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Report to Congressional Requesters

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POSTSECONDARY EDUCATION

Student Outcomes Vary at For-Profit, Nonprofit, and Public Schools

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Abbreviations

ABFSE	American Board of Funeral Service Education
BPS	Beginning Postsecondary Students Longitudinal Study
CIP	Classification of Instructional Programs
Education	Department of Education
EMT	Emergency Medical Technician
ERIC	Education Resources Information Center
IPEDS	Integrated Postsecondary Education Data System
LPN	Licensed Practical Nurse
NPSAS	National Postsecondary Student Aid Survey
NSLDS	National Student Loan Data System
NTIS	National Technical Information Service
OIG	Office of Inspector General
RN	Registered Nurse

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GAO
Accountability * Integrity * Reliability

United States Government Accountability Office
Washington, DC 20548

December 7, 2011

Congressional Requesters

Institutions of higher education, including for-profit, nonprofit, and public schools, receive billions of dollars each year from the Department of Education (Education) to help students pay for school.[1] In the 2009-2010 school year, Education provided $132 billion in grants and loans to students under federal student aid programs, up from $49 billion in the 2001-2002 school year.[2] However, relatively little information is available about the quality of education being provided by these schools.[3] Measuring the quality of educational programs (i.e., how much knowledge or skill students gain) is difficult. Because few direct measures are available, indirect outcome measures, such as graduation and student loan default rates, are often used. Although no single outcome can be used to fully measure something as complex as educational quality, looking at multiple outcome measures (e.g., graduation rates, pass rates on licensing exams, employment outcomes, and student loan default rates) can shed light on the quality of education provided by schools.

Student characteristics are also important to consider when comparing educational outcomes at schools in different sectors (for-profit, nonprofit, and public).[4] Available data indicate that for-profit schools enroll a higher proportion of low-income, minority, and nontraditional students who face challenges that can affect their educational outcomes. Students with these characteristics tend to have less positive educational outcomes

[1]For the purposes of this report, we refer to private for-profit schools as for-profit schools and private nonprofit schools as nonprofit schools.

[2]These programs are authorized by Title IV of the Higher Education Act of 1965, as amended. For the purposes of this report, we define federal student aid programs as financial aid programs authorized under Title IV of the Higher Education Act. Federal student aid spending data beginning in the 2001-2002 school year are more reliable than data from previous years.

[3]The federal government relies on accrediting agencies recognized by Education to ensure educational quality, but accreditors collect varying types of data on student outcomes. Individual schools may also collect data on a variety of student outcomes.

[4]The term “student characteristics” refers to demographic characteristics such as gender, race, and income, as well as to other characteristics, such as prior education and delayed postsecondary school enrollment.

than other students for a number of reasons. For example, students who are low-income, minority, or older generally have lower graduation rates than other students regardless of sector.[5] Consequently, student outcomes at different types of schools can be associated with differences in student characteristics, as well as school type. Accounting for differences in student characteristics as much as possible allows for more meaningful comparisons between types of schools and a better understanding of the school's role in producing student outcomes. This can be done in different ways, such as using statistical models or comparing outcomes for similar groups of students or graduates.

To respond to your interest in student outcomes at different types of schools, this report addresses the following questions.

1. What does research show about graduation rates, employment outcomes, student loan debts, and default rates for students at for-profit schools compared to those at nonprofit and public schools, taking differences in student characteristics into account?

2. How do pass rates on licensing exams for selected occupations compare among graduates of for-profit, nonprofit, and public schools?

We used the following methodologies to develop our findings (see app. I for a detailed discussion of our scope and methodologies). We began by contacting representatives from several higher education associations representing schools in all three sectors to obtain their perspectives on key issues discussed in this report. To identify comparative research on outcomes that controls for student characteristics, we conducted a literature search and rigorously reviewed the data and methodologies used by external researchers and only reported findings that were based on sound methods and reliable data.

- For most outcomes we reviewed, we relied primarily on studies using data from Education's Beginning Postsecondary Students Longitudinal Study (BPS), which tracks a nationally representative sample of first-time students for 6 years. BPS graduation rates are

[5]Research shows that being a racial or ethnic minority may be associated with less positive educational outcomes in part because certain minorities are more likely to have risk factors (such as having a parent who did not finish high school) that can affect educational achievement.

more representative of first-time students than graduation rates from other data sources because they include part-time and transfer students. BPS also collects self-reported information on earnings and employment status, as well as extensive data on student characteristics.

- Some of the graduation rate studies included in our review used data from Education's Integrated Postsecondary Education Data System (IPEDS). IPEDS captures detailed enrollment data from all schools participating in federal student aid programs; however, IPEDS graduation rates include only full-time, first-time students and exclude a significant number of other students (e.g., those who attend part-time or transfer to another school). Because of this limitation, we gave greater weight in our report to studies using BPS data to calculate graduation rates; however, studies using IPEDS data had similar results.

- Studies in our review that analyzed debt levels used data from Education's National Postsecondary Student Aid Survey (NPSAS), which collects detailed data on financial aid and student loans for a large, nationally representative sample of students.

- One study in our review analyzed school default rates using data from the National Student Loan Data System (NSLDS), which is Education's central database for federal student aid loans and grants.

We found a relatively small number of studies that compared student outcomes across sectors and accounted for differences in student characteristics (see app. II for the list of studies included in our literature review). This body of research also has certain limitations. For example, while BPS has some of the best available data on outcomes and student characteristics, it does not represent the experience of more recent students.[6] Further, while two studies in our review conducted regression analyses that account for multiple student characteristics simultaneously (which allows for a more rigorous comparison), other studies analyzed subgroups of students, accounting for a single characteristic at a time. Despite these limitations, we believe that the studies included in our

[6]Because the most recent cohort of students started during the 2003-2004 school year, BPS does not include outcomes for students who enrolled more recently.

review provide insight on the comparative outcomes of students attending different types of schools.

To compare the performance of graduates from for-profit, nonprofit, and public schools on professional licensing exams, we analyzed pass rates for selected exams for first-time test takers.[7] For this analysis, we focused on schools that participate in federal student aid programs. We selected occupations in which passing an exam was generally required and significant work experience was not required prior to taking the exam. We also used Education data to select occupations that (1) had programs in multiple sectors, including the for-profit sector, and (2) had sufficiently large numbers of students graduating from these programs. When possible, we used exams offered by national organizations to maximize the number of states in our analysis. We excluded from our analyses states that did not require the exam in an occupation. For occupations that use state or multiple exams, we used Education data to select four states in which the numbers of graduates and the distribution of graduates across sectors provided the best chance to detect any statistically significant differences that might exist between sectors. Results for individual states are not generalizable to other states and it is possible that sector comparisons in other states would show different results or would differ as to whether the results were statistically significant.

Because demographic information on test takers was generally not available, directly controlling for the characteristics of test takers in our analyses was not possible. However, because our analysis of licensing exam pass rates focuses on outcomes for program graduates, it may partially mitigate the effect of differences in student characteristics on exam results since some characteristics, such as race, age, and income, are associated with lower graduation rates.

We assessed the reliability of the data from each test included in our analyses by interviewing representatives knowledgeable about the data, reviewing relevant data and related documentation, and conducting additional analyses. We determined that these exam data were sufficiently reliable for the purpose of comparing pass rates across

[7]We use the term “licensing exam” to refer to exams that are required to work in a specific occupation, even though some of these exams are technically certification exams. Differences between sectors are statistically significant unless otherwise noted.

sectors. For more detailed results from our analyses of licensing exam pass rates, see appendix III.

We conducted our work from November 2010 to December 2011 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings. On November 10, 2011, we briefed cognizant congressional staff on the results of this study and this report formally conveys the information provided during these briefings. (See app. IV for the slides we used to brief the requesters.)

Limited Research Suggests that For-Profit School Students Generally Have Different Outcomes than Nonprofit or Public School Students

The small number of available studies that accounted for selected student characteristics, such as gender, race, or income, suggests that student outcomes vary by type of school. Student outcomes include graduation rates, employment outcomes, student loan debt, and default rates.

Graduation Rates

Two studies show that for-profit school students had higher graduation rates for certificate programs, similar graduation rates for associate's degree programs, and lower graduation rates for bachelor's degree programs than students at nonprofit and public schools.[8] For example, one study found that 36 percent of low-income students who started at for-profit schools completed a certificate, compared to 6 percent at 2-year

[8]We reported graduation rate findings for certificate, associate's degree and bachelor's degree programs from two studies that used BPS data. For bachelor's degree programs, we also reviewed several studies using IPEDS data, which had similar findings. The term "graduation rate" refers to students who complete a higher education program and receive a degree, diploma, certificate, or other formal award.

public schools.[9] In contrast, 3 percent of low-income students who started at for-profit schools completed a bachelor's degree, compared to 49 percent at 4-year public schools and 13 percent at 2-year public schools.[10]

Employment Outcomes

An ongoing study suggests that students who started at for-profit schools had similar annual earnings, but higher rates of unemployment compared to students who started at nonprofit and public schools. For example, students who started at for-profit schools during the 2003-2004 school year and were no longer enrolled after 6 years were more likely to have been unemployed for more than 3 months, compared to students who started at nonprofit and public schools.

Student Loan Debt

Three studies show that a higher proportion of bachelor's degree recipients from for-profit schools took out student loans and that they generally had higher total student loan debt than bachelor's degree recipients from nonprofit and public schools. For example, one study shows that, among low-income students who graduated in 2007-2008, the percentage who borrowed was greater at for-profit schools (99 percent) than at nonprofit and public schools (83 and 72 percent, respectively).

Default Rates

Two studies show that for-profit schools have higher default rates than 4-year public schools, but the results are mixed when comparing for-profit schools to other types of schools. One ongoing study shows that for-profit

[9]This study does not differentiate between 2- and 4-year for-profit schools, nor does it control for the type of program a student starts in or whether a student transfers to a higher degree program. Graduation rates are for the highest degree attained within 6 years. As a result, students who start in a certificate program and complete an associate's degree are included in the associate's degree graduation rate. Similarly, students who start in an associate's degree program and complete a bachelor's degree will be included in the bachelor's degree graduation rate. BPS data show that few, if any, students at for-profit and nonprofit schools start in certificate programs and complete an associate's degree within 6 years, while a small percentage of students at public schools do so.

[10]We included 2-year public schools in our analysis because some students who started at these schools may have transferred to a 4-year school to complete a bachelor's degree program. BPS data show that few, if any, students at for-profit schools start in associate's degree programs and complete a bachelor's degree program within 6 years, while a small percentage of students at nonprofit and public schools do so.

schools had a higher proportion of students default on their student loans than 4-year nonprofit schools and 2-year nonprofit and public schools, while the other study did not find any statistically significant differences between for-profit schools and these other types of schools.[11]

For-Profit School Graduates Generally Had Lower Pass Rates than Graduates from Other Schools on Licensing Exams We Reviewed

On 9 of the 10 licensing exams we reviewed, graduates of for-profit schools generally had lower pass rates over the 2008-2010 period.

Exam Results

The nine licensing exams for which graduates of for-profit schools generally had lower pass rates were for Registered Nurses (RN), Licensed Practical Nurses (LPN), Radiographers, Emergency Medical Technicians (EMT), Paramedics, Surgical Technologists, Massage Therapists, Lawyers, and Cosmetologists. On some exams, the differences across sectors were statistically significant, but relatively small. For example, 85 percent of graduates earning a bachelor's degree from for-profit nursing programs passed the RN exam, compared to 87 percent of such graduates from nonprofit schools. While we were unable to calculate overall pass rates on the 10th exam (for Funeral Directors), separate analyses of the two sections of the exam suggest that graduates of for-profit schools had similar or better pass rates than graduates of nonprofit and public schools.[12] While for-profit graduates as a group

[11]One study used NSLDS data to calculate default rates and IPEDS enrollment data to control for selected student characteristics. While the graduation rates calculated in IPEDS exclude part-time and transfer students, IPEDS enrollment data include these students. The other study used BPS data to calculate default rates. In general, a lack of statistical significance can mean that there is no actual difference or that the sample sizes are too small to detect any differences.

[12]It was not possible to compare the overall performance of graduates on the Funeral Director exam because data on the combined pass rate for the two sections of the exam (Arts and Sciences) were not available.

generally had lower pass rates, some individual for-profit schools had relatively high pass rates. For example, 9 of the 40 for-profit schools in our analysis of the radiographer exam had pass rates of 100 percent in 2010.[13]

Limitations

Several experts and higher education association officials said that licensing exam pass rates are one reasonable measure of school quality. However, exam pass rates also have some limitations when used for this purpose. For example, relatively few postsecondary graduates overall take licensing exams, as many occupations do not require a license. Further, pass rates on licensing exams only measure the performance of students who both complete a program and take the exam. Data were not available to compare the total number of students who begin a program with those who take the exam. Consequently, a high pass rate may not provide complete information about the quality of a program if a large number of enrolled students do not finish a program or do not take a licensing exam.[14]

Differences in student populations may also affect pass rates. While focusing on graduates can mitigate the effect of differences in student characteristics, it may not completely eliminate the impact of these characteristics on test results. Nevertheless, the federal government has a strong interest in ensuring that schools that receive federal student aid funds are appropriately preparing graduates for any required licensing exams.

Agency Comments

We provided a draft copy of this report to Education for review and comment. Education did not have comments on the report. In addition, we shared relevant sections of the draft report with (1) the authors of studies included in our literature review and (2) the states and entities that

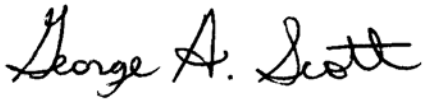
[13]In most cases, the pass rate data provided by testing entities did not identify individual schools. As a result, it was not possible to conduct further analyses on school characteristics that might be associated with higher pass rates.

[14]For example, a school may enroll 100 students in an educational program. If 75 students do not complete the program or choose not to take a required licensing exam, only 25 of the initial 100 students will take the exam. If all 25 pass the exam, the program will have a 100-percent pass rate. This school will have the same pass rate as a school that enrolled 100 students, who all completed the program, took the exam, and passed.

provided licensing exam data to us. We incorporated their technical comments as appropriate.

We are sending copies of this report to relevant congressional committees, the Secretary of Education, and other interested parties. In addition, this report will be available at no charge on GAO's website at http://www.gao.gov.

If you or your staffs have any questions about this report, please contact me at (202) 512-7215 or scottg@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix V.



George A. Scott
Director, Education, Workforce,
and Income Security Issues

Congressional Requesters

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Majority Whip
United States Senate

The Honorable Tom Harkin
Chairman
The Honorable Michael B. Enzi
Ranking Member
Committee on Health, Education,
Labor, and Pensions
United States Senate

The Honorable Lamar Alexander
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The Honorable Robert Andrews
Ranking Member
Subcommittee on Health, Employment, Labor,
and Pensions
Committee on Education and the Workforce
House of Representatives

The Honorable Timothy Bishop
House of Representatives

The Honorable Alcee L. Hastings
House of Representatives

Appendix I: Scope and Methodology

To help us identify data sources on student outcomes and recent research comparing student outcomes across sectors (for-profit, nonprofit, and public), we interviewed officials from the Department of Education (Education) and Education's Office of Inspector General (OIG). We also spoke with 10 higher education experts and researchers, as well as representatives from 6 higher education associations, 6 postsecondary school accreditors, and 8 state agencies that oversee postsecondary institutions.[1] We also reviewed relevant federal laws and regulations. To address our objectives, we (1) conducted a structured literature review of recent studies comparing selected postsecondary student outcomes at for-profit and nonprofit and/or public schools and (2) collected and analyzed pass rate data for selected licensing exams for first-time test takers from for-profit, nonprofit, and public schools, focusing on schools that participate in federal student aid programs.

We conducted this performance audit from November 2010 through December 2011 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings based on our audit objectives.

Literature Review

To identify recent research on comparative postsecondary student outcomes at for-profit, nonprofit, and public schools, we conducted a structured literature review. We searched numerous bibliographic databases—including Education Resources Information Center (ERIC), ProQuest, Education Journals, PsycINFO, National Technical Information Service (NTIS), EconLit, and WorldCat—for articles or studies published from January 2000 through July 2011 that used data from 2000 or later.[2]

[1]We spoke with the following higher education associations: American Association of Collegiate Registrars and Admissions Officers, American Association of Community Colleges, Association of Private Sector Colleges and Universities, National Association of College Admissions Counselors, National Association of Independent Colleges and Universities, and National Student Clearinghouse.

[2]Our search also included the following databases: Congressional Research Service; Wilson Social Sciences Abstracts; Social SciSearch; Sociological Abstracts; Social Services Abstracts; Academic OneFile; PolicyFile; Statistical Insight; Electronic Collections Online; PapersFirst; ArticleFirst; Dissertation Abstracts Online; PAIS International; PASCAL; and British Education Index.

We employed a variety of search strategies to identify research related to student outcomes such as graduation rates, employment outcomes, earnings, student loan indebtedness, and default rates. In addition to searching the bibliographic databases, we identified studies through citations in previously identified work and through a review of several higher education news publications. We also asked higher education associations, researchers, and Education officials to identify any relevant studies and included such studies in our review. We defined "studies" broadly to include published peer-reviewed journal articles; ongoing studies submitted to journals for formal publication by academic researchers; unpublished studies by higher education associations, academic researchers, and other experts; and studies issued or commissioned by different higher education associations, researchers, the Congressional Research Service, or Education.

In order to focus on studies that compared postsecondary student outcomes at for-profit and nonprofit and/or public schools, we examined all initial search results and restricted our formal review to studies meeting the following criteria:

- focused on the U.S. student population;
- used at least some data collected in 2000 or later;
- addressed at least one of the following student outcomes: graduation rates, earnings, employment outcomes, student loan debt, and default rates;
- compared outcomes of for-profit schools with outcomes of nonprofit and/or public schools; and
- contained original analysis controlling for at least one student characteristic (e.g., race, gender, and age).

We identified 32 studies that met these screening criteria. For each of these studies, we conducted a rigorous review of the research methodology, including the research design; objectives; data source; analyses conducted; and any applicable data-related or methodological limitations. As a result of this review, we excluded 21 studies due to methodological limitations and retained 11 for our analyses (see app. II for a list of the 11 studies). Seven of the 11 remaining studies included information on graduation rates, 1 study focused on employment outcomes, 4 studies included information on total student loan

indebtedness, and 2 studies included information on student loan default rates at schools. All of these studies included comparative analyses of student outcomes at for-profit and nonprofit and/or public schools, while controlling for at least one student characteristic, and all were determined to be methodologically sound.[3]

Licensing Exam Pass Rate Analysis

To identify potential occupations for our analyses, we reviewed information from the Bureau of Labor Statistics' 2010-2011 Occupational Outlook Handbook and Education data on the largest fields of study by enrollment. We also spoke with and reviewed information from representatives at national credentialing organizations, state licensing bodies, testing companies, and other entities involved in occupational licensing, to learn more about which occupations require practitioners to pass an exam, which states require practitioners to pass specific exams, and the availability of exam data. To identify educational programs of study associated with our potential list of occupations, we reviewed Education's Classification of Instructional Programs (CIP) codes. We initially considered more than 20 occupational fields.[4]

We restricted our analysis of licensing exam data to occupations that met the following criteria.[5]

- Practitioners are generally required to pass a licensing exam in order to work.[6]

[3]The studies in our literature review did not separately analyze outcomes for students at minority-serving institutions.

[4]Occupations that we considered included: funeral directors/embalmers, cosmetology, culinary arts/cooking, teaching, law/attorneys, legal assisting/paralegal, criminal justice/law enforcement/corrections, dental assisting, dental hygienists, medical assisting, EMT/paramedics, radiography, surgical technology, ultrasound/sonography, nursing, nurse assistants/home health aides, dietetics/nutrition, massage therapy, accounting, real estate, plumbing, and electricians.

[5]We use the term "licensing exam" to refer to exams that are required to work in a specific occupation, even though some of these exams may technically be certification exams.

[6]Surgical technologists who work in a health care facility, such as a hospital or ambulatory surgical center, must generally pass an exam to work in the two states included in our analysis. While surgical technologists who work in physicians' offices are not necessarily required to pass the exam, knowledgeable individuals told us that the significant majority of surgical technologists work in health care facilities. Surgical technologists who work for the federal government or were trained by the U.S. military or the U.S. Public Health Service are also exempt from the testing requirement in these states.

- Obtaining a license does not require significant work experience before taking the licensing exam.[7]

- Passing a licensing exam is generally not a requirement to graduate from a program of study.[8]

To ensure that we selected programs with sufficient numbers of graduates across sectors, we used CIP data to determine the number of students completing each program in each sector in school year 2009.[9] As we identified potential occupations and programs and spoke with representatives from state and other licensing entities, we further refined our list by eliminating occupations where available data would not allow us to both (1) reliably identify the type of school at which test takers completed an educational program and (2) reliably distinguish first time test takers from repeat test takers.[10]

Licensing exams in the following 10 occupations met our criteria and the associated exam entities agreed to provide us with data: Registered Nurse (RN), Licensed Practical Nurse (LPN), Radiographer, Emergency Medical Technician (EMT), Paramedic, Surgical Technologist, Massage Therapist, Lawyer, Cosmetologist, and Funeral Director. We generally collected licensing exam pass rate data for first-time test takers for calendar years 2008, 2009, and 2010 to allow us to identify pass rate patterns and account for any data anomalies that might occur in a single year. To prevent the identification of individual schools or students, we did not report specific pass rates if there were less than five programs in a

[7]Some occupations we initially considered, such as plumber and electrician, typically require long apprenticeships prior to taking a licensing exam. We excluded such occupations since passage of a licensing exam might reflect skills acquired during an apprenticeship rather than from an educational program.

[8]An Education official told us that some teaching programs have historically required students to pass a licensing exam to graduate, so pass rates would always be 100 percent and therefore not a reasonable measure of program quality.

[9]While CIP completions data do not directly correspond to the exact number of licensing exam test takers in any field, we used these data as a proxy for actual test taker data to ascertain which programs of study and corresponding occupations were worth pursuing.

[10]We focused on first-time test takers because we believe their results are more closely associated with the quality of the program they completed, since they are less likely to have had intervening experiences since completing their schooling.

sector over the 2008-2010 time period, unless the data were publicly available.

Data Sources for Pass Rates on Licensing Exams Included in Our Analyses

When possible, we selected licensing exams offered by national organizations to maximize the number of states in our analysis.[11] To ensure that national data included in our analyses were consistent and equivalent, we restricted our analysis to national licensing exams where a single exam with a nationally set pass score was used. We included in our analyses only states that required passing the licensing exam to practice in the occupation.[12] We obtained pass rate data for a national exam for seven occupations—RN, LPN, radiographer, EMT, paramedic, surgical technologist, and funeral director.

RN and LPN. We analyzed licensing exam data from the National Council of State Boards of Nursing for first-time exam takers from LPN programs, associate's degree RN programs, and bachelor's degree RN programs.[13] For each of these degrees, we collected data on less than 2-year programs, 2-year programs, and 4-year programs. All states require RNs and LPNs to pass these exams in order to practice. [14]

Radiographer. We collected licensing exam data from the American Registry of Radiologic Technologists for its radiography technologist exam. We obtained data for 34 states that require radiographers to pass this exam in order to practice in the state.

