

**2004 LEGISLATIVE REPORT ON  
REMEDIAL EDUCATION**  
November 2003

## **I. INTRODUCTION**

The Colorado Commission on Higher Education (CCHE) is required to prepare an annual report on students taking basic skills courses at Colorado's public higher education institutions. CCHE has prepared this report which summarizes: 1) Commission activities since adopting the Remedial Policy in 2000, and 2) data on assessed and remediated students collected from Colorado public higher education institutions on students assigned to college- vs. remedial courses for two years. The report will be submitted to the Education Committees of the Senate and House of Representatives, the Joint Budget Committee, the Colorado Department of Education, and each Colorado public school district superintendent.

C.R.S. 23-1-113.3 defined five areas of responsibility for the Commission with regard to remedial education:

- 1) adopt and implement a remedial policy;
- 2) develop funding policies for remediation appropriate to institutional roles and missions;
- 3) design a reporting system that provides the General Assembly with information on the number, type, and costs of remediation;
- 4) establish comparability of placement or assessment tests; and
- 5) ensure each student identified as needing remediation is provided with written notification regarding cost and availability of remedial courses.

This report documents Commission actions taken in response to these responsibilities.

## **II. CCHE POLICIES RELATED TO REMEDIATION**

### **A. Remedial Policy**

In August 2000, the Commission adopted a remedial policy designed to ensure that:

- All enrolled first-time undergraduate students are prepared to succeed in college-level courses.
- Students assessed as needing remedial instruction have accurate information regarding course availability and options to meet the college entry-level competencies.
- Colorado public high schools are informed about the level of college readiness of their recent high school graduates.

The policy applies to all state-supported institutions of higher education (i.e., four-year and two-year colleges), and governing boards and institutions of the public system of higher education in Colorado are obligated to conform to the

policies set by the Commission within the authorities delegated to it by C.R.S. 23-1-113.3.

## **B. FTE Policy**

The Commission revised its FTE Policy in March 2001, clearly identifying the public institutions that may claim state support for remedial education--Colorado community colleges, Adams State College, and Mesa State College--and the circumstances under which it may be claimed. A separate FTE reporting form was added to enable monitoring of state costs associated with the delivery of basic skills courses.

## **III. REMEDIAL PLANS**

CCHE's Remedial Policy requires that each governing board submit a remedial plan for its institution(s). Staff reviewed the plans during FY 2002 for completeness and compliance with statute, and by June 2002, all governing boards' remedial plans were approved by CCHE. The plans shared a common definition for which undergraduates are to be assessed, focusing primarily on first-time, degree-seeking students--and those undergraduates who were exempt. It is the student's responsibility to satisfy developmental needs within the first 30 credit hours and earn a C- or higher in a remedial course to satisfy the requirements.

Plans described the instruments used for entry-level assessment, and when necessary, secondary-level assessment for placement purposes. The purpose of entry-level assessment is to assist campus faculty and advisors to make the course placement decisions that give students the best possible chance of academic success. If remediation appeared to be needed, students could demonstrate curricular proficiency by means of an approved secondary assessment process (i.e., additional testing; transcript analysis if within one point of cut score).

Institutions initially used a mix of entry-level assessment tools to differentiate students demonstrating college-readiness from those who did not. While many used ACT's Assessment Test or the College Board's SAT for the entry-level assessment, testing instruments also included College Board's Accuplacer Computerized Placement Test (CPT), ACT's Computer Adaptive Placement Assessment (COMPASS), ACT's Assessment of Skills for Successful Entry and Transfer (ASSET), the Nelson-Denny Reading Test, and locally-designed tests. Because the most common instrument was the ACT Assessment Test, comparable cut scores across institutions for college-level placement were set for subscores, with concordances developed between that test and the SAT or Accuplacer: 19 or higher subscore for mathematics, 18 or higher for writing, and 17 or higher for reading. Setting common cut scores was critical to ensure that no student would receive conflicting advising regarding remedial assistance. In June 2003, CCHE approved use of ACT, SAT, and/or Accuplacer for both entry- and secondary-level assessments.

The final component of the remedial plans outlined how institutions advised students with academic deficiencies about options for meeting their responsibility to enroll in appropriate developmental coursework.

#### **IV. DATA ON ASSESSMENT AND REMEDIATION**

During FY 2001, CCHE staff and representatives from governing boards developed a reporting system in order to provide the General Assembly with information on remediated students and the type of remediation needed. Beginning summer/fall 2001, institutions submitted the first data files.

