This update presents information for the 116 pre-licensure registered nursing (RN) programs that reported data for the 2016 reporting year, including:

- 1 Diploma program,
- 67 Associate Degree in Nursing (ADN) programs, including 59 generic ADN programs and 8 Licensed Vocational Nurse to Associate Degree in Nursing (LVN to ADN) stand-alone programs,
- 47 Bachelor of Science in Nursing (BSN) programs, and
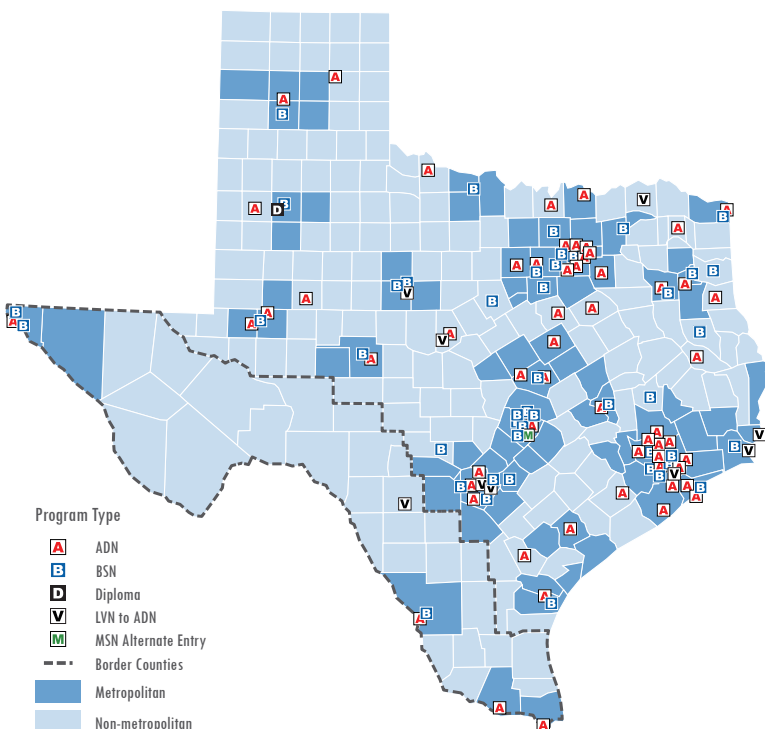- 1 Master of Science in Nursing Alternate Entry (MSN AE) program.

The Texas Center for Nursing Workforce Studies (TCNWS) collected data using the 2016 Board of Nursing's (BON) Nursing Education Program Information Survey (NEPIS) that was available online as of October 3, 2016. The reporting period was academic year (AY) 2015-2016 (September 1, 2015 – August 31, 2016) unless otherwise noted. TCNWS collaborated with the BON in the design and dissemination of the survey.

## Geographic Location of Professional Nursing Programs

Figure 1 presents the locations of the 116 professional nursing programs in Texas by metropolitan and non-metropolitan counties. Table 1 summarizes the location of programs by type and geographic designation.

- 9 professional nursing programs (7.8%) were located in the border region of Texas.

**Figure 1. Geographic Location of RN Programs by Type**



Program Type
- A ADN
- B BSN
- D Diploma
- V LVN to ADN
- M MSN Alternate Entry
- --- Border Counties
- Metropolitan
- Non-metropolitan

**Table 1. Geographic Designation of Main Campuses**

| Program Type | Geographic Designation | | | | Total |
|---|---|---|---|---|---|
| | Metro Border | Metro Non-Border | Non-Metro Border | Non-Metro Non-Border | |
| Diploma | 0 | 1 | 0 | 0 | 1 |
| ADN | 4 | 41 | 1 | 13 | 59 |
| LVN to ADN | 0 | 6 | 0 | 2 | 8 |
| BSN | 4 | 38 | 0 | 5 | 47 |
| MSN AE | 0 | 1 | 0 | 0 | 1 |
| Total | 8 | 87 | 1 | 20 | 116 |

- 21 programs (18.1%) were located in non-metropolitan counties.
- 20 programs (17.2%) were located in non-metropolitan, non-border counties.
- Only 1 program (0.9%) was located in a non-metropolitan, border county.
- 87 programs (75%) were located in metropolitan, non-border counties.

