Every state has made the college and career readiness of its high school graduates a major priority, but few are doing a good job monitoring how well the education system is delivering on that goal. States mostly rely on high school graduation rates to gauge progress. While there have been significant improvements in the high school graduation rate, the evidence is clear — from results on college- and career-ready (CCR) high school assessments; college admission assessments; postsecondary remediation rates; and surveys of graduates, employers, college faculty, etc. — that for too many, earning a diploma does not signify readiness for postsecondary success.

What states report and whom they include in their college and career readiness measures contributes to this problem. The purpose of this brief is to examine how states could provide a more accurate picture of the college and career readiness of their high school students that sends the message that all students need to graduate college and career ready and incentivizes schools and districts to focus on that goal.

What States Should Report

Rather than rely on the graduation rate alone, states should report multiple indicators that reflect students’ readiness. At a minimum, these should include:

1. An indicator based on CCR assessment score(s); and
2. An indicator based on completing a rigorous course of study that delivers the state’s CCR standards.

These indicators are not perfect, and they alone do not capture all information about graduates’ readiness for postsecondary success. But taken together, they paint a more complete and accurate picture of students’ progress toward and attainment of college and career readiness while in high school than just graduation rates alone. Reporting measures of CCR assessment performance and CCR course of study completion will also increase transparency about student outcomes.

How College and Career Readiness Should Be Calculated and Reported

While the selection of indicators typically garners the most attention when creating a public reporting and accountability system, how student outcomes are calculated and publicly reported is equally important.

States should include all students in an adjusted 9th grade cohort in the denominator when reporting key CCR indicators, just as they have calculated their graduation rate since 2012. The data should also be disaggregated by subgroups. In the same way that this denominator is appropriate for counting graduates, using this denominator is appropriate for other measures as well because it provides a better sense of how all students are doing, not just those that opted into a course or made it to graduation. Counting only those that are still in the system by graduation time in the denominator tends to give an inflated sense of performance because it fails to account for the students that have been left behind along the way. Including all students who started in 9th grade in the denominator also sends the message that schools, districts, and states are responsible for the performance of all students, not just some select groups. And finally, this denominator allows for some comparisons to be drawn across schools, districts, and states and to identify bright spots that can serve as models or particular areas in need of intervention and support.

The adjusted 9th grade cohort is the number of students who begin school together in 9th grade and who anticipate graduating from high school four years later, adjusting this number for transfers in and out, émigrés, and deceased students.
Unfortunately, this has largely not been the denominator of choice when it comes to how states calculate and report student outcomes on measures beyond graduation rate. In reviewing states’ reporting of a variety of academic indicators, Achieve found great differences in the denominators states used to calculate various student outcomes, including graduates, completers, 9th–12th graders, juniors and seniors, tests taken, and combinations of test takers throughout high school (grades 9–12, 11–12, or 12).

### Why Choosing the Right Denominator Matters

Figure 1 below illustrates how the reported outcomes differ for five states based on the denominator chosen, despite the fact that all have the same number of students earning a 3+ on an Advanced Placement (AP) exam. Using denominators with more selective pools of students — such as only those who enrolled in AP courses or those who took AP exams like States D and E do — sends the message that a fairly sizable percentage of students earn college credit in high school, when in actuality the number is far lower. Using the adjusted 9th grade cohort as the denominator as in State A presents a more comprehensive and honest picture of student performance on this indicator. Also, because of the use of different denominators, these results are not comparable across states.

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**FIGURE 1: HOW STATES’ DENOMINATOR CHOICES CHANGE THE STORYLINE**

- **20 students**
  - earned 3+ on an AP exam
  - **+ 200** adjusted 9th grade cohort
  - **+ 160** 12th grade students in 2015
  - **+ 150** graduates in 2015
  - **+ 50** graduates who took AP courses
  - **+ 40** 12th grade students who took AP exams

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Finally, states may appropriately use a denominator that reflects high school graduates for calculating key CCR indicators such as postsecondary enrollment, remediation, and persistence. However, these data should be reported in such a way that outcomes can be tracked back to the original adjusted 9th grade cohort, as illustrated in Figure 2.

**FIGURE 2: ILLUSTRATIVE PIPELINE OF 9TH GRADE COHORT PROGRESS TOWARD POSTSECONDARY DEGREE**

- **100 students** in adjusted 9th grade cohort
- **80 students** graduate from high school
- **50 students** enroll in college
- **35 students** require remediation
- **25 students** persist to 2nd year
- **Eventually, 20 STUDENTS GRADUATE FROM COLLEGE.**
Using the Denominator on CCR Indicators

Many states already use these indicators as part of their public reporting and/or accountability system, but few states report students’ progress against them using a denominator that counts all the students their system is serving. Below are each of the indicators that should be calculated using the 9th grade cohort as a preferred denominator.