EMT and Paramedic. We collected licensing exam data from the National Registry of Emergency Medical Technicians for its basic EMT and paramedic exams. We obtained data for 32 states that required

[11]The District of Columbia is counted as a state in reporting on the number of states from which licensing data were collected.

[12]To determine which states require practitioners to pass specific exams, we spoke with and reviewed information from representatives at national credentialing organizations, state licensing bodies, testing companies, and other entities involved in occupational licensing.

[13]Some states use the term Licensed Vocational Nurse (LVN) instead of LPN. LVNs must pass the same exam as LPNs.

[14]Nursing data also include programs in American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the Virgin Islands.

EMTs to pass this basic EMT exam and for 38 states that require paramedics to pass this paramedic exam in order to practice in the state.

Surgical Technologist. We collected licensing exam data from the National Board of Surgical Technology and Surgical Assisting for its surgical technologist exam.[15] While no state requires surgical technologists to be licensed, two states do require most surgical technologists to pass this exam in order to practice in the state. We obtained data for these two states.

Funeral Director. We collected licensing exam data from the International Conference of Funeral Service Examining Boards, Inc. for its National Board Examination. These data were for graduates of the 56 American Board of Funeral Service Education (ABFSE) accredited schools, which are located in 32 states. While not all states require passing this exam to practice as a funeral director, all students in ABFSE-accredited programs are required to take the exam in order to graduate.[16] Therefore, we determined that this exam allowed for a reasonable comparison of program quality across sectors. The exam consists of two sections—Arts and Sciences—which may be taken together or at different times. We report pass rates for each section separately because the International Conference of Funeral Service Examining Boards does not calculate a combined pass rate. Seven of the schools that ABFSE accredits offer bachelor's degree programs in addition to or instead of associate's degree programs; however, the International Conference of Funeral Service Examining Boards cannot distinguish between test takers from associate's degree and bachelor degree programs. In order to ensure a fair comparison across sectors, we collected and analyzed the data both including and excluding schools that offer a bachelor's degree program. The findings were generally similar for both analyses with respect to the relationship between test takers from for-profit schools and

[15]We only report surgical technologist pass rates for 2010 because one of the two states included in our review did not require surgical technologists to pass this exam until 2010.

[16]According to the International Conference of Funeral Service Examining Boards, generally individuals are required to take, but not pass, the exam to graduate. One of the ABFSE-accredited program requires passing the exam to graduate; however, we obtained exam data for all students who took the exam, not just graduates, so this requirement did not impact our analysis.

those from nonprofit and public schools.[17] There were only four for-profit schools included in our analysis; however, because school pass rate data are available publicly, we made an exception to our rule of not reporting on sectors with less than five programs, which is meant to protect the identity of individual schools.

For the three remaining occupations, we collected data from selected states for state and/or multiple national exams accepted for licensing purposes.[18] For each occupation, we used Education's CIP data to identify the four states in which the numbers of graduates and the distribution of graduates across sectors provided the best chance to detect any statistically significant differences that might exist between sectors. However, in some cases, we were unable to obtain data from one of the top four states, so we collected data from the state that was the next most likely to allow us detect differences across sectors.[19] We generally included test takers from schools that were considered "in-state" by the states in our analysis. Results for individual states are not generalizable to other states and it is possible that sector comparisons in other states would show different results or would differ as to whether the results were statistically significant.

Massage Therapist. We collected massage therapy licensing exam pass rate data for schools in Florida, New York, North Carolina, and Ohio.[20] New York and Ohio use their own state exams. During the time period for which we collected data, Florida and North Carolina both accepted

[17]Results when including bachelor's degree programs in our analysis were slightly different in one year—it eliminated the statistically significant difference between test takers from for-profit schools and those from public schools on the sciences section of the exam in 2009. See appendix III for data including and excluding schools offering bachelor's degrees.

[18]For state licensing exams, states could have different requirements, but each individual state had to use one or comparable licensing exams for everyone who is licensed to practice in a specific occupation within the state.

[19]For cosmetology, for example, Georgia was among the four states which best met our criteria; however, we were unable to collect data from this state, so we used North Carolina as our alternative.

[20]We report massage therapy exam pass rates for 2008-2010 for Florida, North Carolina, and New York. Ohio offers its exam in June and December; we were only able to obtain data for the December exam in 2008, so the pass rate reported for Ohio is for the second half of 2008 and all of 2009 and 2010.

passage of exams from either of two different testing entities and we report pass rates separately for the separate exams.[21] We do not report specific pass rates for nonprofit massage therapist programs because there were fewer than five such programs in New York and Ohio, and none in Florida or North Carolina over the 2008-2010 time period.

Bar Exam for Lawyers. We collected publicly available bar exam pass rate data from California, Florida, Georgia, and South Carolina, but eliminated South Carolina because first-time and repeat test takers could not be separately identified.[22] There were fewer than five schools in several sectors in these states; however, because school pass rate data are publicly available, we made an exception to our rule of not reporting on sectors with less than five programs, which is meant to protect the identity of individual schools.

[21]Although we tried to avoid states in which more than one exam was used, we included data from both Florida and North Carolina because we were able to obtain complete data on each exam accepted in these states. Both states accept exams from two testing entities: (1) the Federation of State Massage Therapy Boards, which offers the Massage and Bodywork Licensing Examination, and (2) the National Certification Board for Therapeutic Massage and Bodywork, which offers the National Certification Examination for Therapeutic Massage and the National Certification Examination for Therapeutic Massage and Bodywork exams. We determined that combining the results of both exams offered by the National Certification Board was methodologically sound after interviewing officials at the National Certification Board, who told us that the content of the two exams was largely identical. Results for these two exams are reported individually in appendix III. The National Certification Board provided results from the English language version of its exams. A board official told us that the board offers a Spanish language version of its exams, but test taker volume is very low.

[22]These data were collected from the websites of the State Bar of California, the Florida Board of Bar Examiners, the Supreme Court of Georgia, Office of Bar Admissions, and the South Carolina Supreme Court, Office of Bar Admissions. In the states for which we analyzed data, the bar exam is offered twice each year, in February and July. We collected data from both exams and combined the February and July results in our analysis. In most states, only graduates of schools accredited by the American Bar Association (ABA) are eligible to take the bar exam, but in California, students from ABA-accredited, California-accredited, and California-unaccredited law schools are eligible to take the bar exam and practice in the state. Two of the three California for-profit law schools in our data set were unaccredited; the third was ABA-accredited. Seven of the 22 nonprofit schools were accredited by California, but not the ABA; the rest were ABA-accredited. All of the public schools were ABA-accredited.

Cosmetologist. We collected cosmetology licensing exam pass rate data from California, Florida, North Carolina, and Texas.[23] To obtain a license in these states, individuals must pass both a written and a practical portion of the exam. Only test takers who passed both the written and practical portions of the exam on their first attempt are included in the percent of first-time test takers who passed the exam. In California, North Carolina, and Texas, candidates can apply for a general cosmetology license, which allows them to perform a wide range of cosmetology-related activities, or a more specific license, such as a manicure or esthetician license, which have their own licensing exams.[24] In Florida, only one cosmetology licensing exam was offered.[25] In the states that offer multiple exams, we collected data on each exam, but only reported pass rates on the largest exam by test taker volume.[26] We did not report specific pass rates for nonprofit cosmetology programs because California and North Carolina did not have any nonprofit cosmetologist programs and Florida and Texas each had less than five nonprofit cosmetologist programs over the 2008-2010 time period.

We assessed the reliability of licensing exam data for each exam in our analysis by interviewing representatives at each entity from which we collected data and reviewing documentation related to the data systems and the collection, storage, and processing of data, when available. We determined that all data included in our report are sufficiently reliable for the purpose of comparing pass rates across sectors.

[23]We collected data from the California State Board of Barbering and Cosmetology, the Florida Department of Business and Professional Regulation, Board of Cosmetology, the North Carolina Board of Cosmetic Art Examiners, and the Texas Department of Licensing and Regulation.

[24]Estheticians specialize in skin care therapy and perform treatments such as facials and waxing.

[25]Because Florida could not reliably identify the school from which test takers graduated for its 2008 exam data, we collected only 2009 and 2010 data from Florida.

[26]When all cosmetologist-related exams were analyzed together, the pass rate of graduates of for-profit schools was generally lower than that of graduates of public schools. However, there were few statistically significant differences in pass rates when the less common tests were examined individually, possibly due to small numbers of test takers (see app. III for data on each individual exam).

Data Analysis

For each occupation, licensing exam data were collected at either the program level or individual test taker level. Entities providing program level data identified first-time and repeat test takers for us.[27] In some cases, the entity providing the data did not want to provide data in a way that would allow us to identify a specific school's pass rate. In such cases, we sent the entity the list of schools with their sector identified, and the entity replaced the school name with a generic, sector-specific identifier such as "public school 1," "public school 2," etc. As a result, further analysis with respect to individual school characteristics was not possible. For test taker level data, we identified the first time an individual took an exam using the exam dates provided, and compiled school level records based on the school name or unique identifier associated with each school.

We determined the sector of each school using information from Education's Integrated Postsecondary Education Data System (IPEDS) database.[28] This allowed us to focus on schools that participate in federal student aid programs. However, it is possible that we were unable to match some schools to a sector because the name provided did not match closely enough to the school name listed in IPEDS. Additionally, IPEDS contains a small number of schools that do not participate in federal student aid programs. It is possible that a small number of nonparticipating schools are captured in our analysis if they offer programs related to the occupations for which we collected licensing data.

After we grouped the schools by sector for each licensing exam, we used SAS software to calculate licensing exam pass rates and mean school

[27]In some cases, only data on first-time test takers was provided.

[28]Generally, the entity from which we collected data provided a list of schools with programs from which graduates were eligible to take the exam. However, in some cases we obtained a list of applicable schools from publicly available sources. For the bar exam, we obtained a list of applicable schools from each state's bar website. For the radiography, Texas cosmetology, and Funeral Director exams, we obtained a list of applicable schools from the American Registry of Radiologic Technologists, the Texas Department of Licensing and Regulation, and the American Board of Funeral Service Education's websites, respectively.

pass rates for first-time test takers for each exam for each sector.[29] We conducted appropriate tests to assess the statistical significance of differences in student pass rates and mean school pass rates across sectors (see app. III for overall sector and mean school pass rate data and school pass rate distribution data).[30] We presented overall sector pass rates rather than mean school pass rates in our briefing to avoid having schools with a small number of test takers disproportionately influence sector comparisons. In addition, using the student (rather than the school) as the unit of analysis resulted in larger comparison groups, which increased the likelihood of detecting any statistically significant differences that might exist between sectors. Generally, there were not substantial differences between the overall sector pass rates and the mean school pass rates.[31] In some cases, sector differences in student pass rates were statistically significant, but differences in the mean school pass rates were not. This may be due to the fact that analyses of mean school pass rates are based on fewer observations than analyses of overall sector pass rates.

Limitations of the Analysis

There are some limitations related to using licensing exam pass rates as an indicator of school quality. First, although experts and higher education association officials told us that licensing exam pass rates are one reasonable measure of school quality, relatively few postsecondary school graduates take licensing exams because many occupations do not

[29]To calculate mean school pass rates, we counted the number of school programs in our data. There are challenges when matching schools with Education's IPEDS data base and counting the number of school programs. Some schools have multiple branches and campuses and can be included in Education's data as either a single school or multiple schools. As a result, matching school programs and counting the number of programs involved some judgment.

[30]Although we have data for the population of students and schools taking specific tests in each year, we expect some random fluctuation in the population over time. Accordingly, we did not treat pass rate information as fixed population data, but instead we used statistical tests to determine whether the differences we observed exceeded what we would expect to see with random fluctuation. We used t-tests at the 95 percent confidence level. A 95 percent confidence level for t-tests implies that we would have less than a 5 percent chance of observing the differences that occurred by chance.

[31]Almost 80 percent of the time, differences between overall sector pass rates and mean school pass rates were within 5 percentage points of each other. In the remaining cases, differences of more than 5 percentage points occurred most frequently for law programs in California, massage therapy programs in Florida and North Carolina, and cosmetology programs in North Carolina and Texas.

require a license or certification. Therefore, this analysis is limited to specific programs for which graduates require licensure and does not provide information on the quality of other types of postsecondary programs. In addition, reliable data were not available to estimate the number of students who begin programs likely to lead to specific occupations requiring a license; as a result, we could not compare the number of students who begin a program to those who complete the program or to those who take the relevant licensing exam. Therefore, a school could have a high licensing exam pass rate, but could also have a high drop-out rate if the students least likely to pass the exam did not complete the program. Additionally, a school could have a high exam pass rate if those graduates least likely to pass the exam decided not to take it.

Although student characteristics, such as race and income, have generally been found to be correlated with student outcomes, data were generally not available on the characteristics of licensing exam test takers. As a result, controlling for these factors in our analysis was not possible. Exam pass rates may be affected by the extent to which schools in one sector serve a higher proportion of nontraditional or disadvantaged students. Similarly, schools that attract better prepared students may have higher licensing exam pass rates, which may not be a direct function of the quality of the education provided. Although focusing on outcomes for graduates can mitigate the impact of student characteristics, it may not completely eliminate the effect of these characteristics on test results.

Lastly, the number of schools and students for some of the exams in our analysis was quite small. For example, there was only one for-profit law school in Florida and only one for-profit, two nonprofit, and two public law schools in Georgia. Similarly, there were only 5 for-profit paramedic programs compared to 368 public paramedic programs (see app. III for data on the number of programs and test takers for each exam).

Appendix II: List of Studies and Ongoing Research Included in Our Literature Review

We identified 11 studies that included original research on postsecondary student outcomes, controlled for at least one student characteristic, compared student outcomes at for-profit schools and schools from at least one other sector (nonprofit or public), and met our standards for methodological soundness. Table 1 identifies these studies, the outcomes of interest from each study, the data source, and the time period covered by the study data.

Table 1: Studies Included in GAO's Report, By Student Outcomes

Student outcome of interest	Study information	Data source and time period covered
Graduation rates, employment outcomes, student indebtedness, And school default rates	Deming, D., Claudia Goldin, and Lawrence F. Katz, The For-Profit Postsecondary School Sector: Nimble Critters or Agile Predators? Draft Paper Harvard University and the National Bureau of Economic Research. (Mass., July 2011).	BPS, 2004-2009 IPEDS, 2005-2008 NSLDS, 2005-2008
Graduation rates	Skomsvold, P., Alexandria Walton Radford, and Lutz Berkner of MPR Associates, Inc., Web Tables: Six-Year Attainment, Persistence, Transfer, Retention, and Withdrawal Rates of Students Who Began Postsecondary Education in 2003-04. ED-02-CO-0011, U.S. Department of Education, National Center for Education Statistics (Washington, D.C.: July 2011).	BPS, 2004-2009
Graduation rates	Knapp, L.G., J.E. Kelly-Reid, and S.A. Ginder. Enrollment in Postsecondary Institutions, Fall 2009; Graduation Rates, 2003 & 2006 Cohorts; and Financial Statistics, Fiscal Year 2009. (NCES 2011-230), U.S. Department of Education, National Center for Education Statistics (Washington, D.C.: February 2011).	IPEDS, spring 2010
Graduation rates	Knapp, L.G., J.E. Kelly-Reid, and S.A. Ginder, Enrollment in Postsecondary Institutions, Fall 2008; Graduation Rates, 2002 & 2005 Cohorts; and Financial Statistics, Fiscal Year 2008. (NCES 2010-152), U.S. Department of Education, National Center for Education Statistics (Washington, D.C.: April 2010).	IPEDS, spring 2009
Graduation rates	Knapp, L.G., J.E. Kelly-Reid, and S.A. Ginder, Enrollment in Postsecondary Institutions, Fall 2007; Graduation Rates, 2001 & 2004 Cohorts; and Financial Statistics, Fiscal Year 2007. (NCES 2009-155), U.S. Department of Education, National Center for Education Statistics (Washington, D.C.: March 2009).	IPEDS, spring 2008
Graduation rates	Knapp, L.G., J.E. Kelly-Reid, S.A.Ginder, and E. Miller, Enrollment in Postsecondary Institutions, Fall 2006; Graduation Rates, 2000 & 2003 Cohorts; and Financial Statistics, Fiscal Year 2006. (NCES 2008-173), U.S. Department of Education, National Center for Education Statistics (Washington D.C.: June 2008).	IPEDS, spring 2007
Graduation rates	Knapp, L.G., J.E. Kelly-Reid, R.W. Whitmore, and E. Miller, Enrollment in Postsecondary Institutions, Fall 2005; Graduation Rates, 1999 and 2002 Cohorts; and Financial Statistics, Fiscal Year 2005. (NCES 2007-154), U.S. Department of Education, National Center for Education Statistics (Washington D.C.: April 2007).	IPEDS, spring 2006

Student outcome of interest	Study information	Data source and time period covered
Student indebtedness	Hinze-Pifer, R. and R. Fry, "The Rise of College Student Borrowing, A Social and Demographic Trends Report," Pew Research Center (November 2010).	NPSAS, 2007-2008
Student indebtedness	Baum, S. and Patricia Steele, "Who Borrows the Most? Bachelor's Degree Recipients with High Levels of Student Debt," College Board Advocacy & Policy Center, Trends in Higher Education Series (2010).	NPSAS, 2007-2008
Student indebtedness	"Trends in Student Aid 2010," College Board Advocacy & Policy Center Trends in Higher Education Series (2010).	NPSAS, 2007-2008
Default rate	Guryan, J., M. Thompson, and Charles River Associates, Report on Gainful Employment, Prepared for Harris N. Miller, Career College Association (Washington, D.C.: April 2010).	BPS, 1996-2001

Source: GAO.

Note: IPEDS refers to Education's Integrated Postsecondary Education Data System. BPS refers to Education's Beginning Postsecondary Students Longitudinal Study. NPSAS refers to Education's National Postsecondary Student Aid Survey. NSLDS refers to Education's National Student Loan Data System.

Appendix III: Detailed Analysis of Licensing Exam Pass Rates

The following tables contain more detailed data from our analyses of licensing exam pass rates. For each exam, data are presented in two tables and one figure. The first table contains the number of programs and number of test takers by sector. The second table contains the overall student pass rate and the mean program pass rate by sector. To protect the confidentiality of individual schools and students, we did not report pass rates in cases in which there were less than five programs (unless the data were already publicly available). The figure presents the distribution of program pass rates by sector over the 2008-2010 time period.

Table 2: RN (Bachelor's Degrees): Number of Programs and First Time Test Takers, by Sector

		2008		2009		2010		2008-2010	
Sector	**Program length**	**Programs**	**Test takers**	**Programs**	**Test takers**	**Programs**	**Test takers**	**Programs**	**Test takers**
For-profit	Less than 2 years	0	0	0	0	0	0	0	0
	2 years	0	0	0	0	0	0	0	0
	4 years	11	518	14	825	20	1,083	21	2,426
Total		**11**	**518**	**14**	**825**	**20**	**1,083**	**21**	**2,426**
Nonprofit	Less than 2 years	0	0	0	0	0	0	0	0
	2 years	1	111	1	112	2	131	2	354
	4 years	300	18,690	316	19,313	322	20,354	328	58,357
Total		**301**	**18,801**	**317**	**19,425**	**324**	**20,485**	**330**	**58,711**
Public	Less than 2 years	1	232	1	195	1	200	1	627
	2 years	0	0	0	0	0	0	0	0
	4 years	297	27,994	302	29,163	310	30,780	315	87,937
Total		**298**	**28,226**	**303**	**29,358**	**311**	**30,980**	**316**	**88,564**

Source: GAO analysis of National Council of State Boards of Nursing data.

Table 3: RN (Bachelor's Degree): Student Pass Rate and Mean Program Pass Rate, by Sector

Sector	Program length	2008 Student pass rate	2008 Mean program pass rate	2009 Student pass rate	2009 Mean program pass rate	2010 Student pass rate	2010 Mean program pass rate	2008-2010 Student pass rate	2008-2010 Mean program pass rate
For-profit	Less than 2 years	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	2 years	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	4 years	83.6[c]	83.1	84.8[b, c]	77.9	84.8[c]	86	84.5[b, c]	81.3
Total		**83.6%[c]**	**83.1%**	**84.8%[b, c]**	**77.9%**	**84.8%[c]**	**86%**	**84.5%[b, c]**	**81.3%**
Nonprofit	Less than 2 years	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	2 years	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r
	4 years	85[c]	83.7[c]	87.8 [a, c]	86.1[c]	87.2[c]	85.6[c]	86.7[a, c]	84.4[c]
Total		**85%[c]**	**83.7%[c]**	**87.9%[a, c]**	**86.1%[c]**	**87.2%[c]**	**85.7%[c]**	**86.7%[a, c]**	**84.5%[c]**
Public	Less than 2 years	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r
	2 years	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	4 years	88.9[a, b]	87.9[b]	90.5[a, b]	90.5[b]	89.7[a, b]	88.4[b]	89.7[a, b]	88.9[b]
Total		**88.9%[a, b]**	**87.9%[b]**	**90.5%[a, b]**	**90.5%[b]**	**89.7%[a, b]**	**88.4%[b]**	**89.7%[a, b]**	**88.9%[b]**

Source: GAO analysis of National Council of State Boards of Nursing data.

Notes: To calculate the student pass rate, the total number of first-time test takers passing the exam was divided by the total number of first-time test takers for each sector for each year and overall. The mean program pass rate represents the average pass rate of all programs in each sector and was calculated by summing the individual program pass rates and dividing by the total number of programs for each sector, for each year and overall.

N/R indicates that we are not reporting pass rates because there were less than five programs.

N/A indicates not applicable because there were no programs or test takers.

[a]Indicates pass rate is statistically different from for-profit sector pass rates.

[b]Indicates pass rate is statistically different from nonprofit sector pass rate.

[c]Indicates pass rate is statistically different from public sector pass rate.

Table 4: RN (Associate's Degree): Number of Programs and First Time Test Takers, by Sector

		2008		2009		2010		2008-2010	
Sector	**Program length**	**Programs**	**Test takers**	**Programs**	**Test takers**	**Programs**	**Test takers**	**Programs**	**Test takers**
For-profit	Less than 2 years	2	117	3	223	5	212	5	552
	2 years	28	1,709	35	2,283	46	3,085	47	7,077
	4 years	15	1,034	21	1,304	26	1,534	27	3,872
Total		**45**	**2,860**	**59**	**3,810**	**77**	**4,831**	**79**	**11,501**
Nonprofit	Less than 2 years	1	21	1	12	2	43	2	76
	2 years	28	2,019	28	2,215	28	1,998	29	6,232
	4 years	73	6,165	78	6,324	78	6,298	81	18,787
Total		**102**	**8,205**	**107**	**8,551**	**108**	**8,339**	**112**	**25,095**
Public	Less than 2 years	1	11	2	32	2	55	2	98
	2 years	723	52,076	741	53,741	758	55,956	768	161,773
	4 years	119	9,592	115	9,578	117	9,569	124	28,739
Total		**843**	**61,679**	**858**	**63,351**	**877**	**65,580**	**894**	**190,610**

Source: GAO analysis of National Council of State Boards of Nursing data.