## Changes in the Number of Professional Nursing Programs

Table 2 displays the changes over time in the number of professional nursing programs.

- During the academic year 2015-2016, 3 new programs opened and 6 programs closed.

**Table 2. Changes in the Number of Professional Nursing Programs, 2007-2016**

|  | New Programs | Closed Programs | Total Programs |
|---|---|---|---|
| 2007 | 3 | 1 | 86 |
| 2008 | 6 | 0 | 92 |
| 2009 | 2 | 1 | 93 |
| 2010 | 5 | 2 | 96 |
| 2011 | 9 | 0 | 105 |
| 2012 | 2 | 1 | 106 |
| 2013 | 9 | 2 | 113 |
| 2014 | 3 | 2 | 114 |
| 2015 | 6 | 1 | 119 |
| 2016 | 3 | 6 | 116 |

Table 3 shows the number of professional nursing programs, by program type, over the past 11 years.

- The number of Diploma and MSN Alternate Entry programs has remained relatively steady from 2006 to 2016.
- The number of LVN to ADN stand-alone programs increased from 2006 to 2008, and since then has remained relatively steady. The number decreased from 2015 to 2016.
- The number of ADN programs increased from 2006 to 2011 and has remained relatively steady since.
- The number of BSN programs increased by 92% from 2006 to 2015. From 2015 to 2016, 1 BSN program closed.

**Table 3. Number of Professional Nursing Programs by Program Type, 2006-2016**

|  | Diploma | LVN to ADN (Stand-Alone) | ADN | BSN | MSN AE |
|---|---|---|---|---|---|
| 2006 | 2 | 5 | 51 | 25 | 1 |
| 2007 | 2 | 7 | 50 | 26 | 1 |
| 2008 | 2 | 10 | 50 | 29 | 1 |
| 2009 | 2 | 9 | 52 | 29 | 1 |
| 2010 | 1 | 8 | 54 | 32 | 1 |
| 2011 | 1 | 8 | 58 | 37 | 1 |
| 2012 | 1 | 9 | 57 | 38 | 1 |
| 2013 | 1 | 10 | 58 | 43 | 1 |
| 2014 | 1 | 10 | 58 | 44 | 1 |
| 2015 | 1 | 9 | 60 | 48 | 1 |
| 2016 | 1 | 8 | 59 | 47 | 1 |

## Governing Institutions

Of the 116 professional nursing programs operating in Texas during the AY 2015-2016, 88 programs (75.9%) were governed by public institutions.

- 82 operated within public colleges and universities.
- 6 operated within health science centers.

The other 28 programs (24.1%) were governed by private institutions.

- 19 were governed by private, non-profit institutions.
  - 17 operated within private colleges and universities.
  - 1 operated within a career school/college.
  - 1 operated within a hospital.
- 9 were governed by private, for-profit institutions.
  - 5 operated within private colleges and universities.
  - 4 operated within career schools/colleges.

These were mutually exclusive categories.

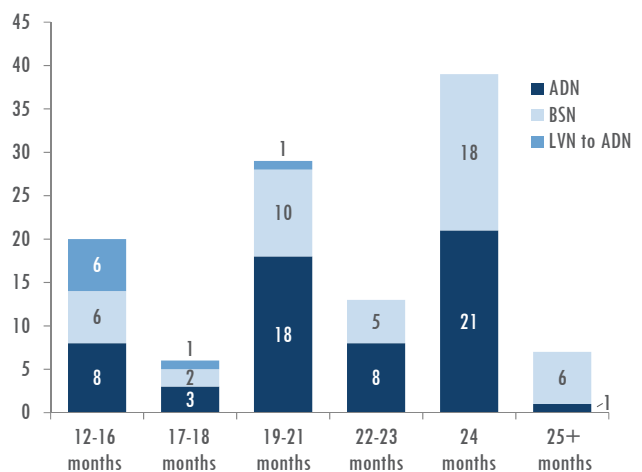## Length of Curriculum in Professional Nursing Programs

In the 2016 NEPIS, programs were asked to report the length of their nursing curriculum in months, not including nursing prerequisites.