Scoring College Ready on a CCR Assessment: This indicator reports the percentage of students who score at the CCR level on high school assessments anchored to CCR standards. These assessments have a performance level/cut score that indicates whether high school students are prepared to be successful in first-year mathematics and English courses at postsecondary institutions and is used by two- and four-year colleges and universities for placement into first-year, credit-bearing courses.

States should know and report the percentage of the adjusted 9th grade cohort that scored ready on a CCR assessment upon graduation because it provides the most accurate picture of how well schools are doing in preparing all students for success after high school. And while many states administer a CCR assessment in high school and report results for those students who took the assessment, student participation often is not universal. Thus the reported results reflect only those who elect to take the test. For example, in some states students can choose whether to take the college entrance exam paid for by the state (ACT or SAT) or the CCR assessment is given to those who are taking a particular class, but not all students in the state take the class.

For most states, somewhere between 70 percent and 90 percent of the adjusted 9th grade cohort will graduate; using that number as the denominator presents a best-case scenario—and an inflated sense of student performance because many students do not participate and others have dropped out of high school—rather than a true picture of the college and career readiness of all high school students.

Because states have adopted different assessment designs—some administer a comprehensive assessment to all students in a cohort and others administer an end-of-course assessment (or assessments) to all students enrolled in a particular course across the 9–12 system—they need different ways to capture students’ progress. In either case, the state should report test results with a denominator that is the number of test takers, or number of 11th graders, and then also report a CCR rate with 9th grade cohort as denominator.

Completing a CCR Course of Study: Graduation rates are an accurate indicator of students graduating high school on time but should not be confused with students graduating with the skills and knowledge needed for entering college or career pathways without remediation. Rigorous course-taking in high school is one of the strongest indicators of postsecondary success, yet many states do not expect all graduates to take the classes or learn the essential content and skills that open doors to their next steps. In all but a handful of states, the CCR graduation rate is much lower than the adjusted cohort graduation rate. For this indicator, the denominator should include all students who entered 9th grade four years earlier and graduate having completed a CCR course of study.

No state publicly reports the percentage of its adjusted 9th grade cohort scoring college ready on a CCR assessment.

Two states—New York and Virginia—are already publicly reporting the percentage of their adjusted 9th grade cohort completing their state’s CCR-level diplomas—and disaggregate these data by subgroup.

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2 Achieve considers states’ mathematics and English language arts/iteracy high school graduation requirements to be at the CCR level if students are expected to complete a course of study aligned with state-adopted CCR standards, which typically includes at least three years of mathematics (through the content generally found in an Algebra II or an integrated third-year math course) and four years of rigorous, grade-level English.

States should also use the adjusted 9th grade cohort for the following indicators and disaggregate these data by subgroup and at the school level:

**Students on Track To Graduate Based on Credit Accumulation:**
This indicator shows the percentage of students who are on track to graduate based on the number of credits earned by the end of a particular grade. Timely credit accumulation is a leading indicator of students’ progress toward high school graduation. This information is critical because it allows for early identification of and intervention for struggling students. Every state should report the percentage of students who are on track to graduate based on the number of credits earned by the end of a particular grade and disaggregate these data by subgroup.

**Earning College Credit While in High School** (includes 3+ on AP Exam, International Baccalaureate (IB) Exam, or earning Dual Enrollment Credit): This indicator reports the percentage of students who earn college credit while still enrolled in high school. Ideally, the denominator includes all students in an entering 9th grade cohort. The numerator should reflect the number of students who score a 3+ on an AP exam, score a 4+ on an IB exam, or earn college credit while still in high school through dual enrollment courses. Performance on an exam or success in the courses, not just participation or enrollment, must be reported, and in cases where the state includes multiple indicators for earning college credit, these data should be reported discretely from one another.

States should also be careful when constructing a combination or "meta indicator” that comprises several different indicators (e.g., AP; IB; dual enrollment; or a broader measure of "college and career readiness” that includes students who earn college credit in high school, score at a CCR level on an assessment, or enroll in postsecondary education without the need for remediation). Combining multiple indicators into one will mask results that should be highlighted and valued on their own and make them harder to interpret or use for improvement. In the interest of transparency and clarity, states should, at a minimum, take care to break out the reporting such that progress on the different indicators can be monitored. It is then far simpler to incentivize and monitor progress on each of these essential components for students.

**Making Certain All Kids Count**
As states refine their public reporting of student outcomes on CCR indicators, they should report those student outcomes against the adjusted 9th grade cohort for those scoring college ready on a CCR assessment, those completing a CCR course of study, those students on track to graduate, and those earning college credit while in high school. These data should also be disaggregated by subgroup and at the school level to ensure that all kids count.