Two-year colleges are a critical link in the nation’s nursing pipeline. Of all new registered nurses entering the profession each year, more than 60% are graduates of associate degree nursing (ADN) programs. In 2002 alone, nearly 42,000 students graduated from ADN programs, and almost 87% of those graduates passed the NCLEX exam—the initial credentialing requirement to enter the field of practice—on their first attempt.

In 2003–2004, the American Association of Community Colleges (AACC) conducted a national survey to gain a better understanding of the current status of nursing education at two-year colleges, particularly in light of the
current nursing shortage. The findings from this survey highlight the challenges nursing programs face and provide insights into their operation at two-year colleges. Several key findings emphasize that there is a greater demand for these programs and their graduates than the colleges are able to meet.

- 82% of RN programs surveyed lacked capacity to meet enrollment demand.
- More than twice as many students applied to RN programs as slots were available.
- Inadequate numbers of qualified faculty and clinical sites were barriers to increasing enrollments for more than 80% of RN programs.
- More than 5% of full-time nursing faculty positions were vacant in fall 2003, and it took up to five months on average to fill each vacancy.
- On average, 98% of RN graduates were employed in their field within six months of graduation.

DESCRIPTION OF THE SURVEY

In spring 2002, the AACC board of directors responded to requests from its membership to educate the public and policymakers about their colleges’ role in educating the nation’s nursing and allied health professionals by launching the Nursing and Allied Health Initiative (NAHI). In addition to its educational mission, NAHI seeks to strengthen the ability of community colleges to expand nursing and allied health program capacities and graduations. In support of these goals, AACC developed the NAHI survey in fall 2003 to collect information on various aspects of nursing and allied health programs in two-year colleges, including faculty, students, graduates, licensure and certification, employment, and program characteristics.

AACC research staff designed the questionnaire through a review of the literature on the nursing shortage and the nursing faculty shortage. Little information was available specifically for associate degree nursing programs. AACC research and workforce development staff, in collaboration with nursing and allied health directors from community colleges, selected the most important items from a list of proposed topics for inclusion in the survey. Research staff further refined the questionnaire based on responses to a pilot test of the survey. Because the survey was long—with most questions asked separately for each program—and because research staff believed the contact people might differ for nursing and allied health programs, AACC split the survey into two questionnaires: one for nursing (collected in fall 2003) and one for allied health (collected in spring 2005).

AACC sent e-mail invitations to participate in the Web-based survey to 1,211 regionally accredited two-year colleges, two-year campuses of four-year universities, and specialized health schools with certificate and associate degree nursing programs. Nursing or allied health directors received the invitation if AACC had contact information for them; otherwise the college president received the invitation. AACC e-mailed the original survey invitation on October 30, 2003. Due to an initial low response rate, AACC modified the questionnaire to be more user-friendly by deleting some items and revising others. Nonrespondents received invitations to participate in the follow-up survey on January 29, 2004. AACC accepted questionnaires until February 26, 2004.

CHARACTERISTICS OF COLLEGES

Twenty-six percent of colleges invited to participate in the survey submitted the original questionnaire and another 27% submitted the follow-up questionnaire, for a 53% (648) response rate overall. An additional 11% of colleges, called minimal respondents, did not formally submit the questionnaire but answered at least the questions on nursing and allied health program availability. In total, AACC received data from 65% (784) of the colleges. Four respondents provided data for systems or consortia; 790 colleges’ data are represented.

The response rate for public colleges (68%) was higher than that for private nonprofit (38%) and proprietary
(37%) colleges. The large majority of both the survey population (88%) and the respondents (93%) are public colleges. Respondents were similar to the survey population on the basis of their location, although colleges in large cities (58%), the suburbs of mid-size cities (57%), small towns (62%), and rural areas (57%) were slightly less likely to respond, and colleges in mid-size cities (67%), suburbs of large cities (73%), and large towns (71%) were slightly more likely to respond.

