CHARACTERISTICS of the NURSING WORKFORCE in Oregon-2016

Oregon Center for NURSING

CHARACTERISTICS OF THE NURSING WORKFORCE IN OREGON - 2016

The nursing workforce is critical to the delivery of healthcare. Nurses work in a variety of settings and practice areas affecting the lives of all Oregonians. In addition, nurses make up the largest share of the healthcare workforce in Oregon. This makes nursing an economic driver for the state.

According to the Health Resources Service and Administration, like much of the rest of the nation, Oregon is facing a shortage of nurses by 2025. This shortage will compound the shortage of other healthcare professionals, including physicians.

Major challenges facing Oregon's nursing workforce include:

- Aging population in Oregon
- Aging nursing and healthcare workforce
- Significant shortages of nurse faculty
- Changes to healthcare reform laws

As the biggest segment of the healthcare workforce, nurses contribute to the fulfillment of the Triple Aim as defined by the Institute for Healthcare Improvement. Nurses can improve the patient experience, improve the health of populations, and reduce the cost of healthcare. In addition, nurses have the ability to move forward national and state health care policies, which emphasize disease prevention and health promotion.

Since 2002, the Oregon Center for Nursing (OCN) has provided independent analysis of nursing workforce data. Understanding the characteristics of Oregon's nursing workforce better informs policymakers, employers, educators, and researchers as they strive to provide quality healthcare for all Oregonians.

THE STATUS OF OREGON'S NURSING WORKFORCE

During 2016, slightly more than 80,000 nursing professionals held a license to practice in the state of Oregon. Of these, an estimated 64,000 are currently practicing in Oregon. Table 1 shows the number of licensed and practicing nursing professionals during 2016 by license type (e.g. Certified Nursing Assistants [CNA], Licensed Practical Nurses [LPN], Registered Nurses [RN], and Advance Practice Registered Nurses [APRN]). Registered Nurses and Certified Nursing Assistants are the most numerous licensed professions with 51,926 and 18,025 licensees, respectively.

In Oregon, nursing professionals renew their licenses every two years, and a demographic/workforce survey is conducted during renewal. Because of the timing of the survey, little is known about the employment setting of newly licensed nursing professionals who obtain their first licenses and do not take the workforce survey. To understand the total supply of nursing professionals in Oregon and take into consideration newly licensed professionals, OCN developed a method to estimate the number of practicing licensees. The employment rate of licensees completing the survey is applied to the newly licensed individuals (and those who did not complete the survey) to estimate the number of practicing individuals shown below. As can be seen, about 80 percent of licensed professionals actually practice in Oregon.

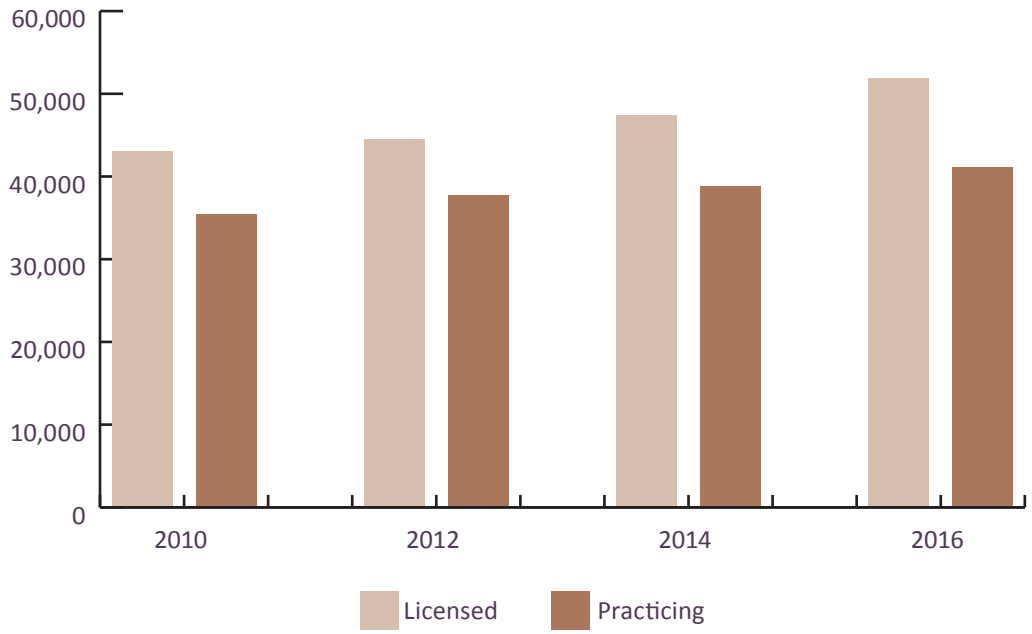
Table 1 | Number of Licensed and Practicing Nursing Professionals in Oregon-2016

	CNA	LPN	RN	APRN
Licensed	18,025	4,934	51,926	4,290
Practicing	15,638	4,035	41,105	3,489

Source: OHA, Public Use Nursing Workforce Data File, 2016

The number of licensed and practicing RNs has grown in recent years. In 2010, 43,015 people held an RN license. By 2016, the number of licensed RNs grew by 20 percent to 51,926 licensed RNs. Interestingly, while the number of practicing RNs also grew during this time, they grew at a slightly lower rate than the number of licensed nurses. The number of practicing nurses only grew by 15 percent from 35,849 in 2010 to 41,105 in 2016. The growth trends for licensed and practicing RNs are illustrated in Figure 1.