##### **A. Methodology and Data**

- 1. Methodology:** Student cohorts are based on: 1) entering degree-seeking undergraduates assessed by a Colorado public institution of higher education for the specified year; or 2) a recent Colorado public high school graduate<sup>1</sup>. CCHE produced the calculations by linking student data from ACT and the College Board with CCHE's Student Unit Record Data System (SURDS) enrollment and applicant files. Because data have been collected for only two years, enough time has not elapsed to calculate student performance data, such as graduation rates, for inclusion in this report.
- 2. Report Format:** This report presents information in two parts (see Tables 1 – 10 in Attachments B, C, D). Initially, data are provided on undergraduates assigned to remediation by Colorado public colleges and universities in either FY 2002 or FY 2003. The second section focuses on a subgroup of undergraduates: recent graduates from Colorado public high schools assigned to remediation. In this section, data are organized largely according to whether or not the students meet the requirements of the recently-approved Colorado precollegiate curriculum, followed by the statutorily-mandated high school feedback report that summarizes remediation by school district. A more detailed description of the data contained in the district feedback report accompanies Table 10.
- 3. Data Limitations:** In reviewing the following tables, the curriculum data are based on matching ACT and SAT self-reported data with elements of the SURDS Enrollment and Undergraduate Applicant files using student identification numbers. The data do not include recent graduates who enrolled in an out-of-state college, delayed entry into higher education for at least one year after completing high school, were not assessed in FY2002 or FY2003, or were reported by institutions with missing data (e.g., year of high school graduation, age, high school code, and/or assessment status).

---

<sup>1</sup> Recent high school graduates are defined as students who a) have graduated from a Colorado public or private high school (or its equivalent) during the previous academic year; or b) are 17, 18, or 19 years of age when year of high school graduation is not reported. Age will be calculated as of September 15 of the specified fiscal year.

As is often the case with an undertaking of this magnitude, some issues remain to be addressed by the higher education institutions that may affect rates next year and limit interpretation. Colleges and universities are continuing to implement assessment processes and data collection and reporting procedures. At the state level, revisions to the remedial policy are pending action by the Commission in November 2003. Additionally, only two years of data are available, so no conclusions about trends in remediation can be drawn. Nonetheless, staff believe that the summary is a reasonable representation of remedial needs of the students entering higher education during the last two fiscal years.

## **B. Remedial Data Summary for All Assessed Undergraduates**

Table 1 is an overview of assessment activity for FY 2003. Approximately 33% of all students evaluated for assessment purposes were assigned to remediation in at least one discipline. More than half of those remediated were deficient in one discipline, with the most common area being mathematics. Twenty-two percent were found needing remediation in all three areas.

## **C. Remedial Data Summary for Recent High School Graduates**

### **1. Demographics of Recent High School Graduates Assigned to College-Level vs. Remedial Coursework**

Table 2 compares the demographic and academic characteristics of recent high school graduates who entered either a Colorado four- or two-year public institution in FY 2003 according to course placement. In general, 78.8% of the four-year students were assigned to college-level coursework, while 16.6% of those at the two-year institutions were assigned.

- By race/ethnicity, a significantly greater share of the Black and Hispanic students are assigned to remediation than from other groups at four-year institutions. In the case of two-year institutions, more than 80% of students from all groups were remediated.
- By gender, a slightly higher proportion of females were assigned to remediation in both institutional sectors.
- Academically, recent graduates at four-year institutions had a significantly higher high school grade point average and ACT composite score than students enrolled in two-year institutions.

### **2. Remediation and the Precollegiate Curriculum**

The significant relationship of academic underpreparation and remediation underscores the importance of completing a precollegiate curriculum in high school as a key factor in predicting the success of a student in higher