**Availability of Nursing Programs**

Of the 784 survey respondents, 667 (85%) indicated that they had one or more nursing programs (see Figure 1). Of the colleges with at least one program, 417 (62%) reported having a certified nursing assistant (CNA) program; 403 (61%), a licensed practical or vocational nursing (LPN/LVN) program; and 572 (86%), an associate degree registered nursing (RN) program. Fifty-five respondents (8%) indicated that they had another nursing program. The most commonly cited other programs were bachelor of science in nursing (BSN) and BSN completion programs (13), pre-nursing transfer associate degree programs (12), and nursing refresher classes (10). The bachelor’s degree programs were cited primarily by private health science schools and by two-year campuses of four-year universities.

Colleges that reported that they had no nursing programs were asked if they had discontinued any programs in the past five years, or if they were planning to implement any programs in the next five years. Seven colleges had discontinued programs, including four CNA programs, three LPN/LVN programs, and one RN program. The reasons cited for program discontinuation were expense and availability of faculty. A number of colleges that had existing nursing programs volunteered, under “other nursing programs,” that they planned to implement another program in the near future. A total of 39 colleges reported that they planned to implement programs, including 10 CNA, 11 LPN/LVN, and 26 RN programs. Most of the colleges reported that the nursing program was pending approval or would start in fall 2004 or fall 2005. The other colleges had longer-term or less definite plans. Because the survey did not include this question for respondents who had at least one nursing program, there may have been more planned programs that were not reported.

**Nursing Program Faculty**

AACC collected data on all nursing faculty combined. Because not all respondents answered questions that pertained to faculty and not all colleges with nursing programs responded to the survey, the total number of faculty reported is smaller than the number of faculty in all nursing programs. Despite these limitations, these data can shed some light on the nursing employment picture in two-year colleges.

Only 604 (91%) of the 667 responding colleges with nursing programs reported faculty numbers. Those colleges reported that they employed a total of 6,389 full-time and 5,602 part-time faculty. The colleges reported an average of 10.6 full-time faculty and a median of 9; they reported an average of 9.7 part-time faculty and a median of 7.

The majority of respondents indicated that scarcity of qualified faculty was a barrier to nursing program growth. The 399 colleges (60%) that reported vacancy rates for their full-time faculty indicated that they had a total of 4,475 budgeted full-time faculty slots, of which 5.5% (245) were currently vacant. They expected 5.5% (246) more positions to become vacant in the next year because of resignations and retirements. In addition to current and anticipated vacancies, the colleges reported that they expected an additional 386 positions to become available because of program growth—an 8.6% increase over current staffing levels. On average, colleges reported that it takes them four to five months to fill a vacant position.

Colleges that had more than one nursing program reported whether their faculty were shared or separate.
Twenty-two percent indicated that nursing faculty were shared among all programs; 33%, that they were shared among some programs; and 45%, that they were separate for each program. This may have been related in part to whether the nursing assistant program was credit or noncredit and whether the RN and LPN/LVN programs were integrated.

RN and LPN/LVN Programs

Program Length and Accreditation
On average, RN programs required more credits than the standard 60 semester-hour or 90 quarter-hour associate degree program. Semester-hour programs required a median of 71.5 credit hours, and quarter-hour programs required a median of 108 credits. Most programs were of similar length. The middle half (the 25th to the 75th percentile) of semester-based programs required 69 to 72 hours, and the middle half of the quarter-based programs required 107 to 112 hours—71.3 to 74.7 semester-equivalent hours.

Like RN programs, LPN/LVN programs were longer than most other programs of their type. Most programs (69%) resulted in a certificate, although many programs led to a diploma (28%) and a small fraction led to an associate degree or a noncredit award (1% each). The median length of semester-based certificate and diploma programs was 47 credit hours, whereas the five associate degree programs had a median length of 71 credits. Quarter-hour certificate programs required a median of 65 credits, compared with 93.5 for the diploma programs (11 of 12 of which were from one state’s technical college system); no quarter-hour associate degree programs were reported.

Most RN programs were accredited by the National League for Nursing Accrediting Commission, Inc. (NLNAC). Sixty-eight percent of all respondents’ programs were accredited; these accounted for 74% of NLNAC-accredited associate degree programs. Unlike RN programs, most of the LPN/LVN programs were not NLNAC-accredited. Only 16% of the respondents’ programs were accredited, but these accounted for 72% of all accredited programs (NLNAC, 2003).

