for K-PREP reading and K-PREP math dependent variables.
[b] The demographic group controls for this model include whether the student was African American, Asian, Hispanic, two or more races, or other race (which includes American Indian and Pacific Islanders), and the model also controlled for gender.
[c] The control group mean for this model is a white, female student who was not chronically absent, did not transfer, and was not a member of an achievement gap group.
[d] Control group mean for K-PREP reading (78.5 percent) + chronic absence status -9 percent) + FRPL status (-19 percent) = 50.5 percent with all other variables held constant.

associated with a positive change (11 percentage points K-PREP reading and 20 percentage points K-PREP math) relative to the control group means.

Figure L.1
Regression Output For K-PREP Reading, Grades 3 To 8
School Year 2016

	K-PREP Reading Proficiency Models							
	Model 1		Model 2		Model 3		Model 4	
Controls	Beta Coefficient	Standard Error	Beta Coefficient	Standard Error	Beta Coefficient	Standard Error	Beta Coefficient	Standard Error
Chronic absenteeism	-0.17	0.003	-0.15	0.003	-0.08	0.003	-0.09	0.003
Within district transfer			-0.12	0.003	-0.08	0.003	-0.06	0.003
Transferred same school			-0.09	0.021	-0.05	0.020	-0.05	0.019
Outside district transfer			-0.09	0.003	-0.05	0.002	-0.05	0.002
FRPL					-0.22	0.002	-0.19	0.002
Special education					-0.23	0.003	-0.22	0.002
English learners					-0.30	0.005	-0.31	0.006
Homeless					-0.04	0.005	-0.04	0.005
Male							-0.06	0.002
Asian							0.11	0.007
African American							-0.20	0.003
Hispanic/Latino							-0.03	0.004
Two or more races							-0.06	0.005
Other race							-0.05	0.020
Intercept (α)*	0.574		0.582		0.748		0.785	
R-Squared	0.011		0.019		0.111		0.130	
Number of observations	302,767		302,767		302,767		302,767	

Note: Beta coefficients have been rounded to the nearest one-hundredth. Each of the variables within these models was statistically significant at the $p < 0.01$ level. FRPL = free or reduced-price lunch.
Source: Kentucky Department of Education.

Figure L.2
Regression Output For K-PREP Math, Grades 3 To 8
School Year 2016

	K-PREP Math Proficiency Models							
	Model 1		Model 2		Model 3		Model 4	
Controls	Beta Coefficient	Standard Error	Beta Coefficient	Standard Error	Beta Coefficient	Standard Error	Beta Coefficient	Standard Error
Chronic absenteeism	-0.22	0.003	-0.20	0.003	-0.14	0.003	-0.14	0.003
Within district transfer			-0.11	0.003	-0.07	0.003	-0.05	0.003
Transferred same school			-0.09	0.021	-0.05	0.020	-0.05	0.019
Outside district transfer			-0.10	0.003	-0.06	0.002	-0.06	0.002
FRPL					-0.23	0.002	-0.20	0.002
Special education					-0.23	0.003	-0.23	0.003
English learners					-0.22	0.005	-0.24	0.006
Homeless					-0.05	0.005	-0.04	0.005
Male							--	--
Asian							0.20	0.007
African American							-0.18	0.003
Hispanic/Latino							-0.03	0.004
Two or more races							-0.06	0.005
Other race							--	--
Intercept (α)*	0.518		0.528		0.696		0.702	
R-Squared	0.019		0.028		0.117		0.132	
Number of observations	302,767		302,767		302,767		302,767	

Note: Beta coefficients have been rounded to the nearest one-hundredth. Each of the variables within these models was statistically significant at the $p < 0.01$ level unless indicated otherwise. FRPL = free or reduced-price lunch.
Source: Kentucky Department of Education.

Appendix M

Absence Level Relationship With Outcomes

Statistical Modeling

Thus far the body of this report and the accompanying appendices have provided analyses on the relationship of chronic absenteeism and measurable educational outcomes such as ACT scores and grade point averages (GPAs). The consensus is that students who were chronically absent (CA) struggled relative to their non-CA peers. However, these analyses did not provide an answer concerning the number of absences at which educational outcomes begin to trend downward. That particular question was addressed by using statistical modeling that controlled for various absence levels.[a] Models were constructed to determine this relationship for ACT composite scores, K-PREP reading and math proficiency, and unweighted GPAs.