Table 5: RN (Associate's Degree): Student Pass Rate and Mean Program Pass Rate, by Sector

		2008		2009		2010		2008-2010	
Sector	**Program length**	**Student pass rate**	**Mean program pass rate**	**Student pass rate**	**Mean program pass rate**	**Student pass rate**	**Mean program pass rate**	**Student pass rate**	**Mean program pass rate**
For-profit	Less than 2 years	n/r	n/r	n/r	n/r	78.3	70.9	84.2	71.3
	2 years	71.4[b, c]	70.4[b, c]	79.7[b, c]	77.2[b, c]	78.7[b, c]	77.8[b, c]	77.3[b, c]	76.2[b, c]
	4 years	78.9[b, c]	76.5[b, c]	84[c]	75.5[b, c]	83.2[c]	82.8	82.3[b, c]	78.7[c]
Total		**74.6%[b, c]**	**73%[b, c]**	**81.8%[b, c]**	**77.2%[b, c]**	**80.1%[b, c]**	**79%[b, c]**	**79.3%[b, c]**	**76.7%[b, c]**
Nonprofit	Less than 2 years	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r
	2 years	83.9[a, c]	82[a]	86.6[a, c]	87.4[a]	86.1[a]	87.8[a]	85.6[a, c]	86.4[a]
	4 years	85.1[a]	85.6[a]	86	86.1[a]	84.4[c]	83.2	85.2[a, c]	84
Total		**84.8%[a, c]**	**84.7%[a]**	**86.2%[a, c]**	**86.5%[a]**	**84.8%[a, c]**	**84.3%[a, c]**	**85.3%[a, c]**	**84.6%[a, c]**
Public	Less than 2 years	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r
	2 years	87.4[a, b]	87.1[a]	88.4[a, b]	88.4[a]	87.2[a]	87.3[a]	87.7[a, b]	87.1[a]

Sector	Program length	2008 Student pass rate	2008 Mean program pass rate	2009 Student pass rate	2009 Mean program pass rate	2010 Student pass rate	2010 Mean program pass rate	2008-2010 Student pass rate	2008-2010 Mean program pass rate
	4 years	85.4[a]	85.2[a]	87.2[a]	87.8[a]	87[a, b]	85.7	86.5[a, b]	85.9[a]
Total		**87.1%[a, b]**	**86.8%[a]**	**88.3%[a, b]**	**88.3%[a]**	**87.2%[a, b]**	**87%[a, b]**	**87.5%[a, b]**	**87%[a, b]**

Source: GAO analysis of National Council of State Boards of Nursing data.

Notes: To calculate the student pass rate, the total number of first-time test takers passing the exam was divided by the total number of first-time test takers for each sector for each year and overall. The mean program pass rate represents the average pass rate of all programs in each sector and was calculated by summing the individual program pass rates and dividing by the total number of programs for each sector, for each year and overall.

N/R indicates that we are not reporting pass rates because there were less than five programs.

[a]Indicates pass rate is statistically different from for-profit sector pass rates.

[b]Indicates pass rate is statistically different from nonprofit sector pass rate.

[c]Indicates pass rate is statistically different from public sector pass rate.

Table 6: LPN: Number of Programs and First Time Test Takers, by Sector

Sector	Program length	2008 Programs	2008 Test takers	2009 Programs	2009 Test takers	2010 Programs	2010 Test takers	2008-2010 Programs	2008-2010 Test takers
For-profit	Less than 2 years	54	3,104	60	3,495	65	4,342	69	10,941
	2 years	79	6,770	89	7,386	100	8,010	106	22,166
	4 years	29	1,721	28	1,647	32	2,254	34	5,622
Total		**162**	**11,595**	**177**	**12,528**	**197**	**14,606**	**209**	**38,729**
Nonprofit	Less than 2 years	19	1,153	19	1,034	20	958	20	3,145
	2 years	12	537	12	583	11	576	12	1,696
	4 years	17	596	20	690	19	640	20	1,926
Total		**48**	**2,286**	**51**	**2,307**	**50**	**2,174**	**52**	**6,767**
Public	Less than 2 years	230	7,881	225	7,704	235	8,320	245	23,905
	2 years	723	26,662	719	26,850	724	26,601	759	80,113
	4 years	53	1,922	54	1,944	55	2,000	58	5,866
Total		**1,006**	**36,465**	**998**	**36,498**	**1,014**	**36,921**	**1,062**	**109,884**

Source: GAO analysis of National Council of State Boards of Nursing data.

Table 7: LPN: Student Pass Rate and Mean Program Pass Rate, by Sector

Sector	Program length	2008 Student pass rate	2008 Mean program pass rate	2009 Student pass rate	2009 Mean program pass rate	2010 Student pass rate	2010 Mean program pass rate	2008-2010 Student pass rate	2008-2010 Mean program pass rate
For-profit	Less than 2 years	77.3[c]	73.9[b, c]	77.2[c]	76[c]	80.3[c]	78.6[c]	78.4[c]	76.3[c]
	2 years	80[c]	76.2[c]	81[b, c]	78.8[c]	84.3[c]	83.1[c]	81.9[b, c]	79.6[c]
	4 years	80.6[c]	86.1	80.9[b, c]	84.1	84.1[c]	86.8[c]	82.1[b, c]	86.1[c]
Total		**79.3%[c]**	**77.2%[b, c]**	**79.9%[c]**	**78.7%[c]**	**83.1%[c]**	**82.2%[c]**	**80.9%[c]**	**79.6%[c]**
Nonprofit	Less than 2 years	78.6[c]	84.1[a]	79.3[c]	81.4	80[c]	80.7	79.2[c]	81
	2 years	82.3[c]	84.9	74.4[a, c]	80.5[c]	80.9[c]	86.7	79.1[a, c]	84.1
	4 years	84.7[c]	83	87.7[a]	86.4	84.1[c]	82.1[c]	85.6[a, c]	81.5[c]
Total		**81.1%[c]**	**83.9%[a, c]**	**80.6%[c]**	**83.1%[c]**	**81.4%[c]**	**82.5%[c]**	**81%[c]**	**81.9%[c]**
Public	Less than 2 years	86.9[a, b]	87.3[a]	86.3[a, b]	86.4[a]	88.8[a, b]	89[a]	87.4[a, b]	87.4[a]
	2 years	91.5[a, b]	91.6[a]	92.1[a, b]	91.8[a, b]	93.1[a, b]	92.8[a]	92.2[a, b]	91.8[a]
	4 years	89.4[a, b]	89.3	89.9[a]	89.2	91.8[a, b]	91.6[a, b]	90.4[a, b]	90.7[a, b]
Total		**90.4%[a, b]**	**90.5%[a, b]**	**90.7%[a, b]**	**90.5%[a, b]**	**92.1%[a, b]**	**91.9%[a, b]**	**91.1%[a, b]**	**90.7%[a, b]**

Source: GAO analysis of National Council of State Boards of Nursing data.

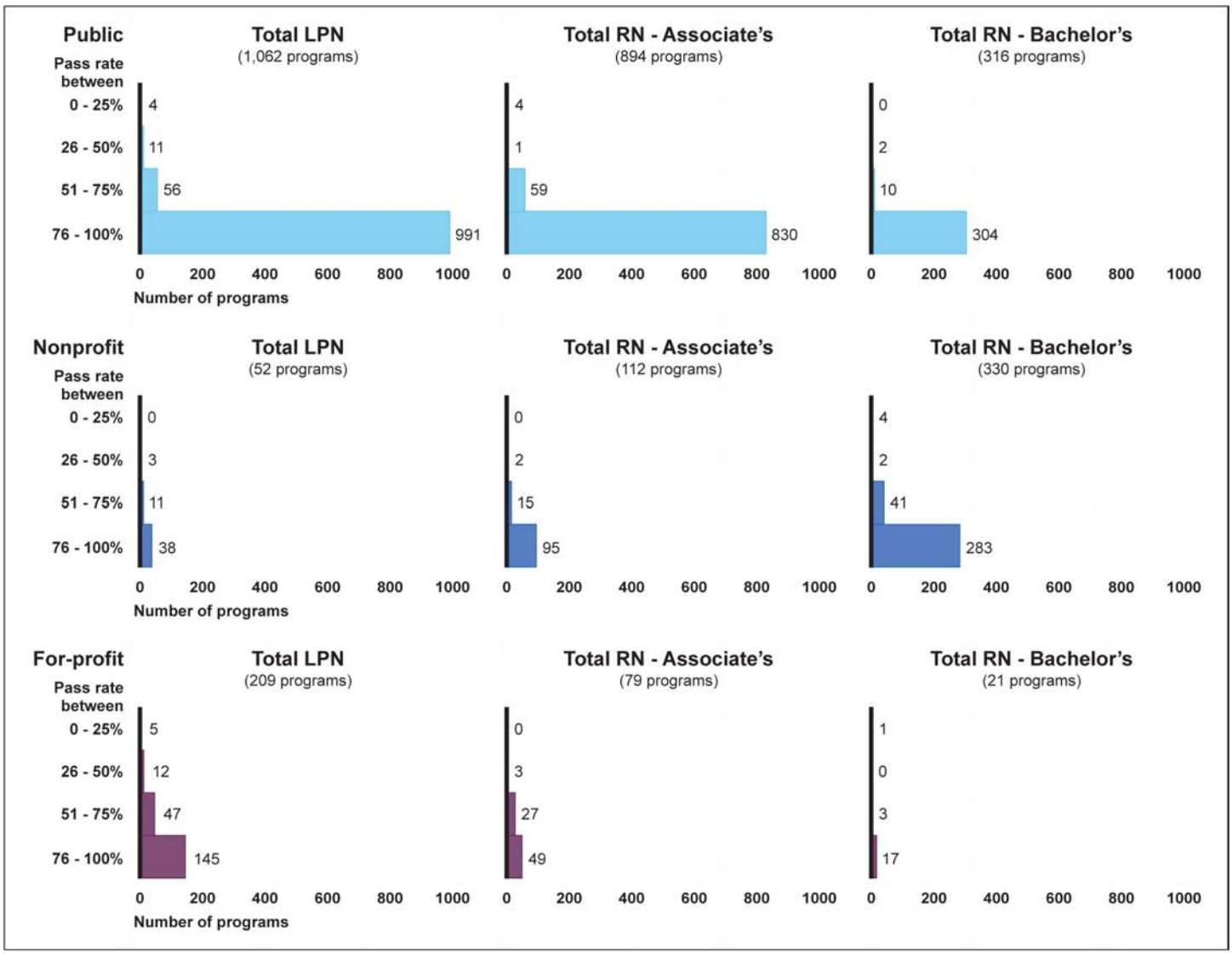
Note: To calculate the student pass rate, the total number of first-time test takers passing the exam was divided by the total number of first-time test takers for each sector for each year and overall. The mean program pass rate represents the average pass rate of all programs in each sector and was calculated by summing the individual program pass rates and dividing by the total number of programs for each sector, for each year and overall.

[a]Indicates pass rate is statistically different from for-profit sector pass rates.

[b]Indicates pass rate is statistically different from nonprofit sector pass rate.

[c]Indicates pass rate is statistically different from public sector pass rate.

Figure 1: Nursing: Number of Programs by Pass Rate Range, 2008-2010



Source: GAO analysis of National Council of State Boards of Nursing data.

Table 8: Radiography: Number of Programs and Test Takers, by Sector

	2008		2009		2010		2008-2010	
Sector	Programs	Test takers	Programs	Test takers	Programs	Test takers	Programs	Test takers
For-profit	32	1,265	35	1,219	40	1,193	40	3,677
Nonprofit	89	1,270	89	1,283	89	1,277	89	3,830
Public	278	6,125	285	5,917	290	5,861	291	17,903

Source: GAO analysis of American Registry of Radiologic Technologists data.

Table 9: Radiography: Student Pass Rate and Mean Program Pass Rates, by Sector

	2008		2009		2010		2008-2010	
Sector	Student pass rate	Mean program pass rate	Student pass rate	Mean program pass rate	Student pass rate	Mean program pass rate	Student pass rate	Mean program pass rate
For-profit	81.3%[b, c]	82.9%[b, c]	84.7%[b, c]	83.2%[b, c]	84.8%[b, c]	84.1%[b, c]	83.5%[b, c]	82.3%[b, c]
Nonprofit	92[a, c]	93.6[a]	93.3[a]	93.4[a]	95.7[a]	96.3[a]	93.7[a]	94.2[a]
Public	94.5[a, b]	94.6[a]	94.1[a]	94.1[a]	94.5[a]	94.6[a]	94.4[a]	94.2[a]

Source: GAO analysis of American Registry of Radiologic Technologists data.

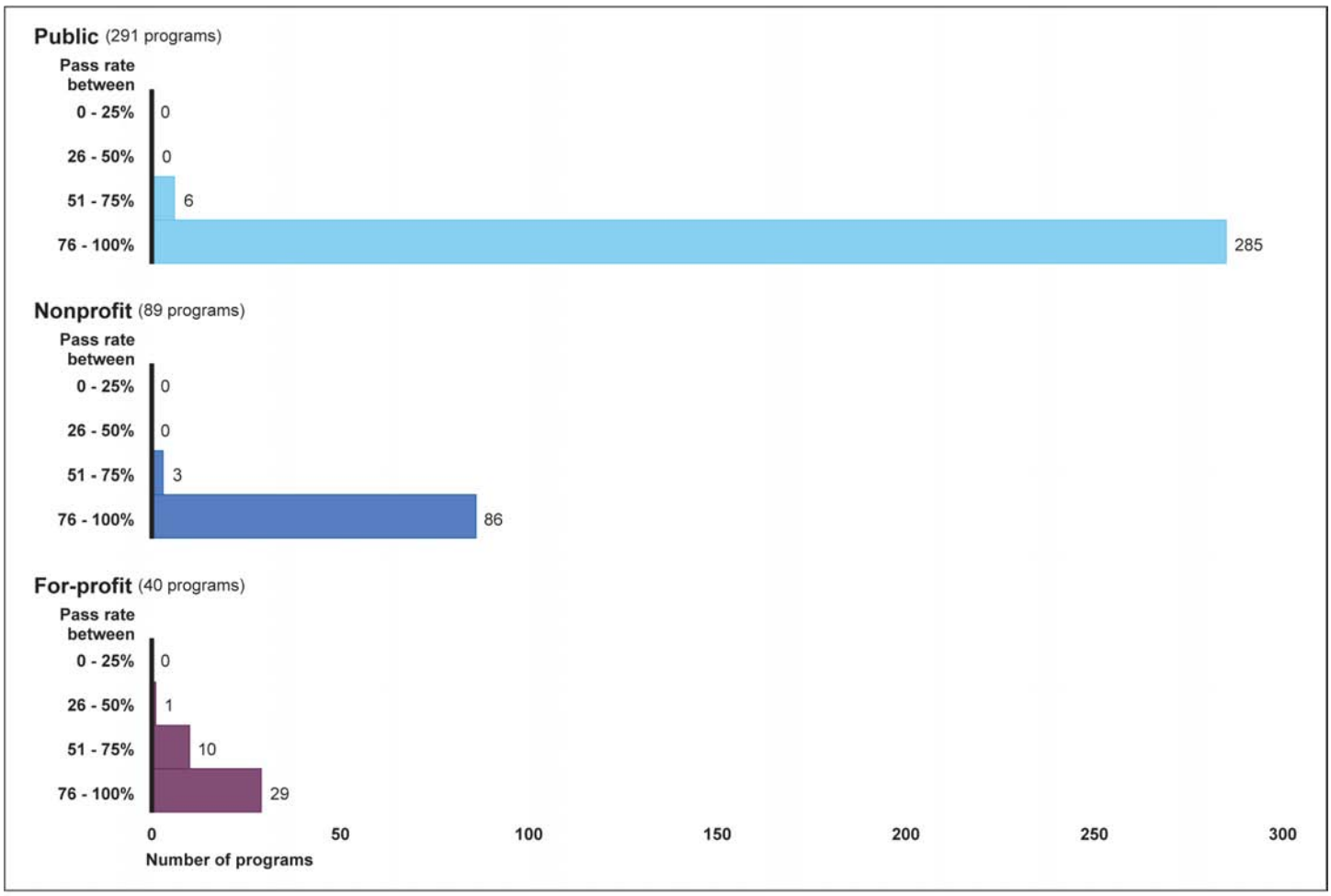
Note: To calculate the student pass rate, the total number of first-time test takers passing the exam was divided by the total number of first-time test takers for each sector for each year and overall. The mean program pass rate represents the average pass rate of all programs in each sector and was calculated by summing the individual program pass rates and dividing by the total number of programs for each sector, for each year and overall.

[a]Indicates pass rate is statistically different from for-profit sector pass rates.

[b]Indicates pass rate is statistically different from nonprofit sector pass rate.

[c]Indicates pass rate is statistically different from public sector pass rate.

Figure 2: Radiography: Number of Programs by Pass Rate Range, 2008-2010



Source: GAO analysis of American Registry of Radiologic Technologists data.

Table 10: EMT: Number of Programs and Test Takers, by Sector

	2008		2009		2010		2008-2010	
Sector	Programs	Test takers	Programs	Test takers	Programs	Test takers	Programs	Test takers
For-profit	10	756	15	896	16	980	18	2,632
Nonprofit	26	728	29	878	27	1,069	30	2,675
Public	565	28,230	571	31,038	575	33,750	615	93,018

Source: GAO analysis of National Registry of Emergency Medical Technicians data.

Table 11: EMT: Student Pass Rate and Mean Program Pass Rates, by Sector

	2008		2009		2010		2008-2010	
Sector	Student pass rate	Mean program pass rate	Student pass rate	Mean program pass rate	Student pass rate	Mean program pass rate	Student pass rate	Mean program pass rate
For-profit	60.2%[b, c]	49.1%[b]	51.2%[b, c]	49.3%[c]	61%[b, c]	56.2%	57.4%[b, c]	48.7%[b, c]
Nonprofit	77.3[a, c]	74[a, c]	68.3[a]	65.1	68.6[a]	67.3	70.9[a, c]	70.3[a, c]
Public	66.9[a, b]	63.1[b]	66.5[a]	63.8[a]	67.5[a]	63.4	67[a, b]	63.5[a, b]

Source: GAO analysis of National Registry of Emergency Medical Technicians data.

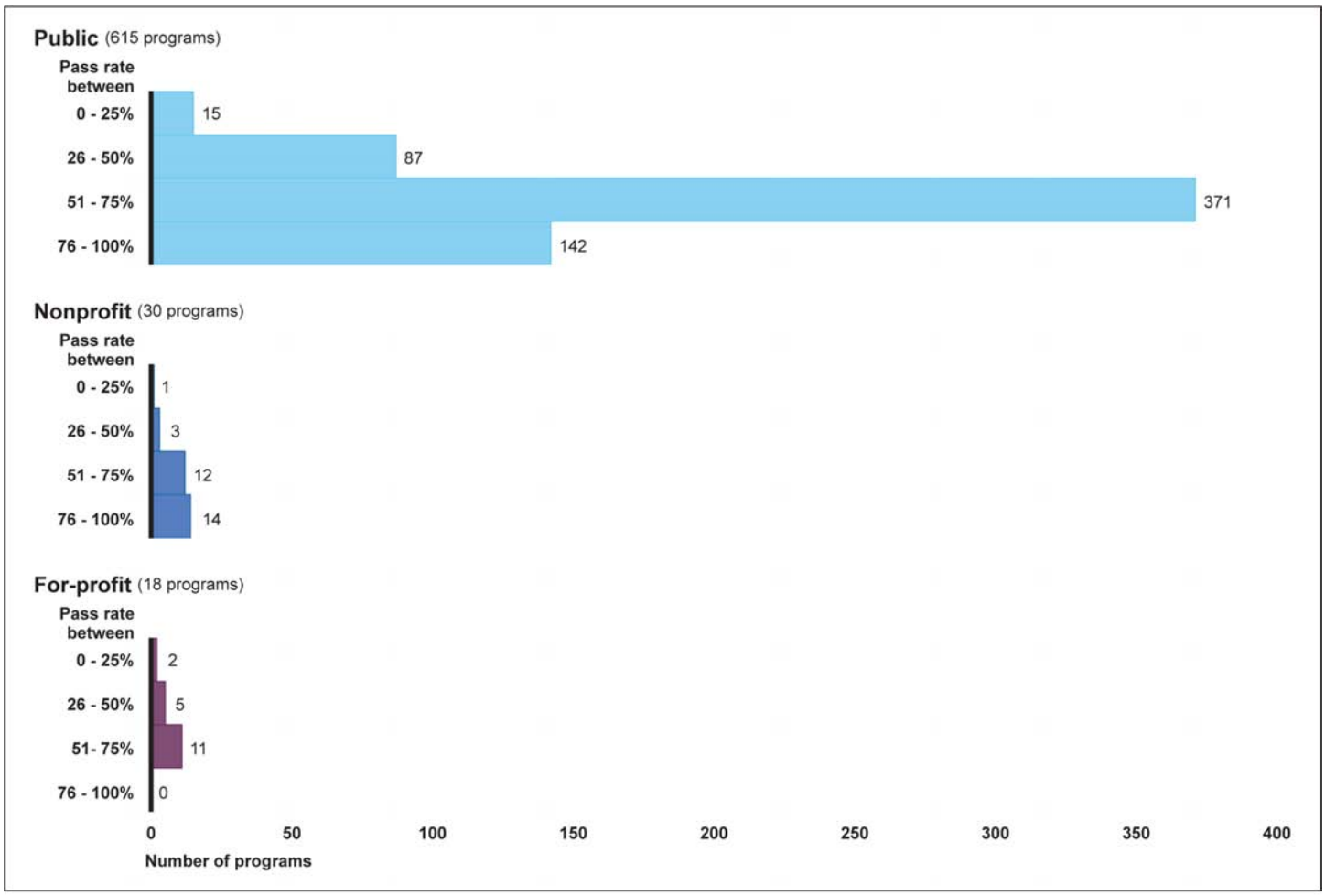
Note: To calculate the student pass rate, the total number of first-time test takers passing the exam was divided by the total number of first-time test takers for each sector for each year and overall. The mean program pass rate represents the average pass rate of all programs in each sector and was calculated by summing the individual program pass rates and dividing by the total number of programs for each sector, for each year and overall.

[a]Indicates pass rate is statistically different from for-profit sector pass rates.

[b]Indicates pass rate is statistically different from nonprofit sector pass rate.

[c]Indicates pass rate is statistically different from public sector pass rate.

Figure 3: EMT Basic: Number of Programs by Pass Rate Range, 2008-2010



Source: GAO analysis of National Registry of Emergency Medical Technicians data.

Table 12: Paramedic: Number of Programs and Test Takers, by Sector

	2008		2009		2010		2008-2010	
Sector	Programs	Test takers	Programs	Test takers	Programs	Test takers	Programs	Test takers
For-profit	5	43	5	74	5	75	5	192
Nonprofit	19	423	18	406	19	419	22	1,248
Public	347	5,474	348	5,621	349	6,170	383	17,265

Source: GAO analysis of National Registry of Emergency Medical Technicians data.