Support from Area Health-Care Providers
Respondents specified which types of support (other than clinical resources) area health-care providers supplied to their nursing programs (see Figure 2). About one quarter of respondents indicated that health-care providers subsidized faculty salaries (26%), provided class or lab space, or loaned faculty to the RN program (24% each). About one fifth (19%) reported that providers loaned equipment and one eighth (12%), that they provided other program support. The greatest proportion of respondents, almost two fifths (38%), indicated that they received no support from health-care providers; providers are a resource that could be tapped to increase program capacity.

Respondents reported support from area health-care providers for LPN/LVN programs similar to that reported for RN programs, except that only half as many providers (13%) subsidized faculty salaries and only one third as many (8%) loaned faculty (see Figure 2). From 14% to 23% of the health-care providers also provided lab or classroom space, loaned equipment, or provided other program support. Almost one half (48%) of respondents indicated that they received no support from health-care providers.

Respondents also indicated whether area health-care providers awarded financial aid to nursing students. More than 90% reported that health-care providers awarded financial aid to RN students and that 90% of those providers required the students who received financial aid to work for them after graduation. In addition, 77% reported that health-care providers awarded financial aid to students in the LPN/LVN program; of those, 87% required students who received financial aid to work for them after graduation.

Capacity and Barriers to Program Growth
Eighty-two percent of survey respondents indicated that their RN programs did not have sufficient capacity to
enroll all qualified applicants. Of colleges that responded to the question regarding barriers to program growth, only 3% had no desire to increase their capacity (see Figure 3). The availability of resources was a greater barrier to program growth than was the availability of qualified students. The greatest barriers to program growth were availability of qualified faculty (85%) and clinical sites (80%). Approximately 6 in 10 respondents also cited availability of class (64%) and lab space (62%) and budget (63%—possibly because of cuts in state and local budget appropriations) as growth barriers. An additional one quarter (27%) indicated that not enough preceptors were available. Only 6% of respondents said that the availability of qualified applicants was a barrier to program growth.

Perhaps because of the shorter program length, capacity was not as great an issue for LPN/LVN programs as it was for RN programs. About two thirds (65%) of survey respondents indicated that the program did not have sufficient capacity to enroll all qualified applicants. Many more respondents, 11%, had no desire to increase program capacity (see Figure 3). Barriers to program growth were reported less frequently for LPN/LVN programs than for RN programs. The most often-cited barriers were availability of clinical sites (75%) and qualified faculty (70%), followed by budget (57%) and availability of class (55%) and lab space (55%). Only 14% indicated that not enough preceptors were available, and only 7% indicated that the availability of qualified applicants was a barrier to program growth.

**Program Outreach Activities and Audiences**

Although most nursing programs could not enroll all qualified applicants and many had waiting lists, they still had extensive outreach activities—necessary to ensure a supply of diverse, well-qualified applicants. As is shown in Figure 4, more than three quarters of colleges advised or mentored students interested in the RN program, worked with guidance counselors to
FIGURE 3  Growth Barriers for Nursing Programs With Insufficient Capacity

FIGURE 4  Nursing Program Outreach Activities

*continued on page 11*
Facts About Nursing

CERTIFIED NURSING ASSISTANTS

• The Bureau of Labor Statistics estimates that, between 2002 and 2012, there will be a 24.9% increase in the employment of “nursing aides, orderlies, and attendants,” including 523,000 new job openings because of growth and net replacements of those who leave the field (Hecker, 2004). Figures are not available separately for CNAs.

• In 2002, nursing homes reported an 8.5% shortage of CNAs that amounts to nearly 52,000 positions (American Health Care Association [AHCA], 2003).

LICENSED PRACTICAL/VOCATIONAL NURSES

• The Bureau of Labor Statistics estimates that, between 2002 and 2012, there will be a 20.2% increase in the employment of LPNs/LVN, including 295,000 new job openings because of growth and net replacements of nurses who leave the field (Hecker, 2004).

• In 2002, nursing homes reported a 13.2% shortage of LPNs/LVNs that amounts to approximately 25,100 positions (AHCA, 2003).