- The Diploma program was 20 months in length and the MSN AE program was 12 months.
- ADN programs ranged from 15 to 28 months in length. The mean and median lengths for ADN programs were 21.4 and 22 months, respectively.
- LVN to ADN programs ranged from 12 to 20 months in length. The mean and median lengths for LVN to ADN programs were 14.3 months and 12 months, respectively.
- BSN programs ranged from 12 to 36 months in length. The mean and median lengths for BSN programs were 22.3 months and 24 months, respectively.

Figure 2 shows the number of programs that reported each length of time for curricula.

- 21 ADN programs and 18 BSN programs reported a nursing curriculum length of 24 months.

**Figure 2. Frequency of Nursing Curriculum Length by Program Type**



- 12 ADN and 7 BSN programs reported a 21-month curriculum.
- 2 BSN, 1 MSN alternate entry, and 5 LVN to ADN programs reported a 12-month curriculum.

## Program Tracks in Professional Nursing Programs

Program tracks are alternate pathways for students to meet the nursing program's objectives or outcomes. 98 of the 116 RN programs (84.5%) offered tracks in addition to their basic program.

- 59 programs (50.9%), including the 8 stand-alone LVN to ADN programs, offered an LVN to ADN track.
- 26 programs (22.4%) offered an RN to BSN track.
- 17 programs (14.7%) offered a paramedic/EMT to ADN track.
- 8 programs (6.9%) offered a bachelor's degree to BSN track.
- 13 programs (11.2%) offered an accelerated/ compressed curriculum.

Programs were asked about tracks that give active duty, former, or retired military personnel nursing credit for allied health care training or experience.

- 8 programs currently offered such a track, while 11 were planning to implement one.

- These 8 programs included 4 BSN programs, 3 ADN programs, and 1 LVN to ADN program.
- The 8 programs reported having a total of 103 students enrolled in these tracks.
- Programs cited challenges to implementing military tracks, such as the difficulty of evaluating military transcripts, insufficient funding, and lack of faculty.

Programs were also asked about options for high school students.

- 7 programs reported offering options for high school students.
- These 7 programs included 6 ADN programs and 1 BSN programs.
- The 7 programs reported having a total of 529 students enrolled in these tracks.
- Programs listed options such as offering dual credit in introductory and pre-requisite courses, as well as saving seats for these students once they have graduated from high school.

## Advanced Placement in Professional Nursing Programs

Some professional nursing programs offer advanced placement for students.[1] Students with prior VN or RN nursing education, paramedics, students with a background in allied health, LVNs, or students who hold a baccalaureate or master's degree in a discipline other than nursing may be eligible for advanced placement.

- As shown in Table 4, 50% of programs offered advanced placement to LVNs and 43.1% of programs offered advanced placement to students with some prior VN or RN education.
- 14.7% of programs offered advanced placement to paramedics/EMTs, 6.9% offered advanced placement to military healthcare personnel, 3.4% of programs offered advanced placement to allied health professionals, and 1.7% offered advanced placement to those with baccalaureate/master's degrees in other disciplines.

- 28.4% of programs did not grant advanced placement.

There were several mechanisms used by programs to grant advanced placement to students. Such mechanisms included direct transfer of credit or granting credit with a transition course, the completion of designated courses, passing written exam(s), or tech prep courses.[2] Table 5 indicates the types of mechanisms used to grant advanced placement by program type.

- Direct transfer of credit was the most widely used mechanism to grant advanced placement to pre-licensure nursing students across all program types, followed by granting credit with a transition course.
- 56% of programs used direct transfer of credit and 39.7% of programs granted credit with a transition course.