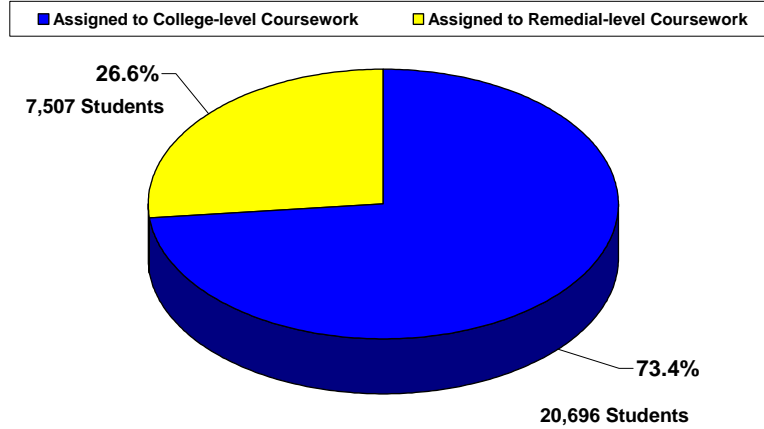
education. While a student may gain admission to an institution based on a less rigorous set of courses, what may be less obvious is the correlation documented in numerous studies between student success—measured by student retention, degree completion, and grade point average—and a demanding high school academic experience. The questions then are: How can high school students be better prepared to undertake college curricula, and, as necessary, how does higher education provide the most effective and efficient means to remediate students in order to enhance the likelihood that students will progress to degree completion.

The relationships between student placement in college- or remedial-level courses and a student's course-taking patterns in high school according to the precollegiate curriculum structure approved by the Commission in October 2003 have been documented in detail as part of the work leading to revisions of the Admissions Standards Policy. The curricular structure for categorizing high school coursework is summarized in Table 3.

Figures 1 – 4 present general information on remediation for FY 2003, while Figures 5 – 7 show the relationship of course placement levels by school district characteristics. Detailed tables (4 – 10) comparing college – vs. remedial placement for FY 2002 graduates with those for FY 2003 are found at the end of the report.

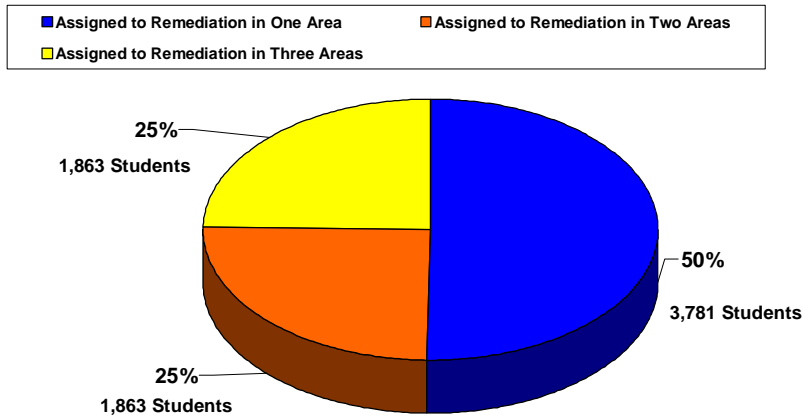
- Figure 1 illustrates the proportion of recent Colorado public high school graduates assigned to remediation. Approximately one-fourth were recommended for developmental coursework in at least one discipline.
- A more detailed portrayal of remedial placement is shown in Figures 2 and 3. Of those assigned to remediation, the largest share (50%) was deficient in one discipline. The proportion assigned to remediation in mathematics, writing, and reading was 25%, while 86% were found to be deficient in mathematics, either solely or in combination with writing and/or reading.
- Figure 4 presents student placement in college-level courses according to whether or not a precollegiate core was completed for a specific race/ethnic group. Highest college-placement rates were associated with white students who completed a core curriculum (83%); rates were lowest for African-American students (48%).
- The proportion of college-ready students by school district characteristic begins with Figure 5. The percentage of students qualifying for free or reduced lunch was used as a proxy for school district socio-economic status and then grouped by quartile, with Quartile 4 representing those districts with the lowest proportion of students participating in the lunch program. The percentage difference in college-level placement/core completer between the “highest” and “lowest” income districts is 15 percentage points for FY 2003.