• Nearly 70% of LPN certificates are awarded by two-year colleges (NCES, 2003b).

REGISTERED NURSES

• The Bureau of Labor Statistics estimates that, between 2002 and 2012, there will be a 27.3% increase in the employment of RNs, including more than 1.1 million new job openings caused by growth and net replacements of nurses who leave the field (Hecker, 2004).

• In 2003, 62% of new RNs had graduated from associate degree programs; 35% were from baccalaureate programs and 3% from diploma programs (NCSBN, 2004).

• More minorities and men graduate from associate degree RN programs than from baccalaureate RN programs. In 2002, minorities earned 9,654 associate degrees and 7,086 baccalaureates in registered nursing. Men earned 4,331 associate degrees and 2,984 baccalaureates (NCES, 2003b). These groups represent largely untapped sources of future RNs and may be able to provide care in a more culturally sensitive context.

• Associate degree RN programs educate graduates more quickly and less expensively than do baccalaureate RN programs. Associate degree RN programs can be completed in four to five semesters, compared with eight to nine semesters for a baccalaureate RN program. The average annual tuition and fees for a full-time student in a public two-year college in 2001–2002 was $1,379, compared with an
average of $3,746 in public four-year institutions; private institutions are significantly more expensive (NCES, 2003a).

- Thirty states had nursing shortages in 2000; that number is projected to increase to 44 states by the year 2020 (Health Resources and Services Administration [HRSA], 2002). RNs educated in community colleges are more likely to remain where they were educated. Whereas 72% of RNs with associate degrees practice in the state where they earned their degree, only 56% of RNs with bachelor’s degrees do so. Similarly, 75% of associate degree RNs and 60% of baccalaureate RNs practice in the state where they received their first license (Spratley, Johnson, Sochalski, Fritz, & Spencer, 2001).

AN RN IS AN RN

- RNs educated in diploma, associate degree, and baccalaureate programs share the same scope of practice—that is, they are authorized to provide the same patient care.

- The 2003 NCLEX-RN exam pass rate was 87.0% for RNs educated in associate degree programs and 86.9% for those educated in baccalaureate programs (NCSBN, 2004).

- No evidence in published studies demonstrates a relationship between individual RNs’ educational background and quality of patient care.

- In 2001–2002, 419 institutions awarded master’s degrees in nursing disciplines (NCES, 2003b). At least 154 of these institutions (37%) in 43 states and the District of Columbia offer registered nurse to master of science in nursing programs for RNs with an associate degree (American Association of Colleges of Nursing [AACN], 2003; Johnson & Johnson Health Care Systems Inc., 2003).

- The majority of two-year RN programs are accredited by NLNAC. In its program design standard, the majority of elements are the same for associate degree and baccalaureate programs. The elements specific to baccalaureate RN programs—attainment of knowledge and skill sets in the current practice of nursing, nursing theory, research, health-care policy, and finance—do not pertain to patient care (NLNAC, 2002).
Implications of the Current Data on Nursing Programs

• Community colleges offer the most efficient means of addressing the nation’s RN shortage. Students can complete the majority of community college RN programs in two years, earning an average of 71.5 credits.

• The nation is losing out on thousands of potential nurses. Eighty-two percent of community college RN programs cannot meet demand for enrollment. The greatest barrier to increasing RN program capacities is a lack of qualified faculty, and the second greatest barrier is a shortage of clinical sites. Nearly two thirds of community colleges reported that inadequate budget levels and a lack of class and lab space prevent increased RN program enrollments. A quarter of community colleges cannot increase RN program enrollments because they lack preceptors.

• Health-care providers value graduates from community college RN programs. Health-care providers award financial aid to students in more than 90% of community college nursing programs to increase the number of RNs with associate degrees available to care for patients.

• Community colleges support “Kids into Health Careers.” Ninety percent of community college RN programs reach out to high school students; 56% reach out to middle or junior high school students; and 25% reach out to elementary school students (see HRSA, 2004a).

• Community colleges are working to increase minority enrollments in RN programs to meet the nation’s changing demographics. Sixty percent of community college RN programs conduct outreach to attract underrepresented populations, including men and minorities, to nursing.