Figure 1 | Number of RNs Licensed and Practicing in Oregon



DEMOGRAPHICS OF THE NURSING WORKFORCE

AGE

An examination of the age distribution for RNs over the past six years shows the workforce is generally younger than in the past. Figure 2 shows the age distribution of RNs from 2010 to 2016.

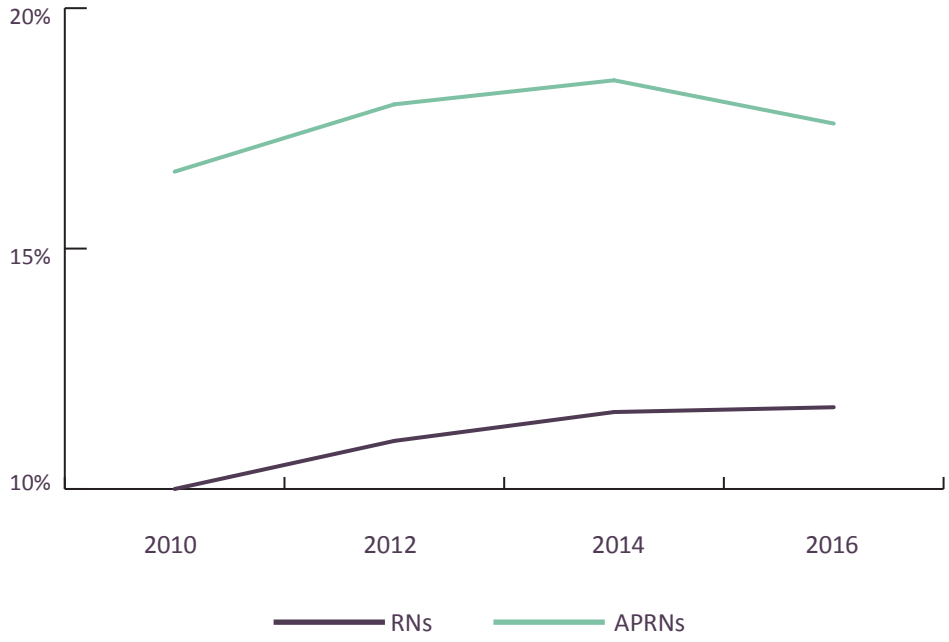
Figure 2 | Age Distribution of RNs from 2010 to 2016

As can be seen in Figure 2, the number of RNs aged 25-34 and 35-44 are proportionally higher in later years, while RNs aged 45-54 and 55-64 are considerably lower. Interestingly, this pattern seems to step in each two-year period with 2016 being slightly younger than 2014, which in turn is younger than 2012. This pattern follows in 2010. However, a bump in the proportion of RNs age 65 and older occurred in 2016.

GENDER

Currently, about 12 percent of licensed RNs in Oregon are male; nationally about 10 percent of licensed RNs are male (Landivar, 2013). Additionally, almost 18 percent of APRNs licensed in Oregon are male. This is primarily due to the high number of Certified Registered Nurse Anesthetists (CRNAs) who are male. Generally, the percent of male RNs and APRNs has grown over time. Figure 3 shows these trends.

Figure 3 | Percent of Male RNs and APRNs



The proportion of male RNs has grown slightly during each 2-year reporting cycle. The slight decline of the proportion of male APRNs seen in 2016 is due to a decrease in the percent of male CRNAs. Proportionally, male Nurse Practitioners and Clinical Nurse Specialists increased in 2016, but the drop in the percent of male CRNAs masked these increases and led to an overall decrease in the proportion of male APRNs.

RACE/ETHNICITY

Racial/ethnic minority groups are typically under-represented in Oregon's nursing workforce as compared to the racial/ethnic makeup of the state's population. More than 88 percent of licensed RNs identified as white, while 79 percent of the population of Oregonians identified as white. Hispanics are the most under-represented population, with only 3.4 percent of RNs identifying as Hispanic, while almost 12 percent of the state's population is Hispanic. Asians and Native Hawaiians/Pacific Islanders are slightly over-represented (4.0% vs 3.6%, 0.4% vs 0.3%, respectively). Table 2 shows the racial/ethnic composition of the RN workforce compared to the population as a whole.