**Figure 1. Students Assigned to Remediation as a Percent of Recent Colorado High School Graduates FY03 (N = 28,203)\***



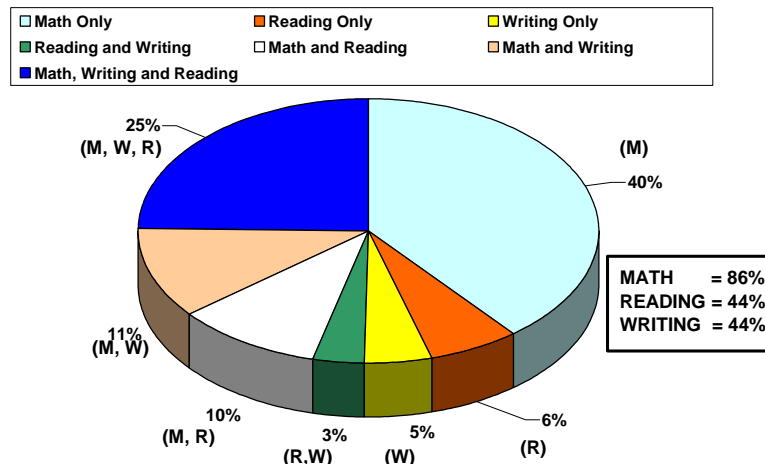
N-size is based on recent Colorado public high school graduates enrolled in Colorado public higher education in specified year

**Figure 2. Level of Assigned Remediation of Recent Colorado High School Graduates FY03 (N = 7,507)\***



N-size is based on recent Colorado public high school graduates enrolled in Colorado public higher education in specified year and assessed as needing remediation in at least one area

**Figure 3. Unduplicated Headcount Assigned to Remediation as a Percent of Recent Colorado High School Graduates by Discipline FY03 (N = 7,507)\***



N-size is based on recent Colorado public high school graduates enrolled in Colorado public higher education in specified year and assessed as needing remediation in at least one area

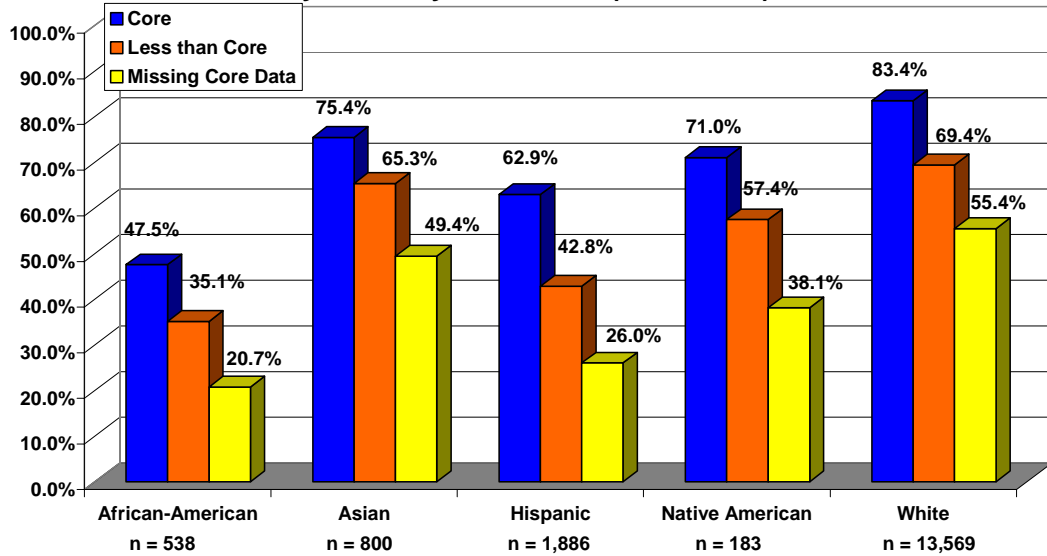
- College-level placement according to school district setting is greatest for those located in outlying towns at 87.6% (Figure 6). The Denver Metro area is the lowest at 79.8%.
  - Generally speaking, the highest college-level placement rates were associated with graduates from smaller school districts (Figure 7), with the largest districts showing a rate of 10 percentage points less.
3. **Remediation by Public Higher Education Institutions:** Table 1 summarizes remedial needs of students defined as recent high school graduates. The remediation rate of 26.6% was lower than that for all assessed undergraduates, but it should be noted that the rates are likely to be understated due to those with incomplete assessments. Remedial rates at two-year schools are higher than for four-year institutions, due to the open admissions nature of the community colleges. Differences in remediation rates by institution may be accounted for in part by variations in remedial requirements (i.e., requiring remediation of students with identified needs vs. informing students of the need).
  4. **Remediation by County:** Figure 8 portrays the distribution of recent high school graduates assigned to remediation by the county where the high school is located. While the counties with the highest concentration are found largely along the front range, the highest densities extend across the south central portion of the state. Note that these data should be interpreted with care as some counties have small numbers of students.
  5. **Retention by Remediation:** First-year retention rates for first-time, full-time, degree-seeking assessed students at four- and two-year institutions who were recent Colorado public high school graduates are shown in Table 9. The retention rate for students at four-year institutions assigned to college-level courses was nearly 16 percentage points higher than that for students assigned to at least one remedial class. In the two-year sector, the difference was only four percentage points, but it should be noted that this cohort represents a very small proportion of students entering the two-year schools.
  6. **Remediation by Public School District:** Data on the number of students assigned to remediation by school district are shown in Table 5. Statewide, the rate for students graduating from public high schools who entered public higher education the next year was 26.6% for FY 2003 which is up from 25.1% FY 2002.