• Community colleges are addressing the shortage of long-term care workers. About 62% of community colleges with nursing programs educate CNAs, and 61% educate LPN/LVN.

Recommendations for Strengthening the Nation’s Nursing Workforce

• Conduct an Institute of Medicine study of RN education. Allocate federal funding to the Institute of Medicine for an unbiased RN education study, which would provide nurse educators with guidance to address increased demand for RNs by building enrollment capacity and to improve nursing programs so that future generations of RNs might be better recruited, prepared, and retained.

• Increase RN to MSN capacities and graduations. Build bridges between associate and master’s level (MSN) nursing programs to successfully move associate degree RNs into graduate nursing education. In addition to achieving a greater scope of practice, MSN graduates can serve as faculty, thus increasing
Survey Implications and Policy Recommendations (cont’d)

RN program capacity. A pool of applicants currently exists—approximately 16% of associate degree RNs continue their nursing education (Spratley et al., 2001)—and more than 150 programs in 43 states and the District of Columbia offer RN to MSN programs for associate degree RNs who do not hold a bachelor’s degree (AACN, 2003; Johnson & Johnson Health Care Systems Inc., 2003).

- **Direct a more proportionate share of federal funding to nursing education at two-year colleges.** In 2002 only $1.9 million of $89.5 million (2%) of federal support for nursing education was directed to associate degree RN programs (HRSA, 2004b). Award a greater proportion of Public Health Service Act Title VIII grants to community colleges, where RNs can obtain a quality education most efficiently (in two years rather than four) and economically (at $1,379 per year rather than $3,756 per year in four-year programs; NCES, 2003a).

- **Fund community college RN enrollment expansions.** Amend current law to permit community colleges to use federal funding to expand RN program capacity. Current authority allows only bachelor’s degree RN programs—which on average are twice as long, and more than twice as expensive per year as associate degree RN programs—to use federal Public Health Service Act Title VIII grants to increase RN program enrollments.
promote the program (81% each), and marketed the program to employees in health-care settings (76%). Seventy percent had in-school presentations for students. A smaller number of colleges had summer programs for students on the college campus (26%) or offered classes in health-care facilities (17%) or high schools (13%).

RN program outreach activities were targeted toward various groups (see Figure 5). Ninety percent of colleges targeted these activities toward students in high schools; 56%, middle or junior high schools; and 25%, elementary schools. It is important that students be contacted early enough that they can take math and science courses before college. Colleges also reached out to less traditional groups for potential students. Four in five colleges (80%) targeted outreach activities toward employees of hospitals and other health-care providers. Three in five had outreach to displaced workers (60%) or to underrepresented populations, including men and minorities (60%).

With the exception of the availability of nursing classes in high schools, program outreach activities were reported less frequently for LPN/LVN programs than they were for RN programs (see Figure 4). About three quarters of respondents reported that they advised or mentored interested students (76%) or worked with guidance counselors to promote the program (75%), whereas about three fifths marketed the program to health-care employees (62%) or had in-school presentations for students (63%). Approximately one fifth offered classes in high schools (20%) or had summer programs for students on the college campus (23%), and one in eight (13%) offered classes in health-care facilities.

Outreach activities for LPN/LVN programs were aimed toward each listed group only slightly less frequently than they were for RN programs, except that displaced workers were more likely to be targeted and elementary school students were less likely to be targeted (see Figure 5). Seven in eight colleges (86%) reported that they targeted outreach activities toward students in high schools.
schools; 50%, middle or junior high schools; and 16%,
elementary schools. Three quarters (76%) of colleges
targeted outreach activities toward employees of hospi-
tals and other health-care providers. Two thirds (66%)
had outreach to displaced workers and three fifths
(58%), to underrepresented populations.

APPLICATIONS, ADMISSIONS, AND ENROLLMENT
Like the total faculty counts reported earlier, the new
and total enrollment figures reported greatly underesti-
mate the true number of students enrolled in the nurs-
ing programs. They are presented here to give the reader
data to estimate nationwide enrollments.