**Table 4. Number of Programs that Grant Different Types of Students Advanced Placement[1] by Program Type**

| Program Type | Type of Advanced Placement | | | | | |
|---|---|---|---|---|---|---|
| | Students with prior VN or RN nursing education | Paramedic/EMT | Allied health | LVN | Baccalaureate/ master's in discipline other than nursing | Military healthcare personnel |
| Diploma | 0 | 0 | 0 | 1 | 0 | 0 |
| ADN | 29 | 17 | 4 | 46 | 0 | 5 |
| LVN to ADN | 2 | 0 | 0 | 3 | 0 | 1 |
| BSN | 19 | 0 | 0 | 8 | 2 | 2 |
| MSN AE | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 50 | 17 | 4 | 58 | 2 | 8 |

**Table 5. Number of Programs Using Different Mechanisms to Grant Advanced Placement[1] by Program Type**

| Program Type | Type of Advanced Placement | | | | | |
|---|---|---|---|---|---|---|
| | Direct transfer of credit | Grant credit with transition course | Grant credit with completion of designated courses | Grant credit with passing written exam(s) | Tech prep courses[2] | College credit for active duty, former, and retired military personnel |
| Diploma | 1 | 1 | 1 | 0 | 0 | 0 |
| ADN | 40 | 37 | 14 | 9 | 1 | 3 |
| LVN to ADN | 3 | 1 | 1 | 1 | 0 | 1 |
| BSN | 21 | 7 | 7 | 12 | 0 | 2 |
| MSN AE | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 65 | 46 | 23 | 22 | 1 | 6 |

[1]Advanced Placement is defined as a mechanism by which students with relevant prior education and/or experience may be offered course credit by meeting certain other requirements.

[2]Tech prep courses are courses taken as part of a tech prep program. Section 2, Chapter 61, Subchapter T of the Texas Education Code defines tech prep programs as programs of study that combine secondary and post-secondary study through the integration of academic instruction with vocational and technical instruction. For more information on tech prep programs, please see the above stated section of the Texas Education Code.

## Online Availability of Professional Nursing Programs[3]

Programs were asked whether they offered nursing courses via online technology. Of the 116 professional nursing programs:

- 7 programs (6%) offered the entire didactic program curriculum online. Of these, 1 was an ADN program, 1 was an LVN to ADN program, and 5 were BSN programs.
- 44 programs (37.9%) offered select courses online. Of these, 18 were ADN, 2 were LVN to ADN, and 24 were BSN programs.
- 65 programs (56%) offered web-enhanced sections of courses online. Of these, 1 was a Diploma program, 32 were ADN, 2 were LVN to ADN, and 30 were BSN programs.
- 36 programs (31%) had no online course availability. These included 23 ADN, 4 LVN to ADN, 8 BSN, and 1 MSN Alternate Entry programs.

Since 2010, the percent of programs that offered the entire didactic curriculum online or offered web-enhanced sections of courses online has remained relatively steady. The percent of programs offering select courses online has decreased (down from 61.5% in 2010).

[3]Please note that programs may offer select courses entirely online and select courses as hybrids. Also note that all programs, whether or not they offered any portion of their program online, offered hands-on, face-to-face clinical experiences. Didactic curriculum is defined as including actual hours of classroom instruction in nursing and non-nursing Board-required courses/content.

## Program Hours in Professional Nursing Programs

In the 2016 NEPIS, programs were asked to provide information regarding the number of contact hours required in each of the following areas in their program of study: didactic, computer lab, skills lab, simulation lab, and patient care clinical situations. Figure 3 graphs the median value for each of the program activities for ADN, LVN to ADN, and BSN programs. Please note that there was only one Diploma program and one MSN Alternate Entry program so the median value was equal to the actual value reported by each program. For that reason, they are not graphed in Figure 3.

As evidenced by Figure 3, there was variation in the hours required by professional nursing programs both between and within program types. Some reasons for the variation may include: inherent differences between the program types (e.g., LVN to ADN programs are generally more abbreviated programs of study than ADN or BSN programs), differences between the operational definitions used in the NEPIS and how programs define these activities, or variations in the accuracy of self-reporting these hours by professional nursing programs. Further study of the variation in program hours has been performed by a Texas Board of Nursing Task Force, the Texas Nurses Association Subcommittee on Education, and the Texas Team Subcommittee on Education.