## V. COSTS ASSOCIATED WITH BASIC SKILLS

For FY2003, Colorado public higher education reported that 6,004 FTE students were enrolled in remedial courses. The estimated cost associated with these enrollments ranged between \$18.9 and \$21 million.

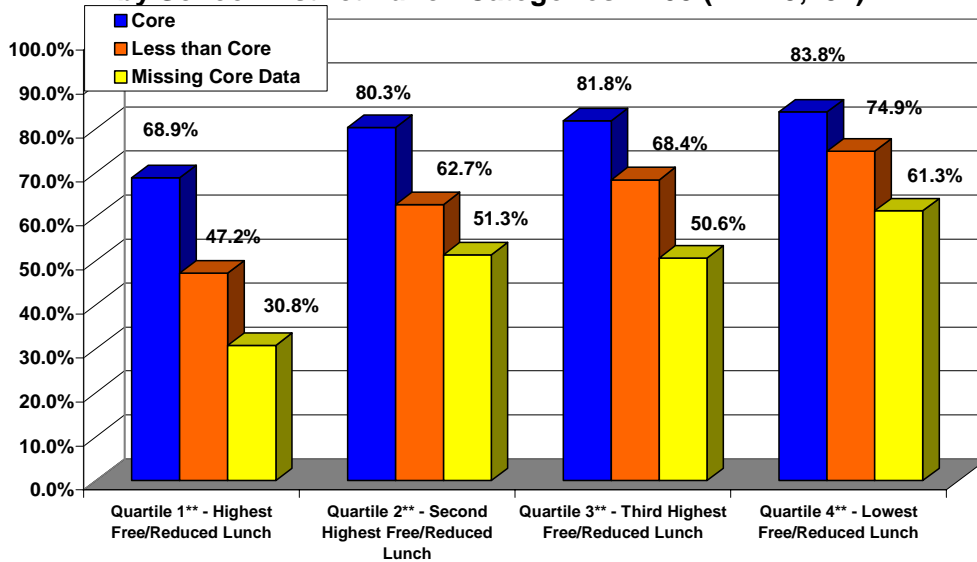


**Figure 4. Statewide - College-Level Coursework\* by Ethnicity/Race FY03 (N = 18,781)\*\***



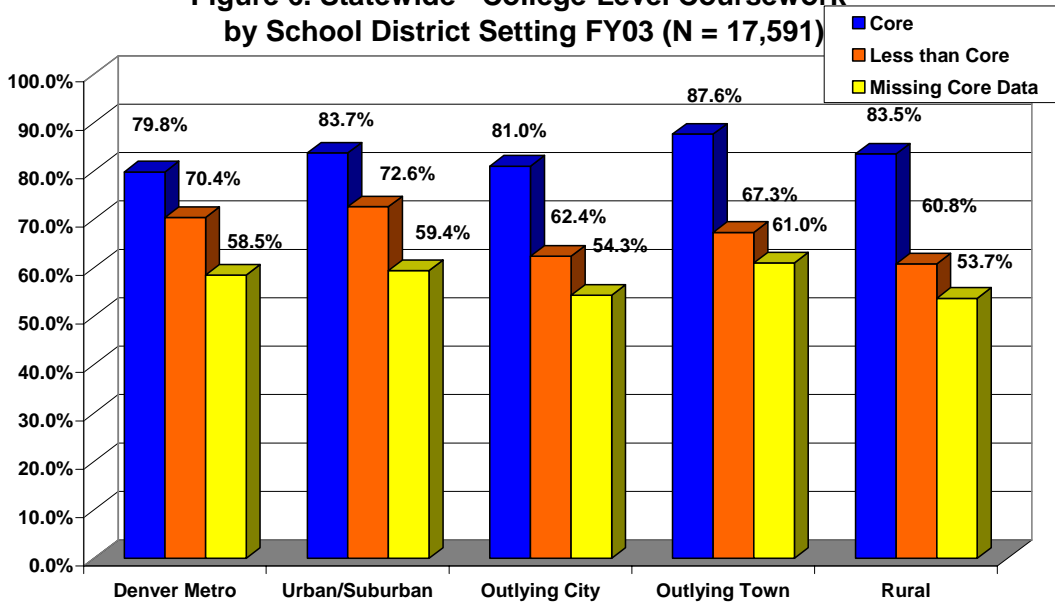
\*For specified year - recent Colorado public high school graduates assigned to college-level courses; remedial-level students assigned to at least one pre-collegiate level course.  
 \*\*N-size shown here will differ from school district table due to the following exclusions: 1) Non-resident aliens, 2) Students with unknown ethnicity/race, 3) Students not assessed and those with pending assessment and missing data.  
 Note 1: Groups with less than 40 students not represented graphically.  
 Note 2: Core curriculum calculated from student responses accompanying ACT and SAT entrance exams indicating courses taken or planned to take by graduation.