ACT Models

Ordinary least squares modeling was conducted on ACT composite scores for 11th-grade students who took the assessment during the 2016 school year as the dependent variable. Equation 1 lists the base equation used to test the relationship of the chosen absence thresholds and ACT composite scores. Each model used a distinct absence level (β*Absence Level*) as the explanatory variable of note, and the models also controlled for mobility status (*βMOBILITY)*, gap group status (*βGAP)*, and student demographics (*βDEMO)*.[b] The error term (*ε)* rounds out the equations associated with Equation 1.

Equation 1**: **ACT Composite = α + βAbsence Level + βMOBILITY + βGAP + βDEMO + ε

According to the output of these models, ACT composite scores appear to begin to trend downward for students with between 10 and 15 absences of any kind. Table M.1 shows the projected relationship of the various absence levels with ACT composite scores when controlling for all other explanatory variables for each of the models.

[a] Models were developed to determine the relationship with ACT composite scores and the following absence levels: 5 or fewer absences, between 5 and 10 absences, between 10 and 15 absences, 15 or more absences, and students who were chronically absent. Each absence level has a distinct model to determine this relationship.

[b] The mobility status controls in the models are transfers within district, transfers outside of district, and transfers within the same school. The gap status controls were for free or reduced-price lunch, individualized education program, limited English proficiency, and homeless students. The demographic controls were for gender, Asian, African-American, Hispanic, two or more races, and other race. The control group for these models is a white female student who was not a mobile student or a member of any of the gap groups within the models.

Table M.1
Projected Relationship Of Absence Levels
And ACT Composite Scores For 11th-Grade Students
School Year 2016

Absence Level	Beta Coefficient (SE)
5 or fewer absences	1.85 (0.047)
Between 5 and 10 absences	0.47 (0.047)
Between 10 and 15 absences	-0.34 (0.054)
15 or more absences	-1.89 (0.042)
Chronically absent	-1.93 (0.048)

Note: The coefficients presented are for five distinct models. Each of the models controlled for mobility and gap group status as well as demographic controls.
Source: Kentucky Department of Education.

Unweighted GPA Models

Similar to the ACT models described above, this portion of the analysis relied upon ordinary least squares modeling to determine the relationship between various absence levels and unweighted GPAs of 9th- through 12th-grade students.[c] The unweighted GPA models were constructed according to Equation 2, with unweighted GPA as the dependent variable for each model.[d] Models were run on each of the absence levels *(βAbsence Level)*, and each model controlled for mobility status *(βMOBILITY)*, gap group status *(βGAP)*, and demographic controls *(βDEMO)*. The intercept term for each model represents the control group mean unweighted GPA for each of the models run for the various absence levels. The error term *(ε)* finishes the equation for the unweighted GPA models for each absence level.

Equation 2**: **Unweighted GPA = α + βAbsence Level + βMOBILITY + βGAP + βDEMO + ε

Table M.2 shows the relationship between the various absence levels within the models and unweighted GPA. According to the output of the models, absences totaling between 10 and 15 days of school for any reason over the course of a school year are projected as the point at which unweighted GPAs begin to trend downward.

[c] The models for unweighted GPA followed the same structure as the ACT composite score models in terms of the explanatory variable controls for absence levels, mobility status, gap group status, and demographics.
[d] Equation 2 represents the base equation for the unweighted GPA models. Each absence level listed in Table M.2 represents a distinct model used for this portion of the analysis.

Table M.2
Projected Relationship Of Absence Levels
And Unweighted GPAs For 9th- Through 12th-Grade Students
School Year 2016

Absence Level	Beta Coefficient (SE)
5 or fewer absences	0.38 (0.004)
Between 5 and 10 absences	0.15 (0.004)
Between 10 and 15 absences	-0.03 (0.004)
15 or more absences	-0.45 (0.003)
Chronically absent	-0.51 (0.004)

Note: The coefficients presented are for five distinct models. Each of the models controlled for mobility and gap group status as well as demographic controls.
Source: Kentucky Department of Education.

K-PREP Models

Linear probability models were used to determine the relationship between absence levels and scoring proficient or better on the K-PREP reading and math assessments for 3rd- through 8th-grade students.[e] Equation 3 represents the base equation used for the models that used K-PREP reading proficiency as the dependent variable, and Equation 4 represents the base equation for the K-PREP math models. Models using the various absence levels *(βAbsence Level)* as the explanatory variables of note were developed for both equations. Each of the models for both equations also controlled for mobility status *(βMOBILITY)*, gap group status *(βGAP)*, and demographic controls *(βDEMO)*. The intercept term for each model represents the control group mean proficiency rate on the K-PREP assessments for each of the models run for the various absence levels. The error term *(ε)* finishes the equation for the both of the K-PREP models for each absence level.