Table 13: Paramedic: Student Pass Rate and Mean Program Pass Rates, by Sector

	2008		2009		2010		2008-2010	
Sector	Student pass rate	Mean program pass rate	Student pass rate	Mean program pass rate	Student pass rate	Mean program pass rate	Student pass rate	Mean program pass rate
For-profit	41.9%[c]	46.9%	44.6%[b, c]	38.6%[c]	42.7%[b, c]	42.7%[b, c]	43.2%[b, c]	43.7%[c]
Nonprofit	60.5	51.7	63.3[a, c]	62.9	64.9[a]	64.9[a]	62.9[a, c]	59.5
Public	65.3[a]	60.3	70.5[a, b]	66.5[a]	70[a]	66.5[a]	68.7[a, b]	63.8[a]

Source: GAO analysis of National Registry of Emergency Medical Technicians data.

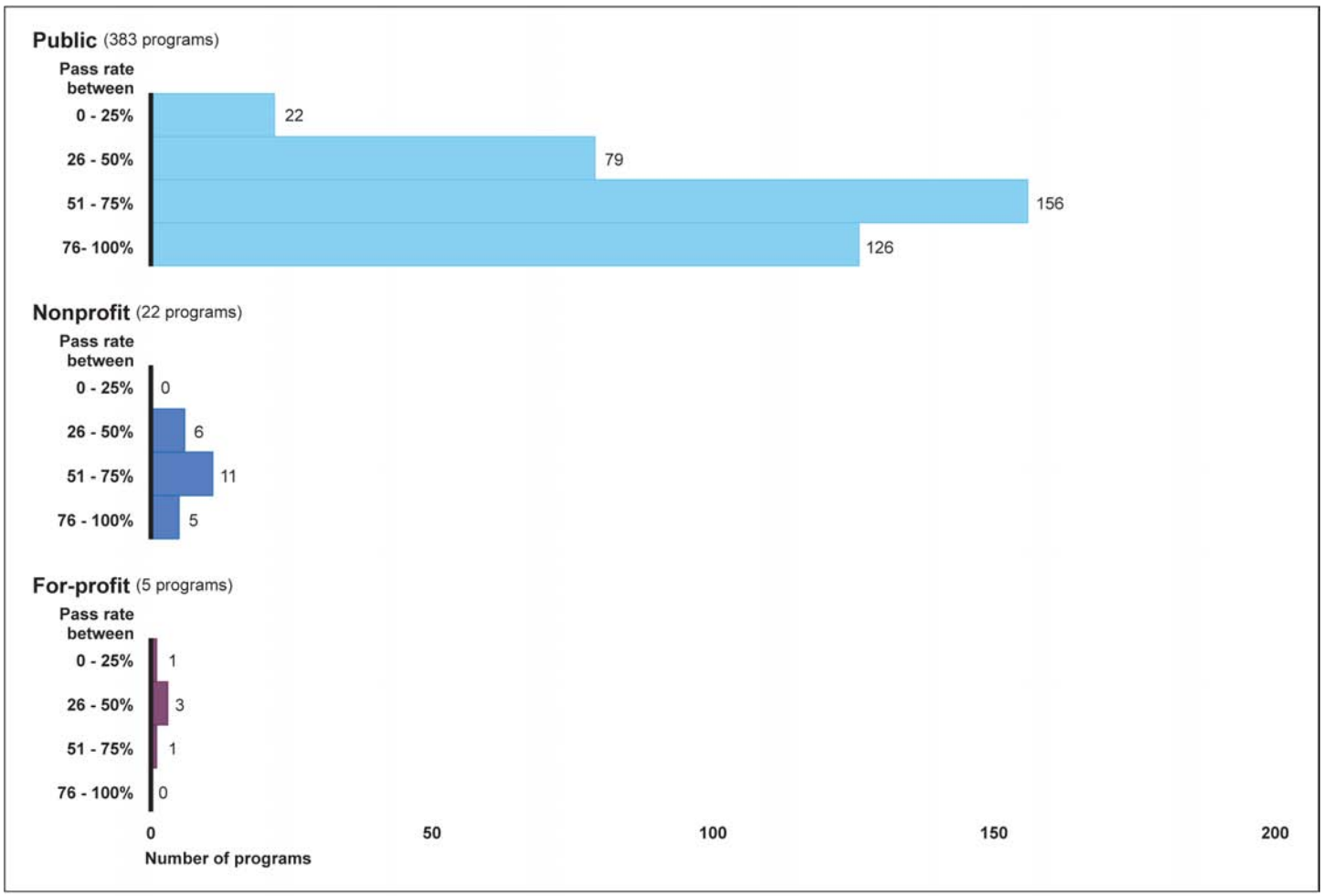
Note: To calculate the student pass rate, the total number of first-time test takers passing the exam was divided by the total number of first-time test takers for each sector for each year and overall. The mean program pass rate represents the average pass rate of all programs in each sector and was calculated by summing the individual program pass rates and dividing by the total number of programs for each sector, for each year and overall.

[a]Indicates pass rate is statistically different from for-profit sector pass rates.

[b]Indicates pass rate is statistically different from nonprofit sector pass rate.

[c]Indicates pass rate is statistically different from public sector pass rate.

Figure 4: Paramedic: Number of Programs by Pass Rate Range, 2008-2010



Source: GAO analysis of National Registry of Emergency Medical Technicians data.

Table 14: Surgical Technologist: Number of Programs and Test Takers, by Sector

	2010	
Sector	**Programs**	**Test takers**
For-profit	8	225
Nonprofit	1	13
Public	20	393

Source: GAO analysis of National Board of Surgical Technology and Surgical Assisting data for Indiana and South Carolina.

Note: One of the two states included in our analysis changed its regulations in 2009, so we present data from 2010 only.

Table 15: Surgical Technologist: Student Pass Rate and Mean Program Pass Rates, by Sector

	2010	
Sector	**Student pass rate**	**Mean program pass rate**
For-profit	29.3%[c]	29.3%[c]
Nonprofit	n/r	n/r
Public	72[a]	72[a]

Source: GAO analysis of National Board of Surgical Technology and Surgical Assisting data for Indiana and South Carolina.

Notes: One of the two states included in our analysis changed its regulations in 2009, so we present data from 2010 only.

To calculate the student pass rate, the total number of first-time test takers passing the exam was divided by the total number of first-time test takers for each sector for each year and overall. The mean program pass rate represents the average pass rate of all programs in each sector and was calculated by summing the individual program pass rates and dividing by the total number of programs for each sector, for each year and overall.

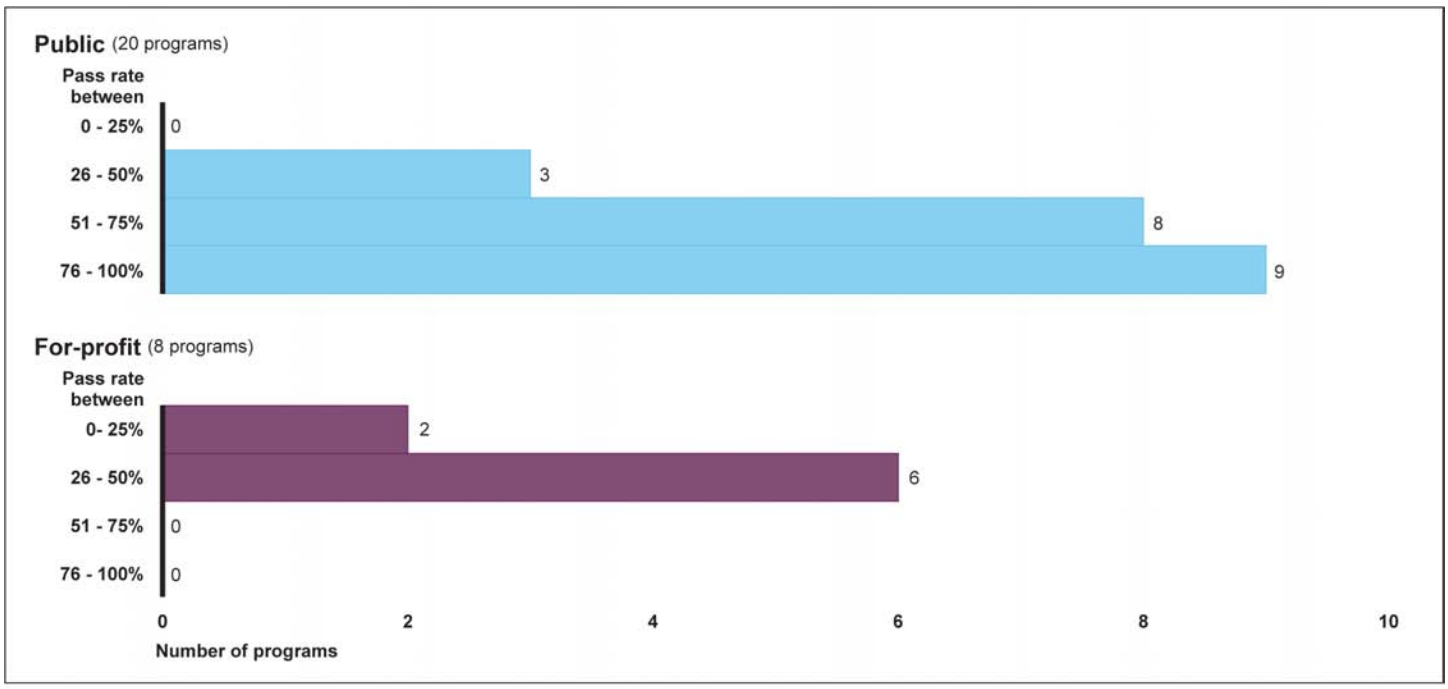
We do not report specific pass rates for nonprofit surgical technician programs because there were fewer than five such programs in our sample. However, the pass rates for students from the nonprofit sector was statistically significantly higher that that of students in the for-profit and publics sectors.

N/R indicates that we are not reporting pass rates because there were less than five programs.

[a]Indicates pass rate is statistically different from for-profit sector pass rates.

[c]Indicates pass rate is statistically different from public sector pass rate.

Figure 5: Surgical Technologists: Number of Programs by Pass Rate Range, 2010



Source: GAO analysis of National Board of Surgical Technology and Surgical Assisting data from Indiana and South Carolina.

Table 16: Massage Therapist: Number of Programs and Test Takers, by Sector

			2008		2009		2010		2008-2010	
State	Exam	Sector	Programs	Test takers	Programs	Test takers	Programs	Test takers	Programs	Test takers
Florida	Combined NCETM/ NCETMB	For-profit	78	2,580	79	2,423	64	974	90	5,977
		Public	23	376	21	336	16	158	23	870
	NCETM	For-profit	20	24	22	59	22	147	43	230
		Public	1	1	2	2	4	11	7	14
	NCETMB	For-profit	77	2,556	79	2,364	59	827	90	5,747
		Public	23	375	21	334	16	147	23	856
	MBLEx	For-profit	11	18	48	434	57	2,423	65	2,875
		Public	1	1	7	35	14	177	15	213
North Carolina	Combined NCETM/ NCETMB	For-profit	6	363	6	307	5	72	8	742
		Public	13	122	8	46	7	25	15	193
	NCETM	For-profit	5	17	3	9	2	3	6	29

State	Exam	Sector	2008 Programs	2008 Test takers	2009 Programs	2009 Test takers	2010 Programs	2010 Test takers	2008-2010 Programs	2008-2010 Test takers
		Public	8	31	4	12	4	6	10	49
	NCETMB	For-Profit	6	346	6	298	5	69	8	713
		Public	12	91	7	34	5	19	14	144
	MBLEx	For-profit	2	2	5	428	7	550	7	980
		Public	3	14	11	84	12	99	12	197
New York		For-profit	10	746	10	784	10	670	10	2,200
		Nonprofit	2	190	2	168	2	257	2	615
		Public	6	101	6	94	6	79	6	274
Ohio		For-profit	21	357	23	704	21	660	23	1,721
		Nonprofit	3	20	4	68	3	51	4	139
		Public	9	62	10	133	9	147	12	342

Source: GAO analysis of data provided by the Federation of State Massage Therapy Boards, the National Certification Board for Therapeutic Massage and Bodywork, the New York State Board for Massage Therapy, and the State Medical Board of Ohio.

Note: Ohio offers its massage therapy licensing exam in June and December. We were unable to obtain data from the June 2008 exam. Data presented from Ohio includes the second half of 2008 and all of 2009 and 2010.

Table 17: Massage Therapist: Student Pass Rate and Mean Program Pass Rates, by Sector

State	Exam	Sector	2008 Student pass rate	2008 Mean program pass rate	2009 Student pass rate	2009 Mean program pass rate	2010 Student pass rate	2010 Mean program pass rate	2008-2010 Student pass rate	2008-2010 Mean program pass rate
Florida	Combined NCETM/ NCETMB	For-profit	56%[c]	51.1%[c]	48.7%[c]	41.5%[c]	59.4%[c]	45.2%[c]	53.6%[c]	44.7%[c]
		Public	72.1[a]	73.6[a]	61[a]	56.9[a]	79.7[a]	83.4[a]	69.2[a]	68.3[a]
	NCETM	For-profit	70.8	74.2	49.2	20.2	55.8	44.6	55.7	42.9
		Public	n/r	n/r	n/r	n/r	n/r	n/r	57.1	51
	NCETMB	For-profit	55.8[c]	49.8[c]	48.7[c]	42.1[c]	60.1[c]	46.1[c]	53.5[c]	45.4[c]
		Public	72[a]	73.5[a]	61.4[a]	57.1[a]	81[a]	86.4[a]	69.4[a]	68.5[a]
	MBLEx	For-profit	94.4	97	71.4	71.1	63[c]	62.4[c]	64.5[c]	65.3
		Public	n/r	n/r	82.9	79	72.9[a]	76.5[a]	74.6[a]	73.7
North Carolina	Combined NCETM/ NCETMB	For-profit	71.3	76.1	57[c]	59.7[c]	80.6	65.6	66.3[c]	76
		Public	77.9	81.9	80.4[a]	82.6[a]	68	72.1	77.2[a]	78
	NCETM	For-profit	52.9	59.1	n/r	n/r	n/r	n/r	51.7[c]	58.3
		Public	77.4	83.3	n/r	n/r	n/r	n/r	81.6[a]	89.2
	NCETMB	For-profit	72.3	78	57[c]	61	82.6	67.5	66.9	77.2

State	Exam	Sector	2008 Student pass rate	2008 Mean program pass rate	2009 Student pass rate	2009 Mean program pass rate	2010 Student pass rate	2010 Mean program pass rate	2008-2010 Student pass rate	2008-2010 Mean program pass rate
		Public	78	74	79.4[a]	77	57.9	61	75.7	69
	MBLEx	For-profit	n/r	n/r	80.8[c]	86.9	78.9[c]	78.8	79.8[c]	80.8[c]
		Public	n/r	n/r	96.4[a]	98.3	88.9[a]	89.7	91.9[a]	92.9[a]
New York		For-profit	87	85.1	84.3	79.9	79.6	75.9[c]	83.8	81.1
		Nonprofit	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r
		Public	88.1	88	80.9	78.4	88.6	88.8[a]	85.8	84.6
Ohio		For-profit	45.9[c]	47.8	59.4[c]	64.1	67[c]	66.6[c]	59.5[c]	58.9[c]
		Nonprofit	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r
		Public	72.6[a]	63	81.2[a]	79.7	85.7[a]	84[a]	81.6[a]	74.7[a]

Source: GAO analysis of data provided by the Federation of State Massage Therapy Boards, the National Certification Board for Therapeutic Massage and Bodywork, the New York State Board for Massage Therapy, and the State Medical Board of Ohio.

Notes: Ohio offers its massage therapy licensing exam in June and December. We were unable to obtain data from the June 2008 exam. Data presented from Ohio includes the second half of 2008 and all of 2009 and 2010.

To calculate the student pass rate, the total number of first-time test takers passing the exam was divided by the total number of first-time test takers for each sector for each year and overall. The mean program pass rate represents the average pass rate of all programs in each sector and was calculated by summing the individual program pass rates and dividing by the total number of programs for each sector, for each year and overall.

We do not report specific pass rates for nonprofit massage therapist programs because there were fewer than five such programs in Ohio, Florida, and New York, and none in North Carolina over the 2008-2010 time period. However, the pass rates for students from the nonprofit sector in Florida and New York were not statistically different than that of students from the for-profit sector or public sector. The pass rate for nonprofit students in Ohio was statistically significantly higher than that of students from the for-profit sector.

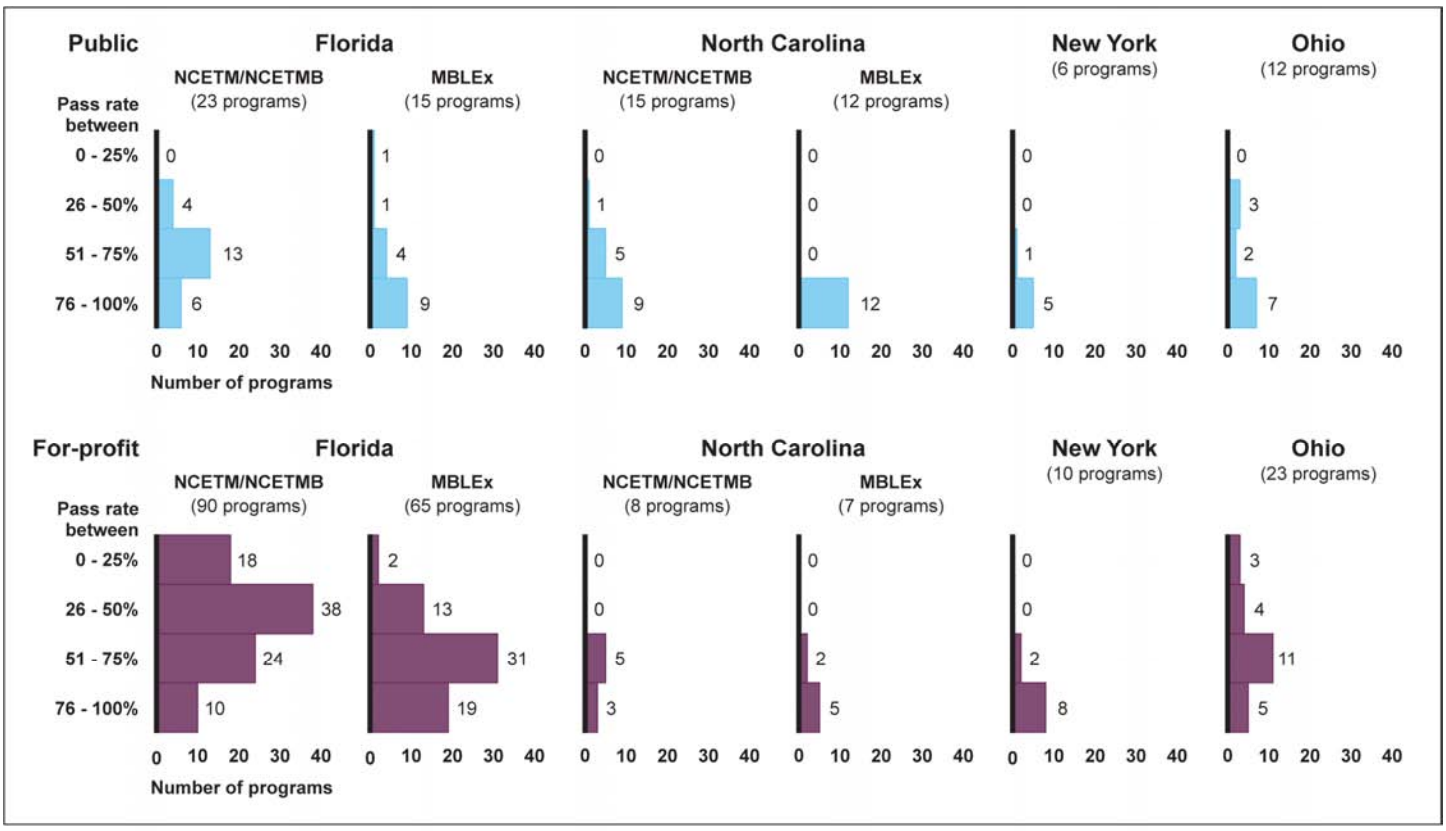
N/R indicates that we are not reporting pass rates because there were less than five programs.

[a]Indicates pass rate is statistically different from for-profit sector pass rates.

[b]Indicates pass rate is statistically different from nonprofit sector pass rate.

[c]Indicates pass rate is statistically different from public sector pass rate.

Figure 6: Massage Therapist: Number of Programs by Pass Rate Range, 2008-2010



Source: GAO analysis of data provided by the Federation of State Massage Therapy Boards, the National Certification Board for Therapeutic Massage and Bodywork, the New York State Board for Massage Therapy, and the State Medical Board of Ohio.

Table 18: Law: Number of Programs and Test Takers, by Sector

		2008		2009		2010		2008-2010	
State	Sector	Programs	Test takers	Programs	Test takers	Programs	Test takers	Programs	Test takers
California	For-profit	3	239	3	193	3	180	3	612
	Nonprofit	22	3,334	22	3,282	22	3,331	22	9,947
	Public	4	1,050	4	1,109	4	1,083	4	3,242
Florida	For-profit	1	253	1	289	1	290	1	832
	Nonprofit	5	1,080	5	1,067	6	1,280	6	3,427
	Public	4	861	4	835	4	813	4	2,509
Georgia	For-profit	1	87	1	104	1	135	1	326
	Nonprofit	2	228	2	226	2	232	2	686
	Public	2	335	2	340	2	363	2	1,038

Source: GAO analysis of publicly available data from the State Bar of California, the Florida Board of Bar Examiners, and the Supreme Court of Georgia Office of Bar Admissions.

Table 19: Law: Student Pass Rate and Mean Program Pass Rates, by Sector

		2008		2009		2010		2008-2010	
State	Sector	Student pass rate	Mean program pass rate	Student pass rate	Mean program pass rate	Student pass rate	Mean program pass rate	Student pass rate	Mean program pass rate
California	For-profit	49.4%[b, c]	41.4%[c]	41.5%[b, c]	39.3%[b, c]	42.8%[b, c]	34.2%[c]	44.9%[b, c]	40.3%[c]
	Nonprofit	76.7[a, c]	62.7[c]	69.3[a, c]	56.2[a, c]	67.6[a, c]	58.2[c]	71.2[a, c]	59.5[c]
	Public	84.1[a, b]	84[a, b]	87[a, b]	87.6[a, b]	83.3[a, b]	83.7[a, b]	84.8[a, b]	85.1[a, b]
Florida	For-profit	83	83	79.6	79.6	74.8	74.8[b, c]	79	79
	Nonprofit	83.5	82.6	79.5	78.1	78.6	75.9[a]	80.4	77.2
	Public	85.4	82.4	79	76	81.9	78.5[a]	82.1	78.7
Georgia	For-profit	83.9[b, c]	83.9[b, c]	82.7[c]	82.7[b, c]	59.3[b, c]	59.3[b, c]	73.3[b, c]	73.3[b, c]
	Nonprofit	96.1[a]	96.1[a]	88.5	88.7[a, c]	92.7[a]	92.7[a]	92.4[a]	92.5[a]
	Public	96.4[a]	96.5[a]	93.2[a]	93.2[a, b]	94.8[a]	94.6[a]	94.8[a]	94.8[a]

Source: GAO analysis of publicly available data from the State Bar of California, the Florida Board of Bar Examiners, and the Supreme Court of Georgia Office of Bar Admissions.