**Figure 3. Median Contact Hours Reported by Program Type**
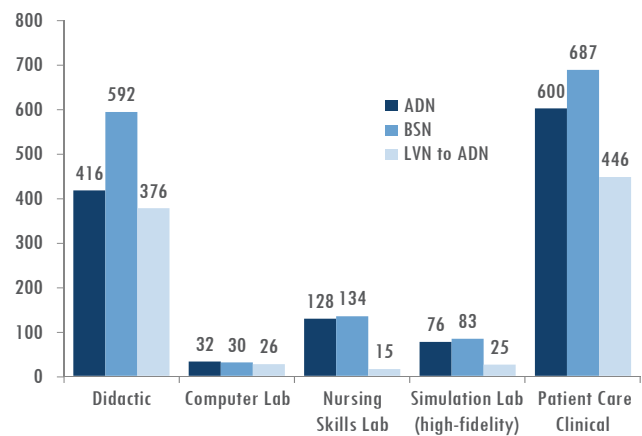


### Didactic Contact Hours

In this report, didactic includes actual hours of classroom instruction in nursing and non-nursing Board-required courses/content. The didactic hours reported by professional nursing programs ranged from 32 to 2,080 hours.

29 programs (25.0%) reported using a concept-based curriculum.[4] Of those 29 programs, 22 (75.9%) said that their program's concept-based curriculum adheres to the Texas model.

## Computer Lab

Computer lab is defined as interactive tutorials and learning modules that are part of a curriculum that is separate from didactic. 91 programs (78.4%) reported computer lab hours for their program of study. The computer lab hours reported ranged from 2 to 334 hours. The median number of computer lab hours reported by all programs has not changed substantially since 2011, but the percent of programs offering computer lab hours has increased steadily from 66.7% to 78.4%.

## Nursing Skills Lab (low- and moderate-fidelity simulations and task training)

In this report, nursing skills lab is defined as low- and medium-fidelity simulations and task training. All but 4 programs reported skills lab hours as part of their nursing curriculum. The skills labs hours reported by professional nursing programs ranged from 5 to 544 hours. The median number of nursing skills lab hours reported by all programs has decreased from 144 in 2011 to 128 in 2016.

## High-Fidelity Simulation Lab

Simulation lab refers to high-fidelity situations which are defined as structured learning experiences with computerized mannequins that are anatomically precise and reproduce physiologic responses. The environment mimics the clinical setting. All but 9 programs (92.2%) reported simulation lab hours for their programs of study. This percentage has been increasing since 2010, when 81.3% of programs required simulation lab hours. The simulation lab hours reported ranged from 6 to 384 hours. The median number of simulation lab hours reported by all programs has increased from 48 in 2011 to 79.8 in 2016, and the percent of programs offering simulation lab hours has increased from 82.9% to 92.2%.

69 programs (59.5%) reported that they had plans to increase the number of simulation lab hours over the next academic year. 31 programs (26.7%) reported that they weight simulation lab hours differently from hands-on clinical practice hours.

Programs were asked to provide their faculty to student ratios in simulation activities.

- The ratio varied from 1:2 in 1 program to 1:20 in 2 programs.
- The most commonly reported ratio was 1:10 (53 programs).