Equation 3**: **K-PREP Reading = α + βAbsence Level + βMOBILITY + βGAP + βDEMO + ε
Equation 4**: **K-PREP Math = α + βAbsence Level + βMOBILITY + βGAP + βDEMO + ε

Table M.3 displays the relationship between the absence levels and K-PREP reading proficiency. The beta coefficients for this analysis represent the change in probability of scoring proficient or better on the K-PREP reading assessment. According to the modeling, absences between 10 and 15 school days is the point at which the probability of scoring proficient or better on the assessment begins to trend downward. That model projects a 2.5 percent decreased probability of scoring proficient on the K-PREP reading assessment for that particular absence level.

[e] All of the models associated with Equations 3 and 4 controlled the same mobility status, gap group status, and demographic controls listed for Equations 1 and 2.

Table M.3
Projected Relationship Between Absence Levels
And K-PREP Reading Proficiency For 3rd- Through 8th-Grade Students
School Year 2016

Absence Level	Beta Coefficient (SE)
5 or fewer absences	0.057 (0.002)
Between 5 and 10 absences	0.005 (0.002)
Between 10 and 15 absences	-0.025 (0.002)
15 or more absences	-0.076 (0.002)
Chronically absent	-0.097 (0.003)

Note: The coefficients presented are for five distinct models. Each of the models controlled for mobility and gap group status as well as demographic controls. The beta coefficients presented represent the percentage change in the probability of scoring proficient on the assessment relative to the control group mean within each model.
Source: Kentucky Department of Education.

Table M.4 displays the relationship between the absence levels and K-PREP math proficiency. As with K-PREP reading, absences between 10 and 15 school days is the point at which the probability of scoring proficient or better on the assessment begins to trend downward. That model projects a 5.4 percent decreased probability of scoring proficient on the K-PREP math assessment for that particular absence level.

Table M.4
Projected Relationship Between Absence Levels
And K-PREP Math Proficiency For 3rd- Through 8th-Grade Students
School Year 2016

Absence Level	Beta Coefficient (SE)
5 or fewer absences	0.100 (0.002)
Between 5 and 10 absences	0.005 (0.002)
Between 10 and 15 absences	-0.054 (0.002)
15 or more absences	-0.127 (0.002)
Chronically absent	-0.149 (0.003)

Note: The coefficients presented are for five distinct models. Each of the models controlled for mobility and gap group status as well as demographic controls. The beta coefficients presented represent the percentage change in the probability of scoring proficient on the assessment relative to the control group mean within each model.
Source: Kentucky Department of Education.

Appendix N

Supplemental Digital Information

As a supplement to this research study, the staff of the Office of Education Accountability used various attendance data to develop an independent, interactive application that allows viewers to review data at the macro and micro levels.

Visit www.lrc.ky.gov/Lrcpubs/interactive/chronicabsenteeism.htm to see the application.