Of the 572 colleges that reported having RN programs,
208 (36%) provided complete information with regard to
applications, acceptances, and enrollments of new stu-
dents for fall 2003. Those colleges reported having 34,965 quali-
fied applicants for 15,221 places—2.3 applicants for each
available slot. Of the 15,668 (45%) applicants who were
accepted, 14,772 (94%) enrolled, leading to programs that
on average had 97% of the available seats filled.

Four hundred colleges (70%) reported usable total RN
enrollment information for fall 2003. They reported a
total fall enrollment of 57,395 students, of whom 71% were
full-time and 29% were part-time students. Almost
12% of the students were men and 88% were women.
Among U.S. residents whose racial or ethnic back-
ground was known, 25% were non-White (including
Hispanic or Latino), and 75% were White (excluding
Hispanic or Latino).

Of the 403 colleges with LPN/LVN programs, 107
(27%) provided complete information with regard to
applications, acceptances, and enrollments of new stu-
dents for fall 2003. Those colleges reported having
9,305 qualified applicants for 4,994 places, or 1.9 appli-
cants for each available slot. Of the 4,979 (54%) appli-
cants who were accepted, 4,770 (96%) enrolled, leading
to programs that on average had 96% of the available
seats filled.

Two hundred eighty-one colleges (70%) reported usable
total LPN/LVN enrollment information for fall 2003.
Those colleges reported a total fall enrollment of 17,716
students, of whom 78% were full-time and 22% were
part-time students; 11% were men and 89% were women.
Among U.S. residents of known race or ethnicity, 30% of
students were non-White and 70% were White.

GRADUATION, LICENSURE, AND EMPLOYMENT
Survey respondents also provided information about
students who had graduated from their programs
between July 1, 2002 and June 30, 2003. Of the 572
colleges with RN programs, 391 (68%) reported having
a total of 21,264 graduates: 10% were men, 90%
women, 24% non-White, and 76% White. The colleges
that provided graduate figures for both this survey and
the 2001–02 Integrated Postsecondary Education Data
System (IPEDS) Completions survey (National Center
for Education Statistics [NCES], 2003b) demonstrated
a 6.6% increase in the number of associate degree nurs-
ing graduates. If that growth rate held for all colleges,
it would yield an increase of approximately 2,735 associ-
ate degree RN graduates nationwide over the previous
year’s 41,714.

The National Council of State Boards of Nursing
(NCSBN) administers the national licensure examina-
tions for RNs (NCLEX-RN) and for LPN/LVNs
(NCLEX-PN). The NCLEX-RN licensure examination
pass rate for first-time candidates educated in the United
States and who graduated from associate degree pro-
grams was 86.7% in 2002 (NCSBN, 2003) and 87.0%
in 2003 (NCSBN, 2004). On this survey, 446 colleges
(78%) reported NCLEX-RN licensure examination pass
rates for a full year, primarily for the requested period,
July 1, 2002, through June 30, 2003 (see Figure 6).

Because not all colleges were able to report the number of
examinees and the number of those who passed the exam
(but instead reported the percentage that passed), it was
not possible to calculate an overall pass rate. However, the
median pass rate reported was 91.4%. Only 1 in 100 col-
leges reported pass rates lower than 70%, whereas 1 in 10 reported a 100% pass rate. The middle half of the colleges reported pass rates between 86% and 95%.

Respondents also indicated the percentage of their RN graduates who were employed in the field within six months of graduation: The average employment rate was 98% and the median rate was 100% for the 208 colleges (36%) that provided this information.

Of the 403 colleges with LPN/LVN programs, 261 (65%) reported having a total of 9,272 graduates in academic year 2002–2003: 9% of graduates were men, 91% women, 26% non-White, and 74% White. The colleges that provided graduate figures for both this survey and the 2001–02 IPEDS Completions survey (NCES, 2003b) showed an 8.2% increase in the number of LPN/LVN graduates. That growth rate, if accu-
rate for all colleges, would yield an increase of approximately 1,768 LPN/LVNs over the 21,488 who graduated from two-year colleges nationwide in 2001–2002.