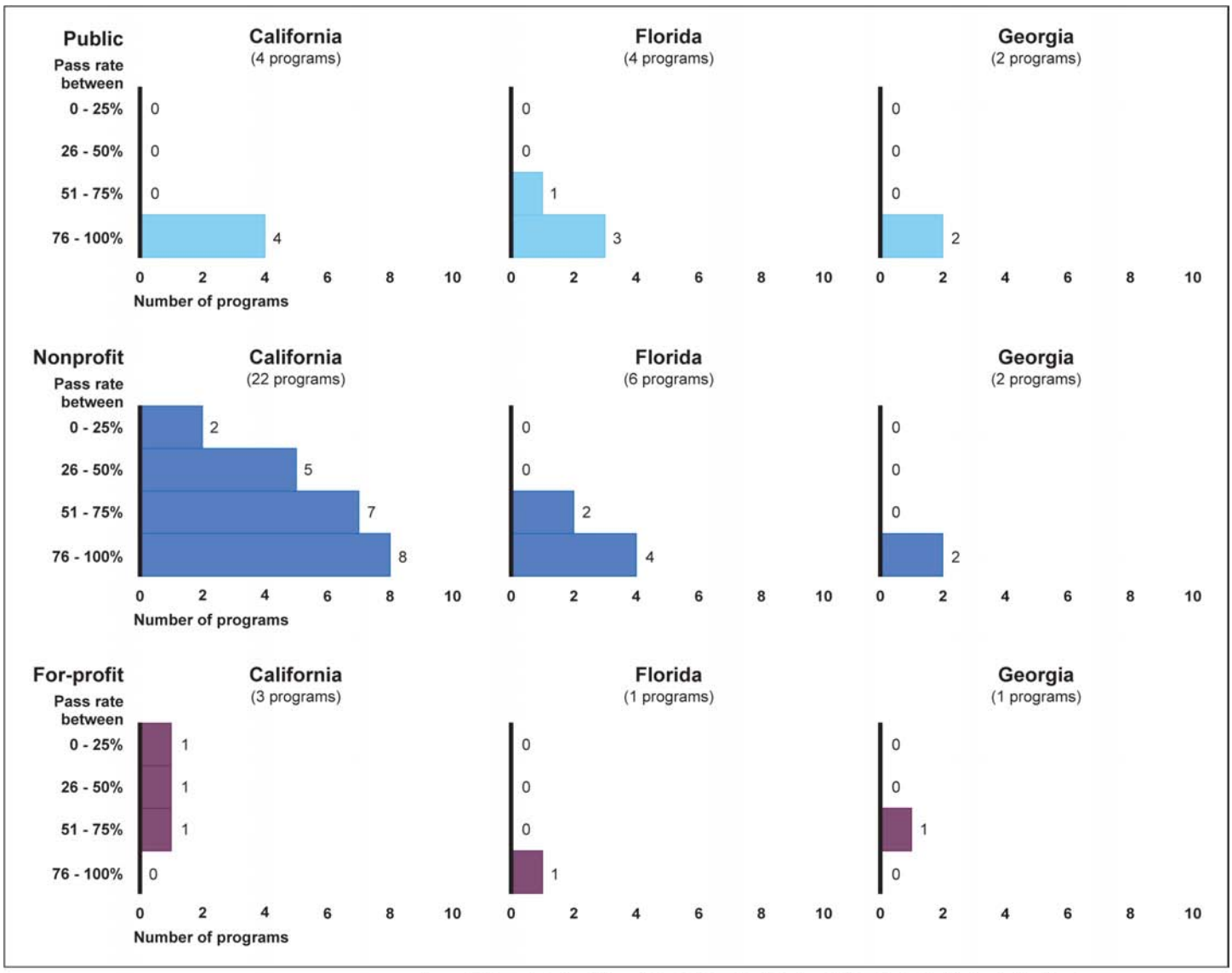
Note: To calculate the student pass rate, the total number of first-time test takers passing the exam was divided by the total number of first-time test takers for each sector for each year and overall. The mean program pass rate represents the average pass rate of all programs in each sector and was calculated by summing the individual program pass rates and dividing by the total number of programs for each sector, for each year and overall.

[a]Indicates pass rate is statistically different from for-profit sector pass rates.

[b]Indicates pass rate is statistically different from nonprofit sector pass rate.

[c]Indicates pass rate is statistically different from public sector pass rate.

Figure 7: Law: Number of Programs by Pass Rate Range, 2008-2010



Source: GAO analysis of publicly available data from the State Bar of California, the Florida Board of Bar Examiners, and the Supreme Court of Georgia Office of Bar Admissions.

Table 20: Cosmetology: Number of Programs and Test Takers, by Sector

			2008		2009		2010		2008-2010	
State	Exam	Sector	Programs	Test takers	Programs	Test takers	Programs	Test takers	Programs	Test takers
California	Barber	For-profit	20	409	22	362	20	440	26	1,211
		Public	3	29	3	44	3	43	3	116
	Cosmetology	For-profit	159	7,980	161	7,357	162	8,069	172	23,406
		Public	28	1,784	28	1,527	28	1,617	29	4,928
	Manicurist	For-profit	81	3,160	70	2,230	78	1,716	98	7,106
		Public	10	103	8	60	8	74	13	237
	Esthetician	For-profit	92	3,453	92	2,347	98	2,434	105	8,234
		Public	15	702	17	570	14	533	17	1,805
	Overall	For-profit	171	15,002	174	12,296	175	12,659	182	39,957
		Public	28	2,618	28	2,201	28	2,267	29	7,086
Florida	Cosmetology	For-profit	2008 data unavailable	2008 data unavailable	65	1,216	77	3,327	79	4,543
		Nonprofit	2008 data unavailable	2008 data unavailable	1	3	1	10	1	13
		Public	2008 data unavailable	2008 data unavailable	42	432	42	1,182	44	1,614
North Carolina	Apprentice	For-profit	13	46	16	52	14	48	20	146
		Public	34	255	40	317	39	245	45	817
	Cosmetology	For-profit	29	569	32	714	36	963	40	2,246
		Public	42	349	51	495	51	698	53	1,542
	Manicurist	For-profit	11	69	10	45	11	55	23	169
		Public	28	107	29	93	20	80	40	280
	Cosmetology teacher	For-profit	14	20	14	21	20	30	26	71
		Public	17	24	19	31	17	26	31	81
	Esthetician	For-profit	11	138	12	150	8	151	16	439
		Public	22	180	25	187	25	160	32	527
	Esthetician teacher	For-profit	1	1	3	3	0	0	3	4
		Public	4	4	1	1	3	3	7	8
	Manicurist teacher	For-profit	1	1	1	1	0	0	2	2
		Public	0	0	1	1	0	0	1	1
	Overall	For-profit	35	844	35	986	41	1,247	46	3,077
		Public	50	919	55	1,125	55	1,212	59	3,256
Texas	Facialist	For-profit	41	711	41	742	37	594	47	2,047
		Nonprofit	1	3	1	2	1	2	1	7

State	Exam	Sector	2008 Programs	2008 Test takers	2009 Programs	2009 Test takers	2010 Programs	2010 Test takers	2008-2010 Programs	2008-2010 Test takers
		Public	12	117	12	90	14	81	14	288
	Facial instructor	For-profit	5	5	3	5	5	6	8	16
		Public	1	1	2	2	1	1	4	4
	Hair weaving	For-profit	3	8	3	7	2	2	4	17
		Public	1	2	1	6	1	1	1	9
	Operator instructor	For-profit	54	132	57	158	46	95	82	385
		Nonprofit	1	2	1	1	1	3	1	6
		Public	21	46	26	84	24	58	34	188
	Manicurist	For-profit	57	576	58	595	50	446	79	1,617
		Nonprofit	1	13	1	15	1	9	1	37
		Public	10	38	12	51	12	58	18	147
	Manicure instructor	For-profit	2	2	0	0	0	0	2	2
		Public	1	1	1	1	0	0	2	2
	Cosmetology operator	For-profit	112	3,369	125	3,485	132	3,641	143	10,495
		Nonprofit	1	24	1	30	1	31	1	85
		Public	46	1,046	48	1,229	48	1,022	50	3,297
	Shampooing and conditioning	For-profit	5	6	4	8	5	5	10	19
	Overall	For-profit	121	4,809	128	5,000	133	4,789	148	14,598
		Nonprofit	1	42	1	48	1	45	1	135
		Public	47	1,251	48	1,463	48	1,221	50	3,935

Source: GAO analysis of data provided by the California State Board of Barbering and Cosmetology, the Florida Department of Business and Professional Regulation, Board of Cosmetology, the North Carolina Board of Cosmetic Art Examiners, and the Texas Department of Licensing and Regulation.

Table 21: Cosmetology: Student Pass Rate and Mean Program Pass Rate, by Sector

State	Exam	Sector	2008 Student pass rate	2008 Mean program pass rate	2009 Student pass rate	2009 Mean program pass rate	2010 Student pass rate	2010 Mean program pass rate	2008-2010 Student pass rate	2008-2010 Mean program pass rate
California	Barber	For-profit	82.2%	84.2%	80.9%	87%	82%	79.9%	81.8%	87.1%
		Public	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r
	Cosmetology	For-profit	71.3[c]	69[c]	74.5[c]	72.7[c]	69.2[c]	68[c]	71.6[c]	69[c]
		Public	80.3[a]	78.4[a]	83.7[a]	80.6[a]	79.8[a]	74.8[a]	81.2[a]	78[a]
	Manicurist	For-profit	79.5[c]	81	82.2	79	78.6	79.2	80.1[c]	79.9

State	Exam	Sector	2008 Student pass rate	2008 Mean program pass rate	2009 Student pass rate	2009 Mean program pass rate	2010 Student pass rate	2010 Mean program pass rate	2008-2010 Student pass rate	2008-2010 Mean program pass rate
		Public	93.2[a]	89.1	86.7	79	81.1	70.2	87.8[a]	86.1
	Esthetician	For-profit	85.2	85.7	91.3	91.6	89.2	87.3[c]	88.1[c]	87.4
		Public	87.2	82.1	94	87.6	90.8	92.2[a]	90.4[a]	89.4
	Overall	For-profit	76.6[c]	73.1[c]	79.3[c]	77[c]	74.8[c]	73.8	76.8[c]	73.9[c]
		Public	82.7[a]	79.7[a]	86.4[a]	82.2[a]	82.8[a]	78	83.9[a]	80.1[a]
Florida	Cosmetology	For-profit	2008 data unavailable	2008 data unavailable	36.8[c]	43[c]	69.4[c]	69.4[c]	60.7[c]	62
		Nonprofit	2008 data unavailable	2008 data unavailable	n/r	n/r	n/r	n/r	n/r	n/r
		Public	2008 data unavailable	2008 data unavailable	53.7[a]	55.8[a]	78.9[a]	76[a]	72.2[a]	69.3
North Carolina	Apprentice	For-profit	93.5	89.3	78.8	85.6	83.3	74.9	84.9	85.2
		Public	88.2	86	91.2	87.6	84.1	82.7	88.1	83.6
	Cosmetology	For-profit	75[c]	71[c]	74.2[c]	65.9	68.4[c]	65.1	72[c]	64.8[c]
		Public	88.3[a]	86.1[a]	83.6[a]	77.2	76.9[a]	73.1	81.6[a]	75.1[a]
	Manicurist	For-profit	71	70.4	73.3	60.6	65.5	55.1	69.8	62.7
		Public	78.5	72.5	79.6	75.4	81.3	80.5	79.6	71.1
	Cosmetology teacher	For-profit	35	28.6	57.1	61.9	50	45.4	47.9	50
		Public	66.7	55.9	61.3	46.1	61.5	60.8	63	54.9
	Esthetician	For-profit	89.9	87.7	86	59.7	80.1	85.6[c]	85.2	73.6
		Public	88.3	91	88.8	79	73.8	70.1[a]	84.1	83.3
	Esthetician teacher	For-profit	n/r	n/r	n/r	n/r	n/a	n/a	n/r	n/r
		Public	n/r	n/r	n/r	n/r	n/r	n/r	75	78.6
	Manicurist teacher	For-profit	n/r	n/r	n/r	n/r	n/a	n/a	n/r	n/r
		Public	n/a	n/a	n/r	n/r	n/a	n/a	n/r	n/r
	Overall	For-profit	77.1[c]	72.5[c]	76[c]	70.5[c]	69.8[c]	64.3	73.8[c]	67.4[c]
		Public	86.6[a]	84.1[a]	85.6[a]	80.5[a]	77.9[a]	73.1	83[a]	77[a]
Texas	Facialist	For-profit	88	81[c]	90.2	86.3	72.6	69	84.3	80[c]
		Nonprofit	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r
		Public	88.9	90.8[a]	90	89.1	75.3	75.8	85.4	87.5[a]
	Facial instructor	For-profit	80	80	n/r	n/r	50	40	56.3	35
		Public	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r
	Hair weaving	For-profit	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r
		Public	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r
	Operator instructor	For-profit	48.5	49.1	51.3	47.3	51.6	45.2	50.4	42.9
		Nonprofit	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r

State	Exam	Sector	2008 Student pass rate	2008 Mean program pass rate	2009 Student pass rate	2009 Mean program pass rate	2010 Student pass rate	2010 Mean program pass rate	2008-2010 Student pass rate	2008-2010 Mean program pass rate
		Public	58.7	57	58.3	56.9	62.1	50.1	59.6	54.5
	Manicurist	For-profit	73.6	63.8[c]	77	66.9	63.7[c]	58.4[c]	72.1	63.7[c]
		Nonprofit	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r
		Public	78.9	88.1[a]	80.4	82.2	81[a]	82.9[a]	80.3	82[a]
	Manicure instructor	For-profit	n/r	n/r	n/a	n/a	n/a	n/a	n/r	n/r
		Public	n/r	n/r	n/r	n/r	n/a	n/a	n/r	n/r
	Cosmetology operator	For-profit	75.3[c]	65.8[c]	76.6[c]	71.6[c]	57.1	51.2[c]	69.4[c]	61.8[c]
		Nonprofit	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r
		Public	82.7[a]	84.3[a]	83.2[a]	85.9[a]	57.7	59.1[a]	75.1[a]	77[a]
	Shampooing and conditioning	For-profit	33.3	40	n/r	n/r	40	40	31.6	36.4
	Overall	For-profit	76.1[c]	68.2[c]	77.7[c]	70[c]	59.5	51.6[c]	71.2[c]	63.5[c]
		Nonprofit	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r
		Public	82.3[a]	84[a]	82.2[a]	84.9[a]	60.3	59.6[a]	75.4[a]	76.4[a]

Source: GAO analysis of data provided by the California State Board of Barbering and Cosmetology, the Florida Department of Business and Professional Regulation, Board of Cosmetology, the North Carolina Board of Cosmetic Art Examiners, and the Texas Department of Licensing and Regulation.

Notes: Two of the four states had no nonprofit cosmetology programs, while the other two each had fewer than 5 nonprofit programs, so we did not report results for the nonprofit sector. However, the pass rate for students from nonprofit programs was not statistically different than that for students from for-profit or public programs, probably due to the small sample size.

To calculate the student pass rate, the total number of first-time test takers passing the exam was divided by the total number of first-time test takers for each sector for each year and overall. The mean program pass rate represents the average pass rate of all programs in each sector and was calculated by summing the individual program pass rates and dividing by the total number of programs for each sector, for each year and overall.

N/R indicates that we are not reporting pass rates because there were less than five programs.

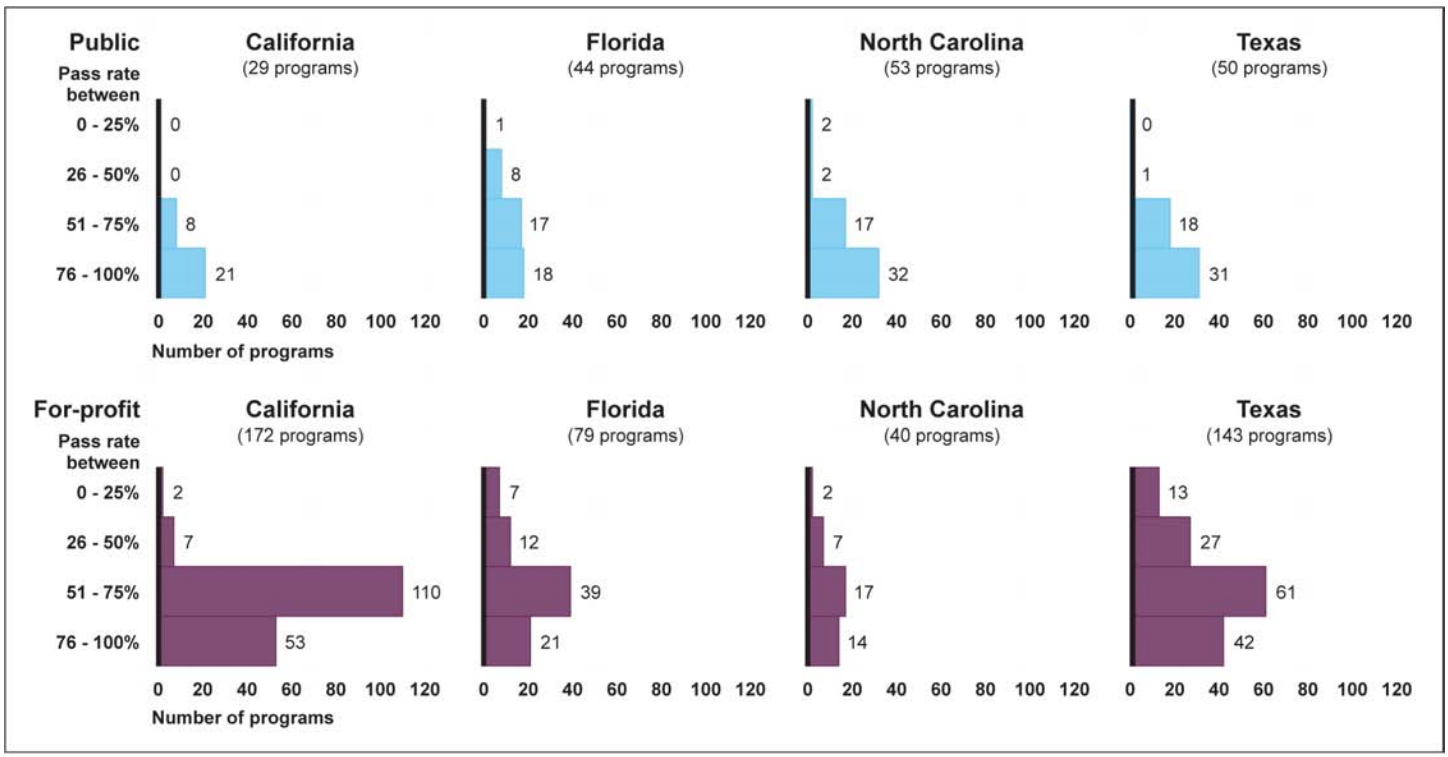
N/A indicates not applicable because there were no programs or test takers.

[a]Indicates pass rate is statistically different from for-profit sector pass rates.

[b]Indicates pass rate is statistically different from nonprofit sector pass rate.

[c]Indicates pass rate is statistically different from public sector pass rate.

Figure 8: Cosmetology: Number of Programs by Pass Rate Range, 2008-2010



Source: GAO analysis of data provided by the California State Board of Barbering and Cosmetology, the Florida Department of Business and Professional Regulation, Board of Cosmetology, the North Carolina Board of Cosmetic Art Examiners, and the Texas Department of Licensing and Regulation.

Table 22: Funeral Directors: Number of Programs and Test Takers, by Sector (All Programs)

		2008		2009		2010		2008-2010	
Sector	Exam section	Programs	Test takers	Programs	Test takers	Programs	Test takers	Programs	Test takers
For-profit	Arts	4	148	4	128	4	127	4	403
	Sciences	4	145	4	129	4	128	4	402
Nonprofit	Arts	9	490	9	463	9	538	9	1,491
	Sciences	9	481	9	463	9	535	9	1,479
Public	Arts	43	761	43	760	43	756	43	2,277
	Sciences	43	769	43	751	43	760	43	2,280

Source: GAO analysis of data from the International Conference of Funeral Service Examining Boards, Inc. on the National Board Examination for funeral directors/embalmers.

Table 23: Funeral Directors: Number of Programs and Test Takers, by Sector (Associate's Programs Only)

		2008		2009		2010		2008-2010	
Sector	Exam Section	Programs	Test takers	Programs	Test takers	Programs	Test takers	Programs	Test takers
For-profit	Arts	4	148	4	128	4	127	4	403
	Sciences	4	145	4	129	4	128	4	402
Nonprofit	Arts	6	346	6	341	6	391	6	1,078
	Sciences	6	342	6	339	6	388	6	1,069
Public	Arts	39	686	39	648	39	683	39	2,017
	Sciences	39	693	39	641	39	683	39	2,017

Source: GAO analysis of data from the International Conference of Funeral Service Examining Boards, Inc. on the National Board Examination for funeral directors/embalmers.

Table 24: Funeral Directors: Student Pass Rate and Mean Program Pass Rates, by Sector (All Programs)

		2008		2009		2010		2008-2010	
Sector	Exam section	Student pass rate	Mean program pass rate	Student pass rate	Mean program pass rate	Student pass rate	Mean program pass rate	Student pass rate	Mean program pass rate
For-profit	Arts	77%	76.3%	82%	78.4%	85%	83.2%	81.1%	79%
	Sciences	82.8	81.5	86.8	83.5	85.2[c]	84.5	84.8[c]	83
Nonprofit	Arts	80.8	83	79	77.7	78.8	76.4	79.5	78.8
	Sciences	80.2	81.4	83.4	83.5	78.9	77.3	80.7	80.7
Public	Arts	84.1	83.7	74.5	71.4	77.1	76.7	78.6	76.8
	Sciences	81.3	81.2	78.8	76.2	73.7[a]	75.7	77.9[a]	77.7

Source: GAO analysis of data from the International Conference of Funeral Service Examining Boards, Inc. on the National Board Examination for funeral directors/embalmers.

Note: To calculate the student pass rate, the total number of first-time test takers passing the exam was divided by the total number of first-time test takers for each sector for each year and overall. The mean program pass rate represents the average pass rate of all programs in each sector and was calculated by summing the individual program pass rates and dividing by the total number of programs for each sector, for each year and overall.

[a]Indicates pass rate is statistically different from for-profit sector pass rates.

[b]Indicates pass rate is statistically different from nonprofit sector pass rate.

[c]Indicates pass rate is statistically different from public sector pass rate.

Table 25: Funeral Directors: Student Pass Rate and Mean Program Pass Rates, by Sector (Associate's Programs Only)

		2008		2009		2010		2008-2010	
Sector	Exam section	Student pass rate	Mean program pass rate	Student pass rate	Mean program pass rate	Student pass rate	Mean program pass rate	Student pass rate	Mean program pass rate
For-profit	Arts	77%	76.3%	82%	78.4%	85%	83.2%	81.1%	79%
	Sciences	82.8	81.5	86.8[c]	83.5	85.2[c]	84.5	84.8[c]	83
Nonprofit	Arts	81.8	83.3	81.2[c]	79.7	82.4	82.2	81.8[c]	81.7
	Sciences	83	84.3	84.7[c]	83.9	84.5[c]	83.7	84.1[c]	84.1
Public	Arts	82.8	82.5	72.5[b]	70.1	77.5	76.9	77.7[b]	76
	Sciences	80.4	80.5	76.6[a, b]	74.6	74.4[a, b]	76.4	77.1[a, b]	77.1

Source: GAO analysis of data from the International Conference of Funeral Service Examining Boards, Inc. on the National Board Examination for funeral directors/embalmers.