## Patient Care Clinical Situations

In this report, patient care clinical situations were defined

**Figure 4. Median Total Clinical Contact Hours Reported by Program Type**
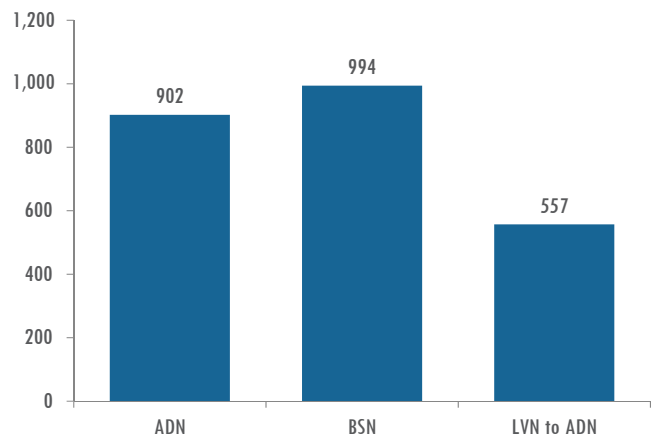


as hands-on clinical practice with actual patients in a clinical setting including all faculty-supervised activities in the clinical setting, such as direct care, observational experiences, and clinical conferences. The patient care clinical situations hours reported ranged from 152 to 1,056 hours. The median number of patient care clinical situations hours reported by all programs has decreased from 712 in 2011 to 631.5 in 2016.

## Total Clinical Contact Hours

Figure 4 displays the median total clinical contact hours reported by program type. Total clinical contact hours includes patient care clinical situations, nursing skills lab, simulation lab, and computer lab hours.

- Diploma and MSN Alternate Entry represent 1 program each, so they were not included in Figure 4. The diploma program reported total clinical contact hours of 1,392 and the MSN Alternate Entry program reported 970 total clinical contact hours.
- BSN programs reported the highest median clinical contact hours (994). The mean clinical contact hours for BSN programs was 972.1. BSN program clinical contact hours ranged from 220 to 1,256.
- ADN programs reported a median of 902 and a mean of 912.0 total clinical contact hours. ADN programs reported a range of total clinical contact hours from 372 to 1,856.
- LVN to ADN programs had a median of 557 and a mean of 516.4 clinical contact hours. Hours varied among LVN to ADN programs from 480 to 832.
- 16 programs (13.8%) reported that they used Dedicated Education Units (DEUs) as a clinical format.[5]

**Table 6. Percentage of Hands-On Clinical Time Spent by Setting**

| Clinical Setting | Mean % of Time Spent | Median % of Time Spent |
|---|---|---|
| Acute Care | 73.0% | 75.0% |
| Long Term Care | 9.2% | 8.0% |
| Community Settings | 12.8% | 10.0% |
| Other | 5.1% | 0.0% |

Table 6 displays the percentage of hands-on clinical practice time programs reported students spent in a variety of settings.

- The majority of hands-on clinical practice hours were spent in the acute care setting, with programs reporting an average of 73.0% of clinical practice hours spent in the acute care setting.
- The next most used setting was community settings, with an average of 12.8% of clinical practice hours.
- "Other" settings included psych/mental health (13 programs) and schools (4 programs).
- The percentage of time spent in these settings has not changed significantly since 2014, when these categories were first introduced.

[4] A concept-based curriculum focuses on helping nursing students learn generalities, or concepts, that can be applied to specifics instead of focusing on expanded content and facts. Conceptual learning in nursing involves emphasizing concepts that link to the delivery of patient care.

[5] A Dedicated Education Unit is a nursing education model based upon a contractual agreement between a hospital and a nursing education program. Staff nurses on a specific hospital unit function as the primary instructors for nursing students during clinical learning experiences, and nursing program faculty serve as mentors and education resources for the staff nurses.

# Interprofessional Collaboration in Professional Nursing Programs

Based on the recommendation of the Institute of Medicine's Future of Nursing report,[6] the 2016 NEPIS included a question on the amount of interprofessional collaboration pre-licensure RN students experience.

Programs were asked to report the number of required nursing courses that offered clinical or simulation experiences for both entry-level RN students and one or more types of other graduate-level health professional students, such as physicians, physician assistants, or pharmacists.

- 64 programs reported zero required nursing courses that offered interprofessional collaboration experiences.
- 52 programs reported requiring anywhere from one course (6 programs) to 11 courses (2 programs).

[6] The Institute of Medicine of the National Academy of Sciences. (2010). *The Future of Nursing: Leading Change, Advancing Health.* Retrieved from: http://www.iom.edu/Reports/2010/The-Future-of-Nursing-Leading-Change-Advancing-Health.aspx