The NCLEX-PN licensure examination pass rate for first-time candidates educated in the United States was 86.5% in 2002 (NCSBN, 2003) and 88.2% in 2003 (NCSBN, 2004). On the AACC survey, 265 colleges (66%) reported annual NCLEX-PN licensure examination pass rates, primarily for the period July 1, 2002 through June 30, 2003 (see Figure 7). The median pass rate reported was 95.0%. Fewer than 2% of colleges reported pass rates lower than 70%, and 36% reported a 100% pass rate. The middle half of the colleges reported pass rates between 90% and 100%. Respondents from 113 colleges (28%) with LPN/LVN programs indicated that an average of 97% and a median of 100% of their graduates were employed in their field within six months of graduation.

**Career Ladder and Bridge Programs**

Many colleges indicated that they offered career-ladder programs to allow students to become certified to work in the health-care field as CNAs or LPN/LVNs while pursuing an RN degree. Just over half of the 257 respondents to this question indicated that their students could earn the CNA, LPN/LVN, or both awards as part of their RN program. RN students could earn a CNA at 16% of colleges, an LPN/LVN at 21% of colleges, and both awards at 16% of colleges. Most colleges that offered an RN program also had programs to accelerate degree completion for students with other health-care–related degrees. Almost 90% of the 267 respondents indicated that they had LPN/LVN to RN programs, 12% offered CNA to RN programs, and almost 5% had bridge programs for emergency medical technicians or paramedics.

**Certified Nursing Assistant Programs**

Data collected on the CNA section of the questionnaire were problematic. A number of colleges that had CNA programs did not indicate their existence on the survey, perhaps because their programs were noncredit. Because CNA programs are short-term and have multiple admissions per year, data collected on applications and admissions and on new and total fall-term enrollments were misleading—for example, respondents reported more students completing CNA programs than they reported were enrolled. In addition, completions of credit and noncredit programs could not be compared with IPEDS data, which track only credit program awards. Nevertheless, summary data are reported for questions for which they might be of use:

- Of the 417 (53%) respondents who had a CNA program, 219 reported the program award; 182 (83%) indicated that they awarded a certificate, and 37 (17%) indicated some other program outcome such as a letter or certificate of completion or eligibility to sit for the certification examination. Fifty respondents, including some who did not indicate an award, specifically noted that the CNA program was noncredit. The true number of noncredit programs probably is higher.

- CNA programs generally were short. The median program length was 6 credit hours, or 120 contact or clock hours. The middle half (the 25th to the 75th percentile) of programs required 5 to 8 credit hours, or 84 to 155 contact or clock hours, for completion.

- Of the 135 respondents who indicated what support was given to their CNA program by health-care providers, almost half said they received no program support. One quarter to one third noted that they were provided class or lab space, and one eighth were loaned equipment. Unlike the RN and LPN/LVN programs, very few (2% to 5%) received subsidies for faculty salaries or were loaned faculty.

- Almost half of respondents reported that health-care providers gave financial assistance to students; of those, seven in eight required the students to work for them after completing the program.
• Only 40% of the respondents indicated that they had insufficient capacity to enroll all qualified students. Faculty availability was cited as a barrier to program growth by three quarters of the respondents with insufficient capacity. About half of the respondents cited the availability of class, clinical, and lab space as growth barriers, whereas two fifths indicated that program budget was a barrier. One in ten reported that they had too few qualified applicants.

• About three fifths of respondents reported that they worked with guidance counselors to promote the CNA program or advised or mentored students interested in the program. One quarter to one third indicated that they offered summer programs on the college campus, offered classes in health-care facilities or high schools, or had in-school presentations for students.

• Outreach activities were less likely to be targeted toward elementary (3%) and junior high or middle school students (20%) and more likely to be targeted toward employees of health-care facilities (60%), high school students (65%), and displaced workers (66%). Men and minorities were targeted in just over half of the CNA programs’ outreach activities.

• The 215 (52%) respondents who provided program completions for 2002–2003 reported a total of 25,493 students who graduated or were eligible to sit for the certification examination. Of those, 12% were men and 36% were non-White (fall 2002 enrollment characteristics were similar: 12% men and 37% non-White). Because the U.S. Department of Education collects data on credit programs only, it is not possible to determine the change in completions from last year.

• Half of the respondents reported certification examination pass rates. The median rate was 97%, and the middle half of the colleges reported pass rates between 92% and 100%.
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