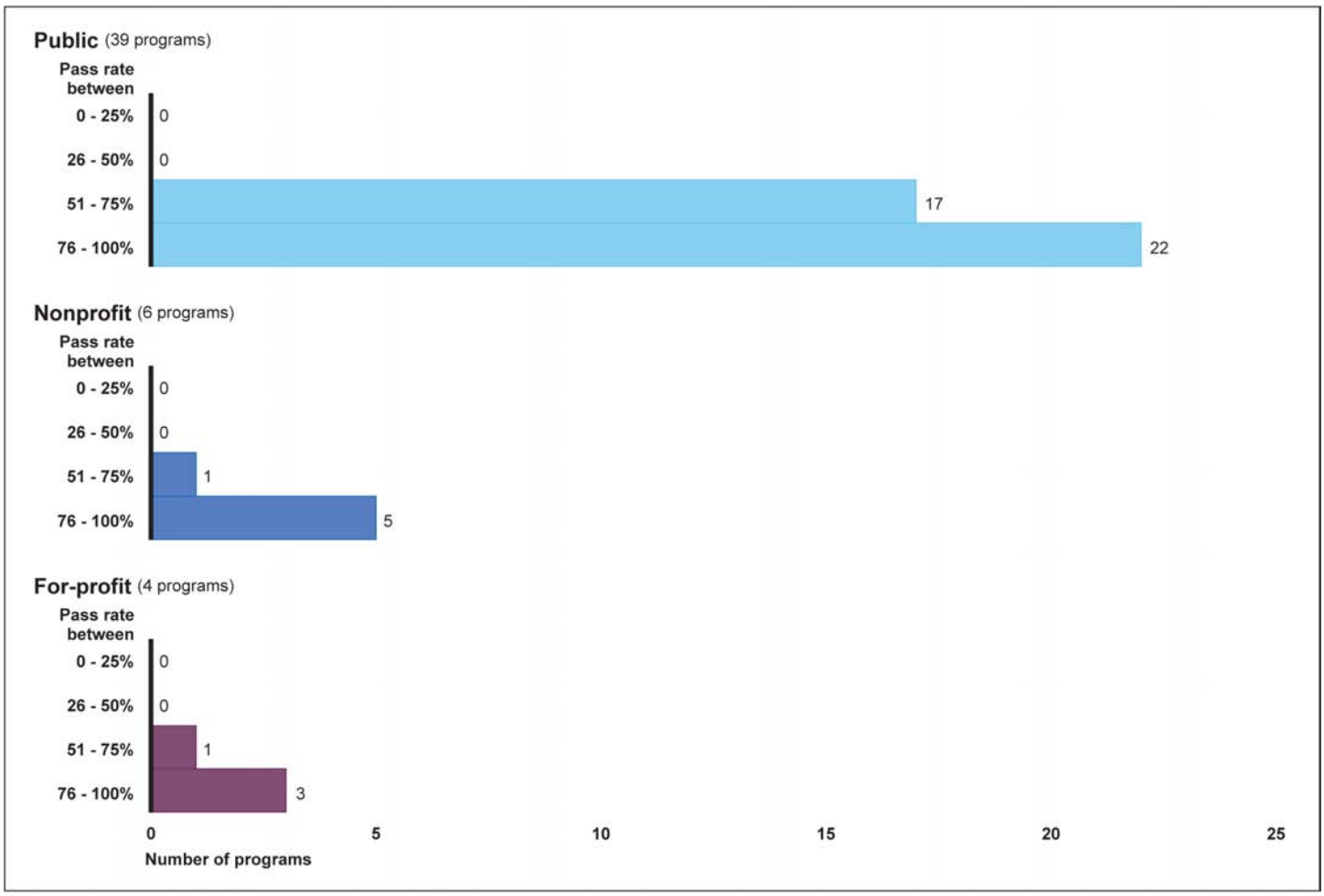
Note: To calculate the student pass rate, the total number of first-time test takers passing the exam was divided by the total number of first-time test takers for each sector for each year and overall. The mean program pass rate represents the average pass rate of all programs in each sector and was calculated by summing the individual program pass rates and dividing by the total number of programs for each sector, for each year and overall.

[a]Indicates pass rate is statistically different from for-profit sector pass rates.

[b]Indicates pass rate is statistically different from nonprofit sector pass rate.

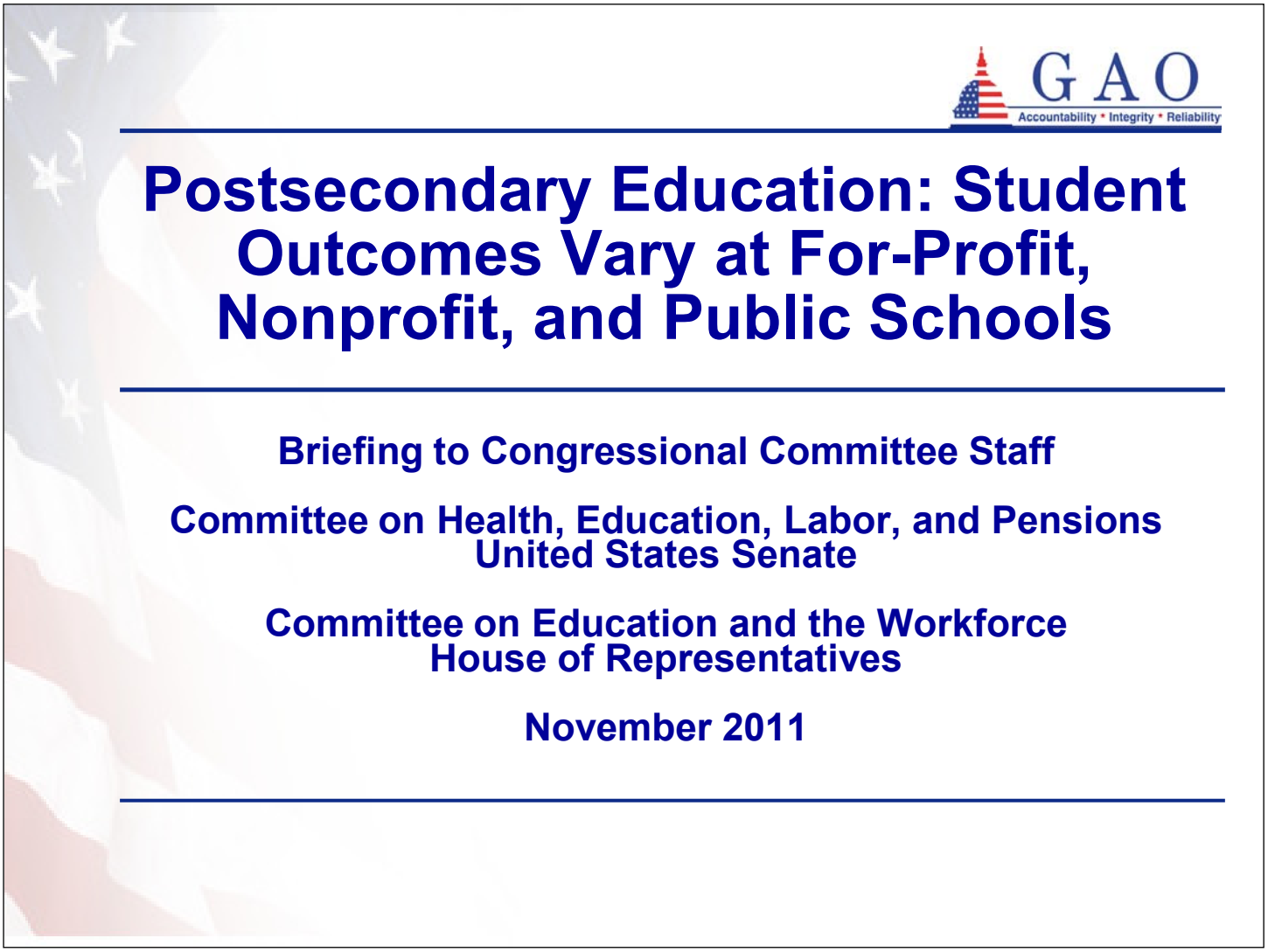
[c]Indicates pass rate is statistically different from public sector pass rate.

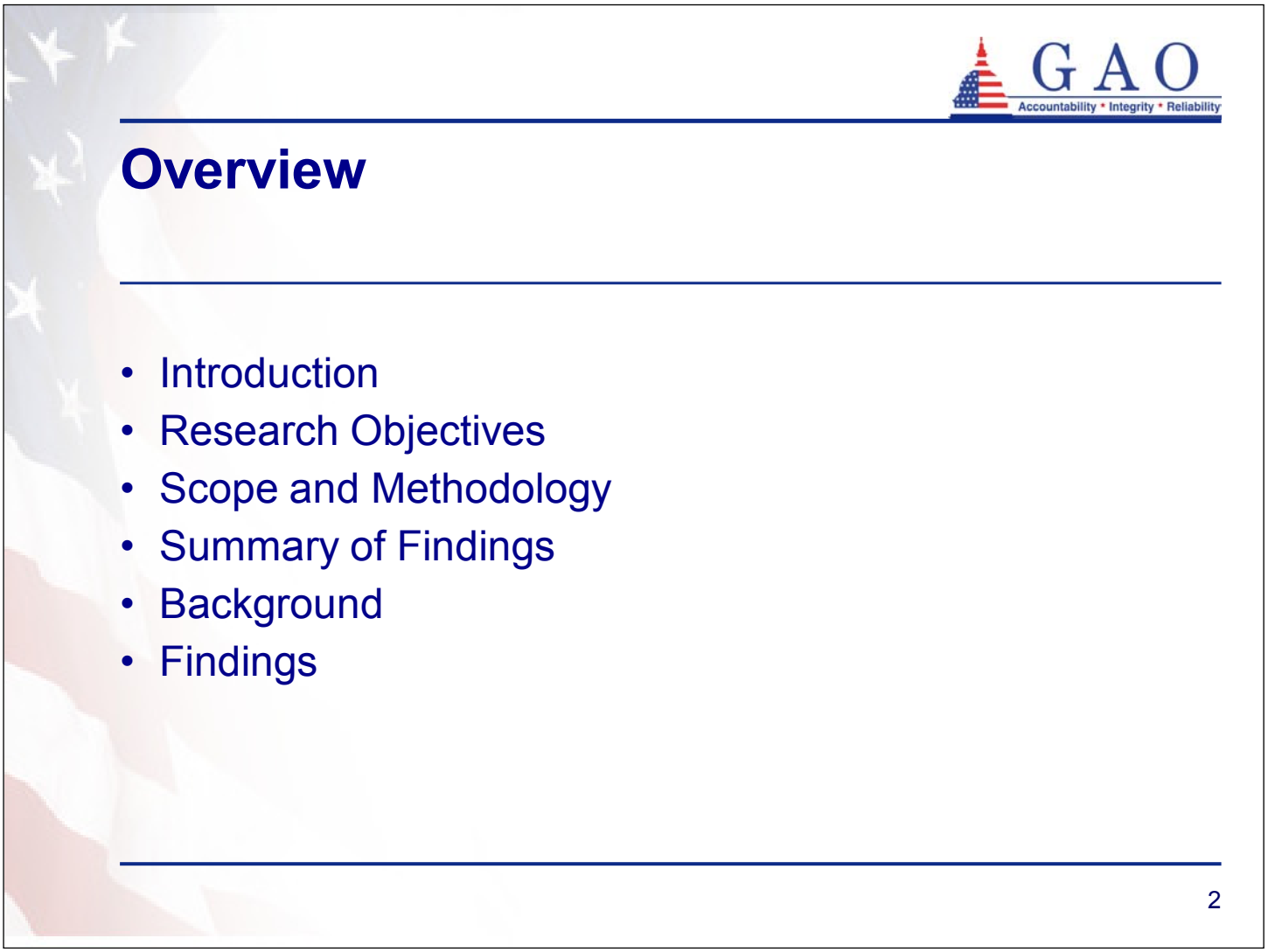
Figure 9: Number of Programs by Pass Rate Range on Sciences Section, 2008-2010 (Associate's Programs Only)



Source: GAO analysis of data from the International Conference of Funeral Service Examining Boards, Inc. on the National Board Examination for funeral directors/embalmers.

Appendix IV: Briefing Slides

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Overview
• Introduction
• Research Objectives
• Scope and Methodology
• Summary of Findings
• Background
• Findings
2

Introduction

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Spending on Federal Student Aid Has Increased, but Information on Educational Quality is Limited

- The federal government's investment in higher education has increased significantly—from $49 billion in 2001-2002 to $132 billion in 2009-2010.*
- Measuring the quality of educational programs (i.e., how much knowledge or skill students gain) is difficult and information is limited.
  - The federal government relies on accrediting agencies to ensure educational quality, but accreditors collect varying types of data on student outcomes.
- Using multiple outcomes that indirectly measure educational quality (e.g., graduation rates, pass rates on licensing exams, employment outcomes, and student loan default rates) can shed some light on the quality of education provided by schools.**

*Funding data is for federal student aid programs authorized by Title IV of the Higher Education Act of 1965, as amended, which include loan and grant programs for students. Data beginning in the 2001-2002 school year are more reliable than data from previous years.
**When we use the term "graduation rate," we include students who completed a higher education program and received a degree, diploma, certificate, or other formal award.

3

Introduction

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Student Characteristics Are Important When Comparing Educational Outcomes

- Available data indicate that for-profit schools have a higher proportion of low-income, minority, and nontraditional students who face challenges that can affect their educational outcomes.
  - Students with these characteristics tend to have less positive educational outcomes than other students for a number of reasons.*
- Comparing student outcomes at for-profit, nonprofit, and public schools is challenging because outcomes can be associated with differences in student characteristics, as well as school type.
  - For example, student characteristics—such as being low income or minority, being older, working full time, or having dependent children—are associated with lower graduation rates.
- Accounting for differences in student characteristics as much as possible allows for more meaningful comparisons between types of schools and a better understanding of the school's role in contributing to student outcomes.

*Research shows that being a racial or ethnic minority may be associated with less positive educational outcomes in part because certain minorities are more likely to have risk factors (such as being low income or having a parent who did not finish high school) that can affect educational achievement.

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Introduction

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Accounting for Differences in Student Characteristics Can Be Done in Several Ways

- Statistical models: Statistical modeling methods, such as multiple regression, can be used to compare students in different sectors while statistically controlling for differences in multiple student characteristics that could impact student outcomes. This is among the most rigorous methods to account for differences.
  - A multiple regression model can be used to compare graduation rates at for-profit, nonprofit, and public schools, while controlling for differences in age, race, and income.
- Comparing students within subgroups: Analyzing outcomes for specific subgroups can allow for reasonable comparisons, while accounting for a single characteristic.
  - One can compare graduation rates at for-profit, nonprofit, and public schools for a subgroup of students, such as Black students or low-income students.*
- Focusing on graduates: Comparing outcomes for graduates of specific programs can also partially mitigate the impact of differences in student characteristics, given that some characteristics, such as race, age, and income, are associated with lower graduation rates.
  - Comparing outcomes (such as licensing exam pass rates) for graduates of a program (rather than for all students who enrolled in a program) can mitigate the impact of race, age, and income on the results.

*This can be done even if the subgroup represents a larger share of students at schools in one sector compared to other sectors.

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Research Objectives

1. What does research show about graduation rates, employment outcomes, student loan debts, and default rates for students at for-profit schools compared to those at nonprofit and public schools, taking differences in student characteristics into account?

2. How do pass rates on licensing exams for selected occupations compare among graduates of for-profit, nonprofit, and public schools?

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Scope and Methodology: Objective 1

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Scope and Methodology: Review of Literature on Student Outcomes

- We conducted a literature review on comparative student outcomes at for-profit, nonprofit, and public schools.
  - Outcomes included: graduation rates and post-educational outcomes, such as earnings and employment, student loan indebtedness, and default rates.
  - Our review covered a wide range of studies, including published peer reviewed articles, unpublished studies by academic researchers, and reports from higher education associations and the Department of Education (Education). We included studies that compared outcomes for students at for-profit schools and either nonprofit and/or public schools and that accounted for at least one student characteristic (e.g., race or income).*
  - We found that research comparing student outcomes across sectors and accounting for differences in student characteristics is relatively limited.
- We rigorously reviewed the data and methodologies used and only reported on studies that were methodologically sound.

*In addition, we included studies that used data from 2000 or later.

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Scope and Methodology: Objective 1

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Scope and Methodology: Review of Literature on Student Outcomes (continued)

- **Beginning Postsecondary Students Longitudinal Study (BPS): For most outcomes, we relied primarily on studies using Education's BPS data, which tracks a nationally representative sample of first-time students for 6 years.**
  - BPS graduation rates are more representative of first-time students because they include part-time students and students who earn a credential at any school within 6 years.*
  - BPS also collects self-reported information on earnings and employment status, as well as extensive data on student characteristics.**
  - Since the most recent cohort started during the 2003-2004 school year, BPS does not include outcomes for students who enrolled more recently.
- **Integrated Postsecondary Education Data System (IPEDS): Some of the studies in our review used Education's IPEDS data to examine graduation rates. IPEDS collects detailed annual data on enrollment, graduation, and school characteristics from all schools that participate in federal student aid programs.**
  - IPEDS graduation rates include only first-time, full-time students, and include only students who complete their degree at the first institution they attended. As a result, we gave greater weight in our report to studies using BPS data to calculate graduation rates. However, studies using IPEDS data had similar results.***
- **National Postsecondary Student Aid Survey (NPSAS): Studies included in our review that analyzed debt levels used Education's NPSAS data, which collects detailed information on financial aid and student debt for a large, nationally representative sample of students.**
- **National Student Loan Data System (NSLDS): To calculate default rates, one study used NSLDS data, which is Education's central database for federal student aid loans and grants.**

*BPS includes students who transfer to other schools.
**While self-reported data may contain errors, it is unlikely that such errors would differ systematically between sectors and influence sector comparisons.
***IPEDS graduation rates exclude students who attend part time or transfer to other schools.

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Scope and Methodology: Objective 2

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Scope and Methodology: Analysis of Licensing Exam Pass Rates

- We analyzed pass rates for selected licensing exams to compare the performance of first-time test takers from for-profit, nonprofit, and public schools.*
  - These exams were for: Registered Nurses (RN), Licensed Practical Nurses (LPN), Radiographers, Emergency Medical Technicians (EMT), Paramedics, Surgical Technologists, Massage Therapists, Lawyers, Cosmetologists, and Funeral Directors.
- We selected occupations in which passing an exam was generally required and significant work experience was not required prior to taking the exam.**
- We used Education data to select occupations that (1) had programs in multiple sectors, including the for-profit sector, and (2) had sufficiently large numbers of students graduating from these programs.
  - During the 2008-2009 school year, RN programs were among the 10 largest associate's degree programs at schools in each sector, while massage therapist programs were among the 10 largest associate's degree programs at nonprofit and for-profit schools.
  - Radiographer programs were among the 10 largest certificate programs at schools in each sector, while cosmetologist programs were among the 10 largest certificate programs at public and for-profit schools.***

*We focused on programs at schools that participate in federal student aid programs authorized by Title IV of the Higher Education Act of 1965, as amended.
**For some occupations, students must graduate from specially accredited programs in order to take required licensing exams.
***For programs that were at least 2, but less than 4 years in length.

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Scope and Methodology: Objective 2

Scope and Methodology: Analysis of Licensing Exam Pass Rates (continued)

- When possible, we used exams offered by national organizations to maximize the number of states in our analyses. We excluded from our analyses states that did not require the exam in an occupation.
- For occupations that use state or multiple exams, we used Education data to select 4 states in which the numbers of graduates and distribution of graduates across sectors provided the best chance to detect any statistically significant differences that might exist between sectors.*
- We did not directly control for the characteristics of test takers because this information was generally not available. However, focusing on graduates is one way to partially control for differences in student characteristics.
- We determined that these exam data were sufficiently reliable for our purposes.
- We conducted our review between November 2010 and November 2011 in accordance with generally accepted government auditing standards.

Types of Licensing Exams and Number of States Included in GAO's Review

Occupations	National exam	State specific/ multiple national exams	Number of states included in GAO's review
RN and LPN	✓		50
Paramedic	✓		38
Radiographer	✓		34
EMT	✓		32
Funeral Director	✓		32
Surgical Technologist**	✓		2
Cosmetologist		✓	4
Massage Therapist		✓	4
Lawyer		✓	3

Source: GAO analysis of data from testing entities.

*There was no one generally accepted national exam in these occupations; some states use different and/or multiple national exams and others use state specific exams. We selected four states for the bar exam for lawyers, but were only able to obtain data for first-time test takers from three of these states. Pass rates for individual states are not generalizable to other states.
**No states license surgical technologists, but two states generally require them to pass a particular national exam to practice in the state.

10

Summary of Findings

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Student Outcomes Vary by Type of Institution Attended

- Limited research suggests that, after accounting for differences in at least one student characteristic:
  - students from for-profit schools had higher graduation rates for certificate programs, similar graduation rates for associate's degree programs, and lower graduation rates for bachelor's degree programs than students from nonprofit and public schools.
  - students from for-profit schools had similar earnings, but higher unemployment than students from nonprofit and public schools
  - bachelor's degree recipients from for-profit schools had higher total student loan debt than bachelor's degree recipients from nonprofit and public schools.
  - for-profit schools had higher default rates than 4-year public schools, but results were mixed when comparing for-profit schools with other types of schools.
- Between 2008 and 2010, graduates of for-profit schools generally had lower pass rates on licensing exams than graduates of nonprofit and public schools.

11

Background: School Sectors

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Different Types of Schools Can Receive Federal Student Aid Funds

- Different types of schools can receive federal student aid funds.
- **Sector**
  - Public schools: operated and funded by state or local governments.
  - Nonprofit schools: owned and operated by nonprofit organizations whose net earnings do not benefit any shareholder or individual.
  - For-profit schools: privately owned and net earnings can benefit a shareholder or individual.
- **Institution Level**
  - 4 year and above: Colleges and universities that typically offer bachelor's and higher level degrees, but can also offer associate's degrees.
  - 2 year: Community colleges and other schools that typically offer associate's degrees, but can also offer certificate programs.
  - Less than 2 year: Vocational and technical schools that offer certificate programs, but typically not degrees.

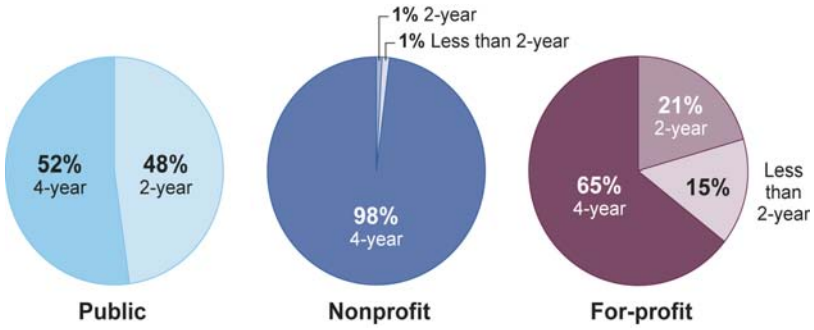
12

Background: Program Types

Most Students Attend 4-Year Schools

- In each sector—for-profit, nonprofit, and public—more than half of students attend 4-year schools.*

Enrollment by Institution Level and School Sector, 2009-2010



Source: GAO analysis of IPEDS data.