**Figure 5. Statewide - College-Level Coursework\* by School District Lunch Categories FY03 (N = 19,454)**



\*For specified year - recent Colorado public high school graduates assigned to college-level courses; remedial-level students assigned to at least one pre-collegiate level course.  
 \*\*Ranges for quartiles are: Quartile 1: 39.4% and higher; Quartile 2: 20.6 - 39.3%; Quartile 3: 13.6 - 20.5%; Quartile 4: 0.0 - 13.5%.  
 Note1: Excludes students not assessed and those with pending assessment and missing data.  
 Note 2: Core curriculum calculated from student responses accompanying ACT and SAT entrance exams indicating courses taken or planned to take by graduation.

**Figure 6. Statewide - College-Level Coursework\* by School District Setting FY03 (N = 17,591)**

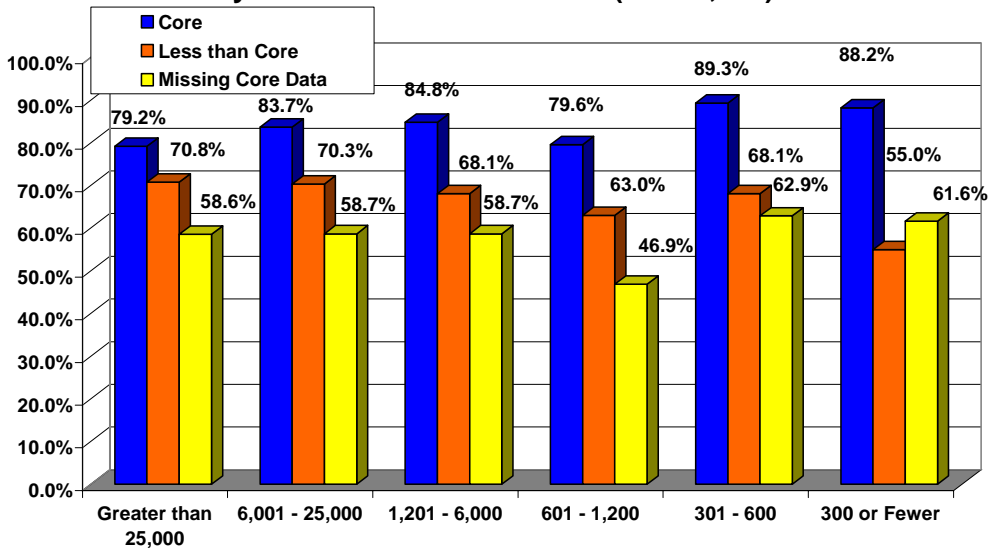


\*For specified year - recent Colorado public high school graduates assigned to college-level courses; remedial-level students assigned to at least one pre-collegiate level course.

Note 1: Excludes students not assessed and those with pending assessment and missing data.

Note 2: Core curriculum calculated from student responses accompanying ACT and SAT entrance exams indicating courses taken or planned to take by graduation.