Endnotes

[1] *New Federal Education Law Includes Chronic Absence Tracking, Training*. AttendanceWorks.org. Attendance Works. Dec. 10, 2015. Web. Nov. 13, 2017.
[2] Hedy N. Chang and Mariajosé Romero. *Present, Engaged, And Accounted For: The Critical Importance Of Addressing Chronic Absence In The Early Grades*. New York: Natl. Center for Children in Poverty, 2008.
[3] *Attendance In The Early Grades: Why It Matters For Reading.* AttendanceWorks.org. Attendance Works. February 2014. Web. July 14, 2017.
[4] *Attendance In Early Elementary Grades: Associations With Student Characteristics, School Readiness, And Third Grade Outcomes.* Applied Survey Research. July 2011. Web. July 14, 2017.
[5] University of Utah. Utah Education Policy Center. *Research Brief: Chronic Absenteeism*. July 2012.
[6] R. Balfanz and Vaughan Byrnes. *The Importance Of Being In School: A Report On Absenteeism In The Nation's Public Schools*. Center for Social Organization of Schools. Johns Hopkins Univ. 2012. Web. July 14, 2017.
[7] *Attendance In The Early Grades: Why It Matters For Reading.* AttendanceWorks.org. Attendance Works. Feb. 2014. Web. July 14, 2017.
[8] Douglas D. Ready. "Socioeconomic Disadvantage, School Attendance, And Early Cognitive Development: The Differential Effects Of School Exposure." *Sociology of Educ*. 83.4 (2010): 271-286. Web. July 14, 2017.
[9] R. Balfanz and Vaughan Byrnes. *Chronic Absenteeism: Summarizing What We Know From Nationally Available Data.* Baltimore: Johns Hopkins Univ. Center for Social Organization of Schools, 2012.
[10] University of Utah. Utah Education Policy Center. *Research Brief: Chronic Absenteeism*. July 2012.
[11] R. Balfanz and Vaughan Byrnes. *The Importance Of Being In School: A Report On Absenteeism In The Nation's Public Schools*. Center for Social Organization of Schools. Johns Hopkins Univ. 2012. Web. July 14, 2017.
[12] University of Utah. Utah Education Policy Center. *Research Brief: Chronic Absenteeism*. July 2012; R. Balfanz and Vaughan Byrnes. *The Importance Of Being In School: A Report On Absenteeism In The Nation's Public Schools*. Center for Social Organization of Schools. Johns Hopkins Univ. 2012. Web. July 14, 2017.
[13] R. Balfanz and Vaughan Byrnes. *The Importance Of Being In School: A Report On Absenteeism In The Nation's Public Schools*. Center for Social Organization of Schools. Johns Hopkins Univ. 2012. Web. July 14, 2017.
[14] University of Utah. Utah Education Policy Center. *Research Brief: Chronic Absenteeism*. July 2012.
[15] Linda S. Olson. *Why September Matters: Improving Student Attendance*. Baltimore-berc.org. Baltimore Educ. Research Consortium. July 2014. Web. July 14, 2017.
[16] *Truancy And Habitual Truancy: Examples Of State Definitions*. Educ. Commission of the States. www.ecs.org. April 2011. Web. July 25, 2017.
[17] Hedy N. Chang and Mariajosé Romero. *Present, Engaged, And Accounted For: The Critical Importance Of Addressing Chronic Absence In The Early Grades*. New York: Natl. Center for Children in Poverty, 2008.
[18] Ibid.
[19] Kentucky. Dept. of Educ. *The Non-Traditional Instruction Program*. KDE. Web. June 28, 2017.
[20] Charles Bruner, Anne Discher, and Hedy Chang. *Chronic Elementary Absenteeism: A Problem Hidden In Plain Sight.* AttendanceWorks.org. Attendance Works. Nov. 2011. Web. Nov. 13, 2017.
[21] United States. Dept. of Agriculture. *The National School Lunch Program.* Washington: USDA, 2017. Web. Nov. 13, 2017.
[22] *Limited English Proficiency (LEP): A Federal Interagency Website.* lep.gov. United States. 2017. Web. Nov. 13, 2017.
[23] United States. Dept. of Educ. Office for Civil Rights. *Civil Rights Data Collection: Frequently Asked Questions*. Web. Aug. 3, 2017.
[24] Kentucky. Dept. of Educ. *School Report Card Glossary*. KDE. Web. June 28, 2017.
[25] Charles Bruner, Anne Discher, and Hedy Chang. *Chronic Elementary Absenteeism: A Problem Hidden In Plain Sight.* AttendanceWorks.org. Attendance Works. Nov. 2011. Web. Nov. 13, 2017.
[26] Kentucky. Dept. of Educ. *K-PREP.* KDE. Web. June 28, 2017.
[27] Robert Balfanz and Vaughan Byrnes. *Meeting The Challenge Of Combating Chronic Absenteeism: Impact Of The NYC Mayor's Interagency Task Force On Chronic Absenteeism And School Attendance And Its Implications For Other Cities*. Baltimore: Johns Hopkins School of Education Everyone Graduates Center. Web. Dec. 22, 2016.
[28] Kentucky. Dept. of Ed. *Raising The Compulsory Attendance Age In Kentucky*. KDE, July 14, 2016. Web. June 27, 2017.
[29] Kentucky. Dept. of Educ. *Senate Bill 200*. KDE, June 23, 2015. Web. June 27, 2017.
[30] Kentucky. Dept. of Educ. *Senate Bill 200 FAQs*. KDE. N.d. Web. July 7, 2017.