- Since the 1999-2000 school year, about half of public school enrollment and almost all nonprofit school enrollment has been at 4-year schools.
- In contrast, enrollment at 4-year schools represented 37 percent of total for-profit enrollment in the 1999-2000 school year, but grew to 65 percent in the 2009-2010 school year.

*A 4-year school can also offer 2-year and less than 2-year programs. For example according to the most recent NPSAS data—for the 2007-2008 school year—about 50 percent of students at 4-year for-profit schools were not enrolled in 4-year bachelor's degree programs. By contrast, over 90 percent of students at nonprofit and public 4-year schools were enrolled in 4-year bachelor's degree programs.

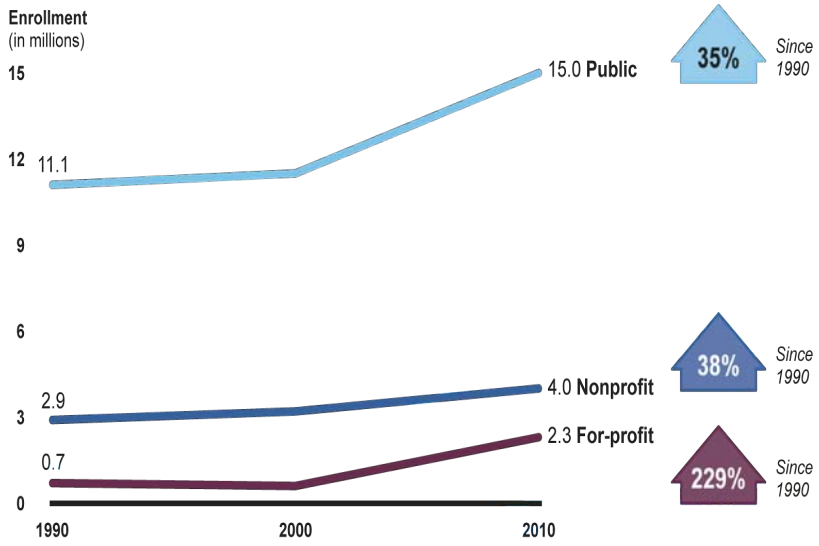
13

Background: Enrollment

Enrollment in All Sectors Grew in Last 20 Years, but Grew Faster at For-Profit Schools

- Student enrollment at all schools has increased since 1990, with most of the growth occurring since 2000.
- Although most students attend public and nonprofit schools, enrollment at for-profit schools has grown faster in recent years.
- Some of the largest for-profit schools are reporting decreased enrollment in 2011 due to a variety of factors, including economic conditions and changing admissions practices.

Increase in Enrollment by School Sector, from 1990 to 2010



Source: GAO analysis of IPEDS data.

Background: Publicly-Traded Schools

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Enrollment at For-Profit Schools Has Shifted from Small, Local Schools to Large, Publicly-Traded Companies

- Prior to the 1990s, for-profit schools were traditionally owned by local, sole proprietors.
- In the 1990s, large, publicly-traded companies began enrolling significant numbers of students. Enrollment in the for-profit sector is increasingly concentrated in these schools.*
    - Schools owned by 10 publicly-traded for-profit companies enrolled 50 percent of all for-profit school students in the fall of 2009.

*A publicly-traded company is authorized to offer its securities (e.g., stocks and bonds) for sale to the general public, typically through a stock exchange.

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Background: Student Characteristics

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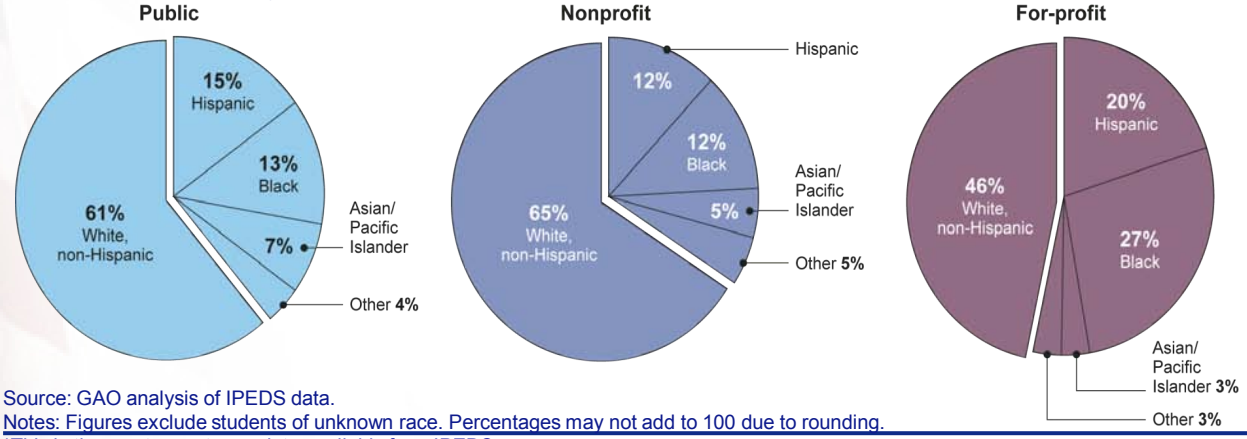
For-Profit Schools Enroll a Higher Proportion of Minority Students

- A higher percentage of students at for-profit schools are Black or Hispanic compared to other schools.
- Public and nonprofit schools enroll a slightly higher percentage of Asian/Pacific Islander students than for-profit schools.

Race of Students by School Sector, Fall 2009*



Source: GAO analysis of IPEDS data.
Notes: Figures exclude students of unknown race. Percentages may not add to 100 due to rounding.
*This is the most recent race data available from IPEDS.

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Background: Student Characteristics

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For-Profit Schools Enroll a Higher Proportion of Students Who Are Older, Female, and Have Lower Incomes

- For-profit schools enroll a higher percentage of students who are age 25 and older, female, and financially independent than nonprofit and public schools.
- Students at for-profit schools tend to have lower family incomes and a smaller proportion of their parents have attained an associate's degree or higher.

Percentage of Students with Selected Characteristics, by Sector, 2008*

School sector	Age 25 or older	Female	Financially independent
For-profit	57%	69%	76%
Nonprofit	28%	57%	34%
Public	35%	55%	46%

Source: GAO analysis of 2008 NPSAS dataset.

Family Income and Parental Education of Students, by Sector, 2008*

School sector	Annual median family income	Percent of students with parents who had an associate's degree or higher
For-profit	$22,932	34%
Nonprofit	$61,827	63%
Public	$44,878	52%

Source: GAO analysis of 2008 NPSAS dataset.

*This is the most recent NPSAS data available.

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Background: Funding

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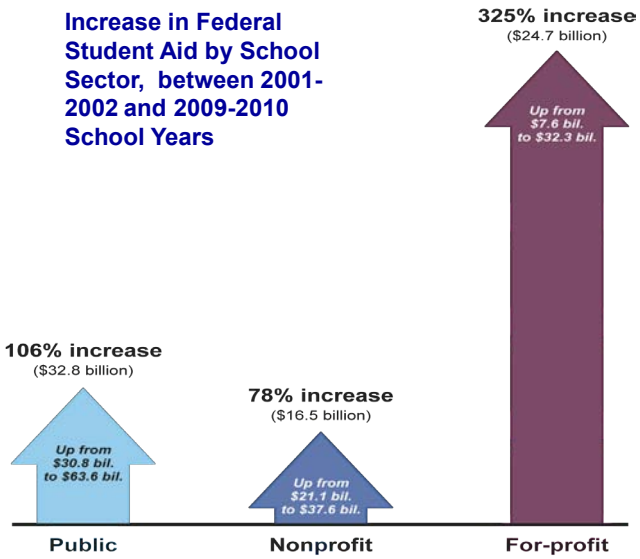
Federal Student Aid at All Schools Has Increased in Recent Years, but Has Grown Faster at For-Profit Schools

- Between the 2001-2002 and 2009-2010 school years, federal student aid increased 325 percent at for-profit schools, from almost $8 billion to $32 billion.
- During the same time frame, federal student aid has increased much less at other schools.

Increase in Federal Student Aid by School Sector, between 2001-2002 and 2009-2010 School Years



Source: GAO analysis of Education's annual federal student aid funding data. Dollar amounts have been adjusted for inflation using the Gross Domestic Product Price Index and represent fiscal year 2011 dollars.

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Finding 1: Student Outcomes—Overview

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Limited Research Suggests that For-Profit School Students Generally Have Different Outcomes than Nonprofit or Public School Students

- Relatively few studies have compared student outcomes across sectors while accounting for differences in student characteristics.*
- Several studies that account for student characteristics, such as gender or race, suggest that students at for-profit schools had:
  - higher graduation rates for certificate programs than students at nonprofit and public schools;
  - similar graduation rates for associate's degree programs as students at nonprofit and public schools;
  - lower graduation rates for bachelor's degree programs than students at nonprofit and public schools;**
  - comparable earnings when employed, but higher rates of unemployment; and
  - a higher proportion of bachelor's degree recipients who took out loans, and generally had higher total debt.
- Two studies that account for student characteristics show that for-profit schools have higher default rates than 4-year public schools, but results are mixed when comparing for-profit schools to 4-year nonprofit schools and 2-year nonprofit and public schools.

*"Student characteristics" refers to both demographic characteristics, such as gender, race, or income, and to other characteristics and risk factors, such as not enrolling in school immediately after high school. "Students" refers to individuals who started their education at a particular type of school, whether they were still enrolled, earned a degree, or dropped out.
**Some students in certificate or associates' degree programs may have transferred to higher degree levels before completing these programs.

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Finding 1: Graduation Rates—Certificate Programs

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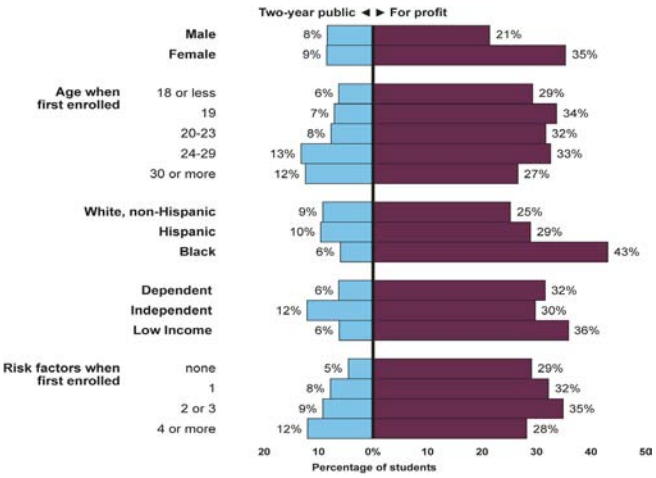
Two Studies Show that For-Profit School Students Had Higher Graduation Rates for Certificate Programs

- One study shows that, when comparing students with a selected characteristic (e.g., male, Hispanic, or low income), those who started at for-profit schools generally had higher graduation rates from certificate programs than students who started at 2-year public schools (see figure).*
  - About 36 percent of low income students who started at for-profit schools completed a certificate, compared to 6 percent at 2-year public schools.
- Ongoing research from another study that controls for multiple student characteristics at a time (e.g., race, gender, age, income, marital status, delayed enrollment, and parental education) suggests that students who started in certificate programs at for-profit schools during the 2003-2004 school year were about 9 percentage points more likely to obtain a certificate within 6 years than students at other schools.**

Percentage of Students Who Completed Certificate Programs within Six Years, for Students Starting at For-Profit and Two-Year Public Schools during the 2003-2004 School Year*



Source: GAO analysis of data from Skomsvold, P., Radford, A.W., and Berkner, L. (2011). Study used BPS data. Graduation rates are associated with the first school attended and are for the highest degree earned within 6 years.

*Analysis does not differentiate between 2- and 4-year for-profit schools or control for the program students start in or if they transfer to higher degree programs. Dependency status refers to whether students are financially dependent on their parents. Risk factors include: no high school diploma, delayed or part-time enrollment, financial independence, having dependents, being a single parent, and working full time.

**Deming, D., Goldin, C., and Katz, L. (2011).Study used BPS data and controlled for the type of program in which the student started.

20

Finding 1: Graduation Rates—Associate's Degrees

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Two Studies Show that For-Profit School Students Had Similar Graduation Rates for Associate's Degree Programs

- One study shows that students who started at for-profit schools during the 2003-2004 school year generally had comparable graduation rates for associate's degree programs as students who started at 2-year public schools.*
  - This study analyzed graduation rates for separate groups of students based on a single characteristic, such as gender, age, or parents' education level.
- Ongoing research from another study controlling for multiple student characteristics at a time (e.g., race, gender, age, income, marital status, delayed enrollment, and parental education) has not found statistically significant differences in graduation rates between students who started in associate's degree programs at for-profit schools and similar students who started in associate's degree programs at other 2-year schools during the 2003-2004 school year.**

*Skomsvold, P., Radford, A.W., and Berkner, L. (2011). Study used BPS data and does not differentiate between 2- and 4-year for-profit schools or control for the program in which a student started or for transfer to higher degree programs. Graduation rates based on highest degree earned.
**Deming, D., Goldin, C., and Katz, L. (2011). Study used BPS data and controlled for type of program in which a student started. Enrollment in 2-year and 4-year for-profit schools since 2004 has increased much faster than at other schools; findings from both studies do not reflect outcomes of more recent students.

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Finding 1: Graduation Rates—Bachelor's Degrees

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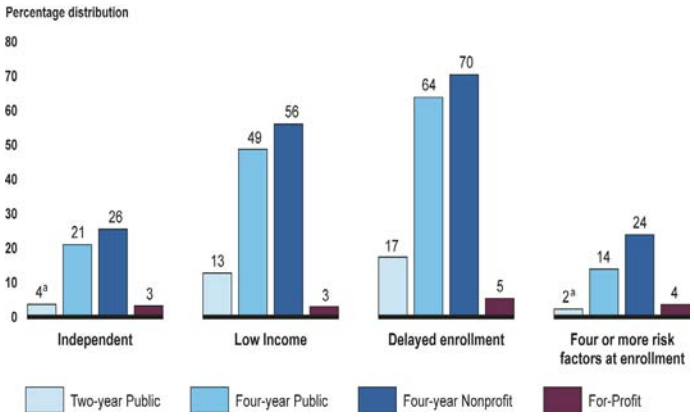
Several Studies Show that Students at For-Profit Schools Were Less Likely to Graduate from a Bachelor's Degree Program

- One study shows that when comparing students with a selected characteristic (e.g., low income or delayed enrollment), those who started at for-profit schools generally had lower graduation rates from bachelor's degree programs than students who started at other schools (see figure).*
- Ongoing research from another study controlling for multiple characteristics at a time (e.g., race, gender, age, income, marital status, and delayed enrollment) suggests that students who started a bachelor's degree program during the 2003-2004 school year at a for-profit school were 12 to 19 percentage points less likely to earn such a degree within 6 years than similar students at other schools.**
- Several annual Education studies using IPEDS data also show that for-profit school students generally had lower graduation rates for bachelor's degree programs.***

Percentage of Students Who Completed a Bachelor's Degree Program within Six Years, for Students Starting During the 2003-2004 School Year*



Source: GAO analysis of BPS data from Skomsvold, P., Radford, A.W., and Berkner, L. (2011). Graduation rates are associated with the first school attended and are for the highest degree earned within 6 years. We included 2-year public schools in our analysis because some students who started at these schools transferred to a 4-year school to complete a bachelor's degree.
[a]Percentage was not significantly different than at for-profit schools.

*Study did not control for the program students start in or distinguish between 2- and 4-year for-profit schools.
**Deming, D., Goldin, C., and Katz, L. (2011). Study used BPS data and controlled for type of program in which a student started (e.g., bachelor's degree). Study looked at 6-year graduation rates.
***Knapp, L.G., Kelly-Reid, J.E. and Ginder. (2011)—most recent annual report. Study did not include part-time or transfer students.

22

Finding 1: Post-educational Outcomes—Employment

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One Ongoing Study Suggests that Students from For-Profit Schools Have Similar Earnings but Higher Rates of Unemployment

- Ongoing research controlling for multiple characteristics at a time, such as race, gender, age, income, marital status, delayed enrollment, parental education, and type of program in which a student started, suggests that:

Earnings were similar

- Students who started at for-profit schools during the 2003-04 school year had similar annual earnings 6 years after first enrolling in school, compared to students who started at nonprofit and public schools.*

Rate of unemployment was higher

- Students who started at for-profit schools during the 2003-2004 school year and were no longer enrolled after 6 years were more likely to have been unemployed for 3 months or more since leaving school, compared to students who started at nonprofit and public schools.*

*Deming, D., Goldin, C., and Katz, L. (2011). Study used self-reported employment data from BPS. We refer to "students" rather than "graduates" in this section because individuals may have dropped out or still be enrolled. Authors included all students who were no longer enrolled after 6 years, but did not differentiate between students who completed a degree or certificate and those who dropped out. Earnings analysis was based on students who were employed 6 years after first enrolling in school and sector differences were not statistically significant.

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Finding 1: Post-educational Outcomes—Debt

GAO
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Studies Show that a Larger Proportion of Bachelor's Degree Recipients from For-Profit Schools Took Out Student Loans and These Borrowers Generally Incurred Higher Student Loan Debt

- Three studies show that a larger proportion of bachelor's degree recipients from for-profit schools took out student loans and that they tended to have higher student loan debt than recipients from other schools, when comparing groups of students with a selected characteristic (e.g., male, Hispanic, or low income) across sectors.*
  - One study shows that, among low-income 2007-2008 graduates, the percentage who had borrowed was higher for students from for-profit schools (99 percent) than for students from nonprofit and public schools (83 percent and 72 percent, respectively).**
  - Another study shows that, among 2007-2008 graduates, the percentage with loan debt of $30,500 or higher was greater at for-profit schools than at other schools. For example, among low-income students who were financially dependent on their parents, about 73 percent of white students from for-profit schools graduated with high debt, compared to 26 percent of white students from nonprofit schools.***
- However, in some cases the cross-sector differences in average amount borrowed were relatively small.
  - One study shows that the average amount borrowed by Black 2007-2008 graduates from for-profit schools was almost the same as the average amount borrowed by this group at nonprofit schools ($30,990 vs. $29,184).**

*Loan debt is cumulative and includes both federal and nonfederal student loans, but not consumer debt. Little is known about how the debt of borrowers from different sectors compares for students who earn certificates or associate's degrees or for students who do not graduate.
**Hinze-Pifer, R. and Fry, R. (2010). Study used NPSAS data. Authors noted that about a quarter of student loan debt was from non-federal loans.
***Baum, S. and Steele, P. (2010). Study used NPSAS data.

Finding 1: Post-educational Outcomes—Debt

GAO
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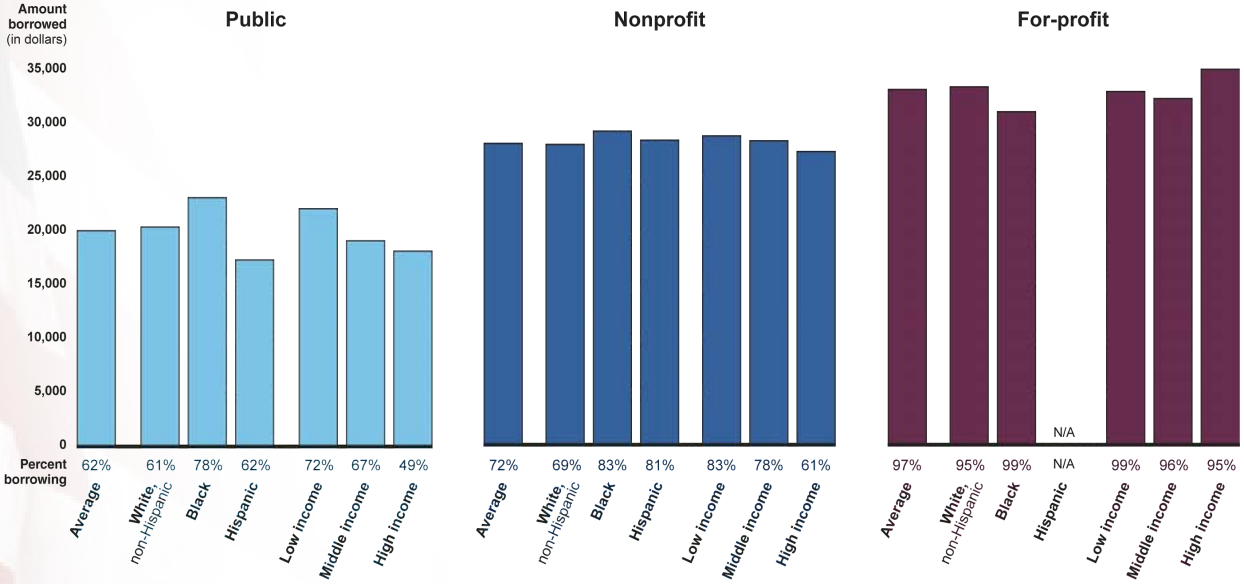
Bachelor's Degree Recipients from For-Profit Schools Had Higher Total Student Debt

Student Loan Debt Amounts for 2008 Bachelor's Degree Recipients Who Borrowed, By Type of School and Selected Student Characteristics



Source: GAO analysis of a study from the Pew Research Center using NPSAS data. Loan debt is cumulative, includes both federal and nonfederal student loans, and represents the total debt incurred by graduates.
Note: N/A indicates that the sample size was too small for meaningful analysis.

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Finding 1: Post-educational Outcomes—Default Rates

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Two Studies Show that For-Profit Schools Have Higher Default Rates than 4-Year Public Schools, but Results Are Mixed When Comparing For-Profit Schools with Other Types of Schools

- After controlling for multiple student characteristics at once, such as gender, race, receipt of financial aid, income, and degree type:
  - Ongoing research and another study show that a higher proportion of students from for-profit schools default on student loans, compared to 4-year public schools.
    - Ongoing research shows that, in the years 2005-2008, the proportion of students at for-profit schools who defaulted within 3 years of entering repayment was about 10.5 percentage points higher than the proportion from 4-year public schools.*
    - Another study shows that, for students who started school in 1996, the proportion of students at for-profit schools who defaulted within 6 years was about 6.7 percentage points higher than the rate at 4-year public schools.**
  - However, these two studies show mixed results when comparing for-profit schools to other types of schools.
    - The ongoing research study shows that for-profit schools had higher default rates than 4-year nonprofit schools and 2-year nonprofit and public schools; in the other study, however, the differences were not statistically significant between for-profit schools and these others types of schools.