**Figure 7. Statewide - College-Level Coursework\* by School District Size FY03 (N = 17,591)**

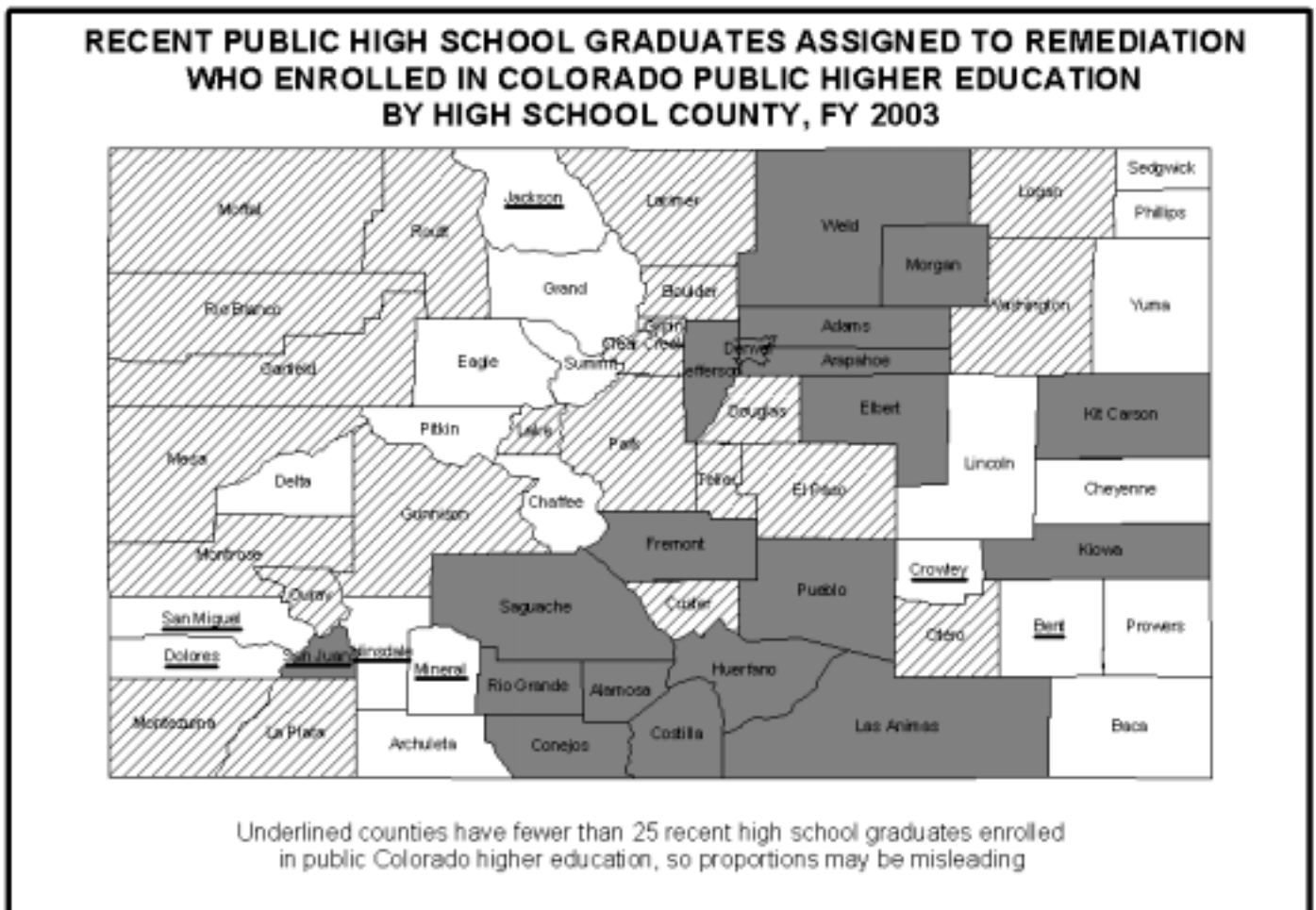


\*For specified year - recent Colorado public high school graduates assigned to college-level courses; remedial-level students assigned to at least one pre-collegiate level course.

Note 1: Excludes students not assessed and those with pending assessment and missing data.

Note 2: Core curriculum calculated from student responses accompanying ACT and SAT entrance exams indicating courses taken or planned to take by graduation.

Figure 8



**Legend for Percent of Enrolled Recent Colorado High School Graduates Assigned to Remediation**