*Deming, D., Goldin, C., and Katz, L. (2011). Study used default data from NSLDS and IPEDS enrollment data to control for student characteristics and type of program student started in. In 2012, Education will begin to use the 3-year default rate as its measure for school federal student aid eligibility.
**Guryan, J. and Charles River Associates. (2010). Study used BPS data. Authors did not differentiate between 2- and 4-year for-profit schools or the type of program in which students enrolled (e.g. certificate program). This finding is supported by additional data provided by the authors.

Finding 2: Licensing Exams—Overview

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For-Profit School Graduates Generally Had Lower Pass Rates than Graduates from Other Schools on Licensing Exams We Reviewed

- Experts noted that licensing exam pass rates are one reasonable measure of the quality of school programs.
- On 9 of the 10 licensing exams we reviewed, graduates of for-profit schools generally had lower pass rates over the 2008-2010 period.*
  - These nine exams were for: RNs, LPNs, Radiographers, EMTs, Paramedics, Surgical Technologists, Massage Therapists, Lawyers, and Cosmetologists.
- Data on the overall pass rates on the Funeral Director licensing exam were not available, but separate analyses of the two exam sections suggests that for-profit graduates had similar or better pass rates over the 2008-2010 period.**
- There are some limitations to using licensing exam pass rates as a measure of the quality of school programs.

*We use "licensing exam" to refer to exams required to work in an occupation, although some are technically certification exams. Pass rates are for first-time test takers and are statistically significant unless otherwise noted. In some cases, test takers may not have formally graduated, but have completed most program requirements. In a small number of cases, data are presented for a shorter time period.
**The funeral director exam consists of two sections—Arts and Sciences—which may be taken together or at different times.

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Finding 2: Licensing Exams

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Licensing Exams are One Measure of the Quality of School Programs

- Several experts and higher education association officials agreed that licensing exam pass rates are one reasonable measure of the quality of school programs.
- In the states included in our analyses, individuals must generally pass a licensing exam to practice in the occupations we reviewed.

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Finding 2: Licensing Exams

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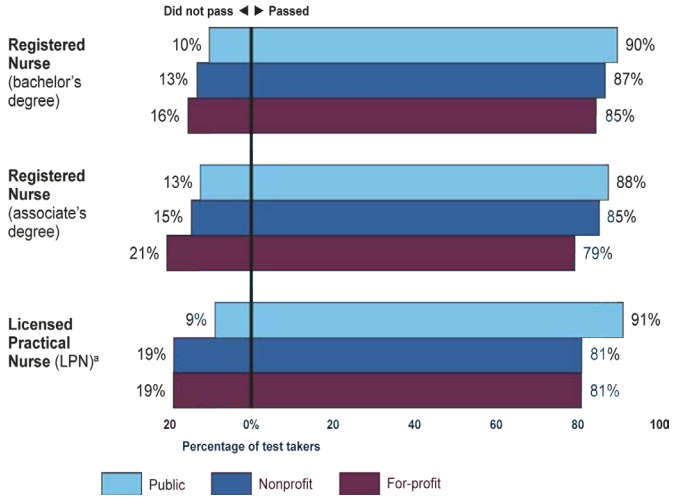
Pass Rates on Nurse Exams

- Graduates with a bachelor's or associate's degree from for-profit schools had a somewhat lower pass rate on the RN licensing exam than graduates with these degrees from nonprofit and public schools.*
- Graduates of for-profit schools had a lower pass rate on the LPN licensing exam than graduates of public schools, but a similar pass rate to graduates of nonprofit schools.
  - However, the for-profit sector pass rate was higher than the nonprofit sector for LPN test takers who completed 2-year LPN programs.

Exam Pass Rates by Sector for All States (2008-2010)



Source: GAO analysis of National Council of State Boards of Nursing data. Percentages may not add to 100 due to rounding.

[a]Differences between the for-profit and nonprofit sectors were not statistically significant.

*Pass rates were calculated based on national data from the National Council of State Boards of Nursing on the National Council Licensure Examination for Practical Nurses and the National Council Licensure Examination for Registered Nurses exams. Data include programs in all states, American Samoa, Guam, Northern Mariana Islands, Puerto Rico, and the Virgin Islands. Programs of all lengths were combined for this analysis.

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Finding 2: Licensing Exams

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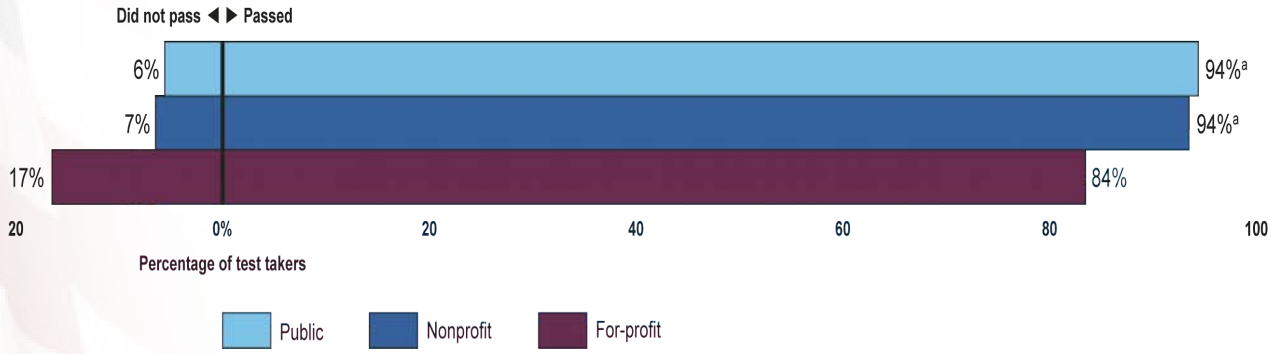
Pass Rates on the Radiographer Exam

- Graduates of for-profit schools had a lower pass rate on the radiographer exam than graduates of nonprofit or public schools.*

Exam Pass Rate by Sector for 34 States (2008-2010)



Source: GAO analysis of American Registry of Radiologic Technologists data. Percentages may not add to 100 due to rounding.

[a]Differences between the public and nonprofit sectors were not statistically significant.

*Pass rates were calculated using data from the American Registry of Radiologic Technologists' examination in radiography from 34 states that require radiographers to pass this exam in order to practice in the state. Radiographers perform diagnostic imaging examinations, such as X-rays, magnetic resonance imaging (MRI), and mammograms.

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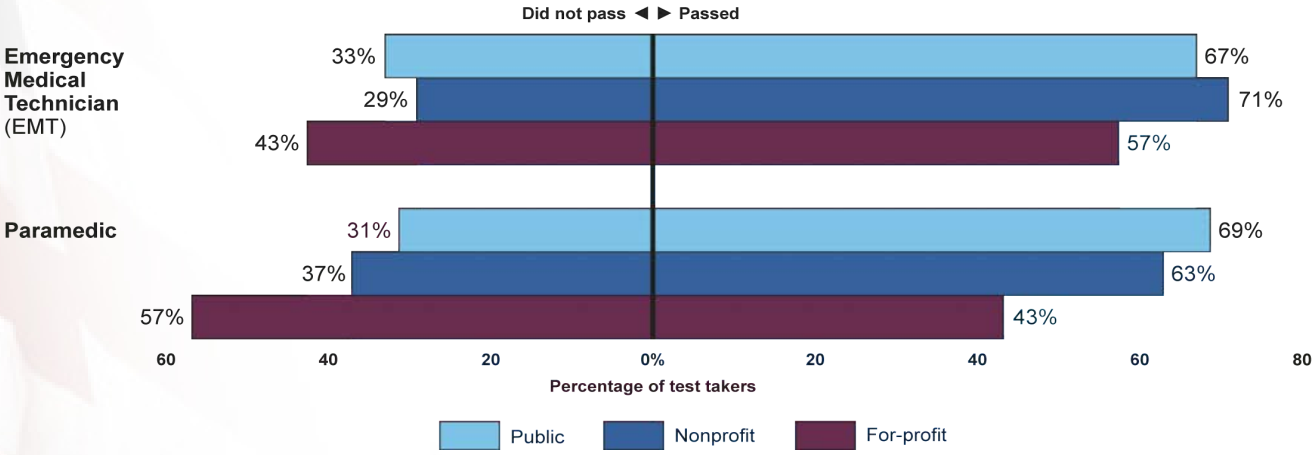
Finding 2: Licensing Exams

Pass Rates on EMT and Paramedic Exams

- The pass rate for graduates of for-profit schools on the basic EMT and paramedic exams was lower than that for graduates of nonprofit and public schools.*

Exam Pass Rate by Sector for 32 States for the Basic EMT Exam and 38 States for the Paramedic Exam (2008-2010)



Source: GAO analysis of National Registry of Emergency Medical Technicians data.

*Pass rates were calculated using data provided by the National Registry of Emergency Medical Technicians on its basic EMT exam from 32 states and paramedic exam from 38 states. We analyzed data from 18 for-profit, 30 nonprofit, and 615 public EMT programs and 5 for-profit, 22 nonprofit, and 383 public paramedic programs over the 2008-2010 time period. The basic EMT exam is the lowest level EMT exam, which every licensed EMT has to pass.

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Finding 2: Licensing Exams

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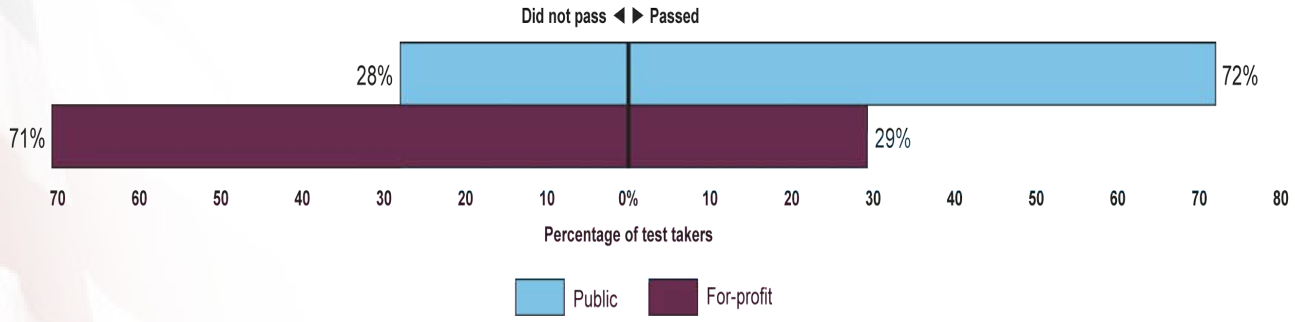
Pass Rates on the Surgical Technologist Exam

- In the two states that require practitioners to pass the national surgical technologist exam, the pass rate for graduates of for-profit schools was lower than the pass rate of graduates of public schools in 2010.*

Exam Pass Rates by Sector for Two States (2010)



Source: GAO analysis of National Board of Surgical Technology and Surgical Assisting data from Indiana and South Carolina.

Notes: To avoid identifying individual schools, we did not report data for programs or sectors with fewer than 5 schools. There were fewer than 5 nonprofit surgical technologist schools in our sample, so we did not report specific pass rates for them. However, the pass rate for students from nonprofit schools was statistically significantly higher than that of students from for-profit and public schools.

*Pass rates were calculated using data from the National Board of Surgical Technology and Surgical Assisting for the two states that generally require passing its exam to work as a surgical technologist in the state. The requirement to pass this exam was instituted in 2009 in one of the states, so we analyzed only 2010 data. Pass rates are based on 8 for-profit and 20 public schools.

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Finding 2: Licensing Exams

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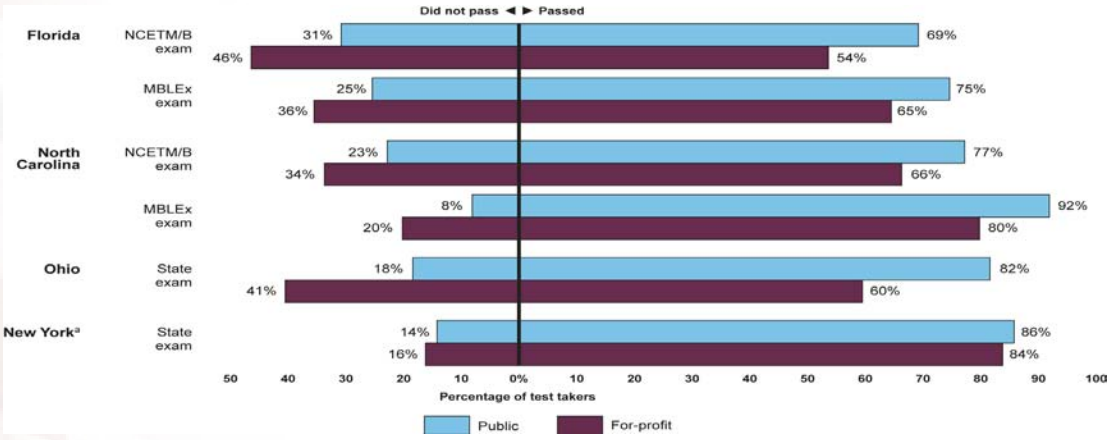
Pass Rates on Massage Therapist Exams

- In three of the four states from which we obtained data, the pass rate of graduates of for-profit schools was generally lower than that of graduates of public schools.*

Exam Pass Rates by Sector for Four States (2008-2010)



Source: GAO analysis of data provided by the Federation of State Massage Therapy Boards, the National Certification Board for Therapeutic Massage and Bodywork, and Ohio and New York. Percentages may not add to 100 due to rounding.
[a]In New York, the differences between the public and for-profit sectors were not statistically significant.

*We did not report pass rates for the nonprofit sector because in our data two states had no nonprofit programs and the other two had less than five nonprofit programs. For some individual massage therapy exams in individual years, for-profit students had higher pass rates than students at other schools, but these differences were not statistically significant.

Finding 2: Licensing Exams

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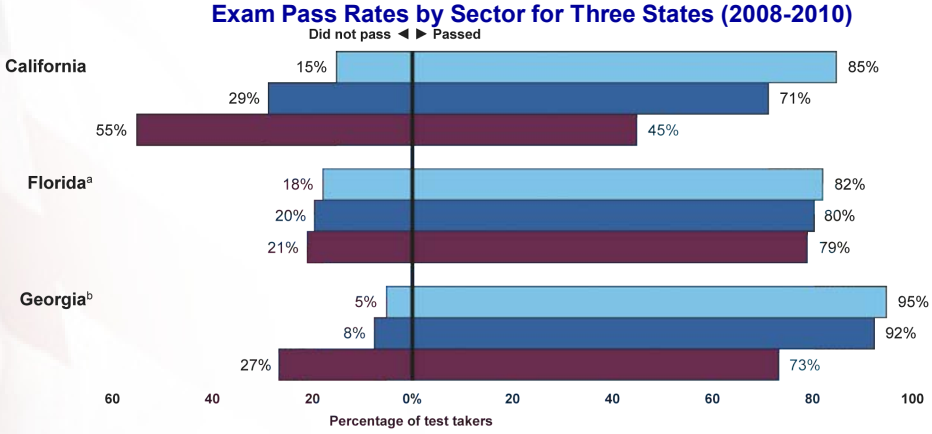
Pass Rates on the Bar Exam for Lawyers

- In two of the three states from which we obtained data—California and Georgia—the pass rate of graduates of for-profit schools on the state bar exam was generally lower than that of graduates of nonprofit and public schools.*
- In Florida, there were no statistically significant differences in the pass rates of graduates of for-profit, nonprofit, and public schools.**

Exam Pass Rates by Sector for Three States (2008-2010)



Source: GAO analysis of publicly available data from the State Bar of California, the Florida Board of Bar Examiners, and the Supreme Court of Georgia Office of Bar Admissions.
[a]In Florida, differences across sectors were not statistically significant.
[b]In Georgia, differences between the public and the nonprofit sectors were not statistically significant.

*Georgia had 1 for-profit, 2 nonprofit, and 2 public law programs; California had 3 for-profit, 22 nonprofit, and 4 public law programs; and Florida had 1 for-profit, 6 nonprofit, and 4 public law programs. California allows students from nonaccredited law schools to take the bar exam.
**We also analyzed average school pass rates. For-profit schools in Florida had a higher average school pass rate than other schools, but the difference was not statistically significant.

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Finding 2: Licensing Exams

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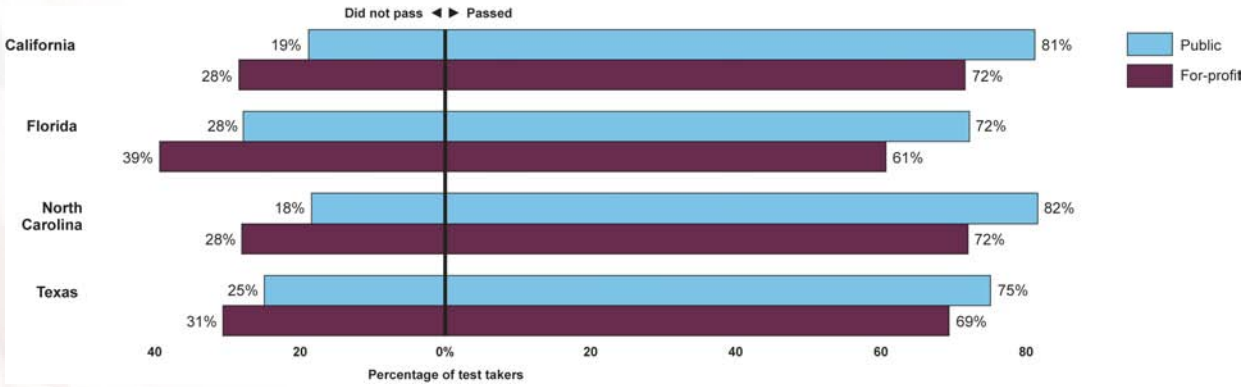
Pass Rates on Cosmetologist Exams

- In the four states from which we obtained data, the pass rate of graduates of for-profit schools was lower than the pass rate of graduates of public schools on the most common cosmetologist licensing exam.*

Exam Pass Rates by Sector for Four States (2008-2010)



Source: GAO analysis of data provided by the California State Board of Barbering and Cosmetology, the Florida Department of Business and Professional Regulation, Board of Cosmetology, the North Carolina Board of Cosmetic Art Examiners, and the Texas Department of Licensing and Regulation. Percentages may not add to 100 due to rounding.

*Two of the four states had no nonprofit cosmetology schools, while the other two each had fewer than five nonprofit schools, so we did not report results for the nonprofit sector. For some individual cosmetology exams in individual years, for-profit students had higher pass rates than students at other schools, but the differences were not statistically significant. In one case, for-profit schools had a statistically higher average school pass rate than public schools—on the esthetician exam in North Carolina in 2010.

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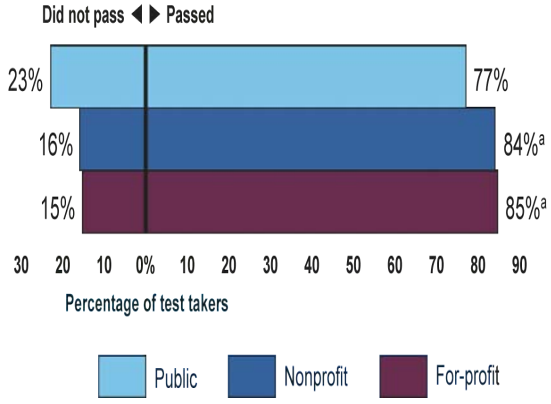
Pass Rates on the Funeral Director Exam

- Comparing the overall performance of graduates on the funeral director exam was not possible because data on the overall pass rate for both sections of the exam were not available. However, separate analyses of the two sections suggest that for-profit graduates had similar or better pass rates.
  - Graduates of for-profit schools generally had a higher pass rate on the sciences section of the funeral director exam than graduates of public schools and a similar pass rate as graduates of nonprofit schools.* See figure.
  - Graduates of for-profit schools had similar pass rates on the arts section of the exam as graduates of nonprofit and public schools, with no statistically significant differences.

Pass Rates by Sector for Sciences Section of Exam for the 49 ABFSE Accredited Programs Offering Only Associate's Degrees (2008-2010)



Source: GAO analysis of data from the International Conference of Funeral Service Examining Boards on the National Board Examination for funeral directors/embalmers. We analyzed data on schools accredited by the American Board of Funeral Service Education (ABFSE). Although there were only four for-profit funeral director programs, we reported these data because some school-level pass rates were publicly available. We also analyzed data for 6 nonprofit and 39 public associate's degree programs.

[a]Differences between the nonprofit and for-profit sectors were not statistically significant.

*Not all states require funeral directors to pass this national exam. However, for all programs included in our analysis, students must take this exam prior to graduating. As a result, we determined that these data represented a valid sector comparison of pass rates. A small number of nonprofit and public schools offer bachelor's degrees in addition to, or instead of, associate's degrees. We compared pass rates including these schools and the results were generally similar.

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While For-Profit Graduates as a Group Generally Had Lower Pass Rates, Some For-Profit Schools Performed Well

- Graduates of for-profit schools generally had lower pass rates, but for some of the exams we reviewed, some individual for-profit schools had relatively high pass rates.*
  - In 2010, 9 of the 40 for-profit schools in our analysis had pass rates of 100 percent on the radiographer exam.
  - In 2008, 9 of the 10 for-profit massage therapist programs in New York had pass rates between 75 percent and 100 percent.
- On some exams, although the differences across sectors were statistically significant, they were relatively small.
  - Eight-five percent of graduates of for-profit nursing programs with a bachelor's degree passed the RN exam compared with 87 percent of graduates with a bachelor's degree from nonprofit schools.

*In the majority of occupations, the pass rate data provided by testing entities did not identify individual schools. As a result, it was not possible to conduct further analyses on school characteristics that might be associated with higher pass rates.

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Finding 2: Licensing Exams–Limitations

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Exam Pass Rates Have Some Limitations

- Relatively few graduates take licensing exams, because many occupations do not require a license.
- Data are not available to compare the number of students who (1) begin a program, (2) successfully complete it, and (3) take the exam.*
- Some states have more stringent requirements for authorizing schools to operate, which can affect state level pass rates.
- Factors other than school quality may affect pass rates.
  - Schools may serve different populations of students. Although focusing on graduates can mitigate the impact of student characteristics, it may not completely eliminate the effect of these characteristics on test results.
  - Some schools may more deliberately "teach to the test" than others, while students in some sectors may rely more heavily on test preparation courses to pass required exams.
- Nevertheless, the federal government has a strong interest in ensuring that schools that receive federal student aid funds are appropriately preparing graduates for any required licensing exams.

*A high pass rate may not provide complete information about the quality of a program if a large number of enrolled students do not complete the program or do not take the licensing exam. A program or sector may have a high exam pass rate, but also a high dropout rate if a large number of students do not complete the program, but those who do complete pass the exam at a high rate.

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Appendix V: GAO Contact and Staff Acknowledgments

GAO Contact

George A. Scott, (202) 512-7215 or scottg@gao.gov

Staff Acknowledgments

The following staff members made key contributions to this report: Melissa Emrey-Arras, Acting Director; Michelle St. Pierre, Analyst-in-Charge; Jennifer McDonald; David Barish; James Bennett; Deborah Bland; Jessica Botsford; Russell Burnett; Barbara Chapman; David Chrisinger; Lorraine Ettaro; Ashley McCall; John Mingus; Anna Maria Ortiz; Sal Sorbello; and Shana Wallace.

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