Table 2 | Comparison of the Racial/Ethnic Composition of RNs and the Population

Race/Ethnicity	RNs	Population
White	88.5%	78.5%
Hispanic	3.4%	11.7%
Black	1.0%	1.7%
Asian	4.0%	3.6%
Native American/Alaskan Native	0.6%	1.1%
Native Hawaiian/Pacific Islander	0.4%	0.3%
Other Race	0.4%	0.1%
More Than One Race	1.9%	2.9%

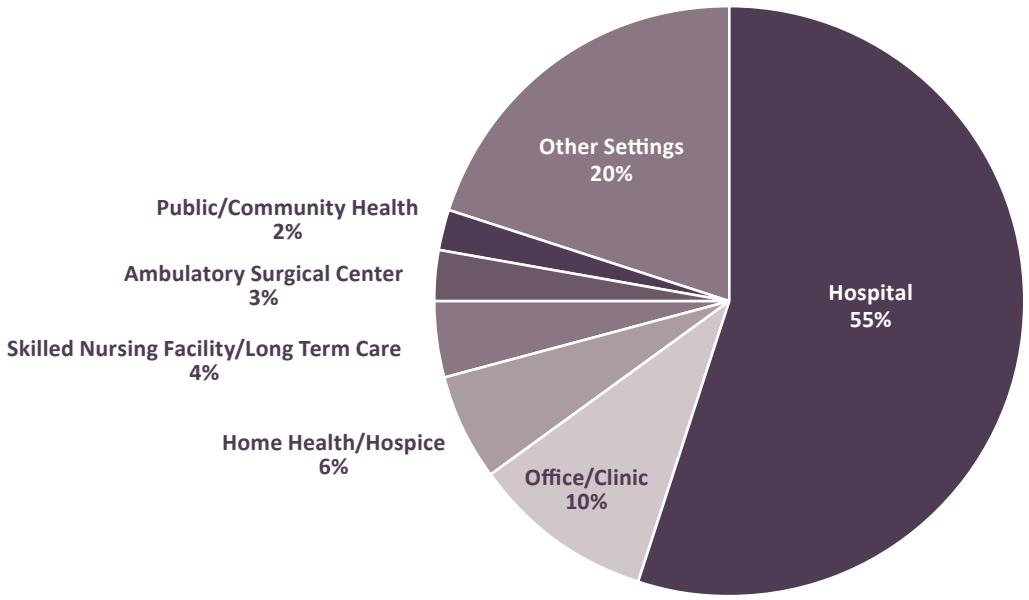
Sources: OHA, Public Use Nursing Workforce Data File, 2016
Portland State University, Oregon State Data Center, State Population Estimate, 2016

PRACTICE SETTINGS & **PRACTICE** SPECIALIZATION

PRACTICE SETTINGS

As with most reports discussing employment settings for nurses, the majority of Oregon's licensed RNs practice in a hospital setting. During 2016, 55 percent of RNs worked in hospitals. Office/clinic settings was the second largest employment setting, but only 10 percent of RNs reported practicing in this setting. National data show similar findings. According to the Bureau of Labor Statistics (2015), about 61 percent of RNs worked in a hospital during 2014. Figure 4 illustrates the top six practice settings for Oregon nurses, and clearly shows how hospital employment overshadows every other practice setting.

Figure 4 | Practice Settings for Oregon RNs



While the vast majority of RNs work in a hospital setting, this figure has begun to decline recently. During 2014, 60 percent of RNs worked in a hospital setting, and figures for 2010 and 2012 show similar levels of the work-setting share (60 and 58 percent, respectively).

Table 3 | Reported Practice Specializations for RNs

RN Specialty	Percent
Medical-Surgical	13.6%
Surgery/Recovery	11.3%
Critical Care/ICU/CCU	10.7%
Emergency/Urgent Care	8.3%
Ob-Gyn/Women's Health	7.9%
Management/Administration	4.7%
Home Health	4.4%
Pediatrics	4.2%
Psychiatry/Mental Health	4.0%
Geriatrics	3.5%
Oncology	3.4%
Community-Based Care	3.2%
General Nursing	2.1%
Long Term Care	2.1%
Other Specialties	16.6%

Source: OHA, Public Use Nursing Workforce Data File, 2016

PRACTICE SPECIALIZATION

Unlike practice setting, practice specialization is distributed somewhat more evenly across RNs. However, many of the reported specializations are consistent with a hospital setting. A little more than 13 percent of RNs reported a medical-surgical specialization; 11 percent reported a surgery/recovery specialization, and just under 11 percent reported a critical care specialization. The top specializations for licensed RNs is found in Table 3.

EDUCATIONAL ATTAINMENT

In 2010, the National Academy of Medicine (formerly the Institute of Medicine) set a goal for 80 percent of RNs to have a Bachelor's of Science in Nursing (BSN) by the year 2020. In 2016, 48 percent of Oregon RNs held a BSN and 54 percent held a BSN or higher degree. This represents an increase of four percent points over the 2012 figure of 44 percent of RNs with a BSN. A concomitant decline in the proportion of RNs with an Associate's Degree in Nursing (ADN) was also observed over this same period; from 46 percent of RNs holding an ADN in 2012 to 41 percent in 2016. Table 4 displays the highest level of educational attainment by RNs over the past 6 years.

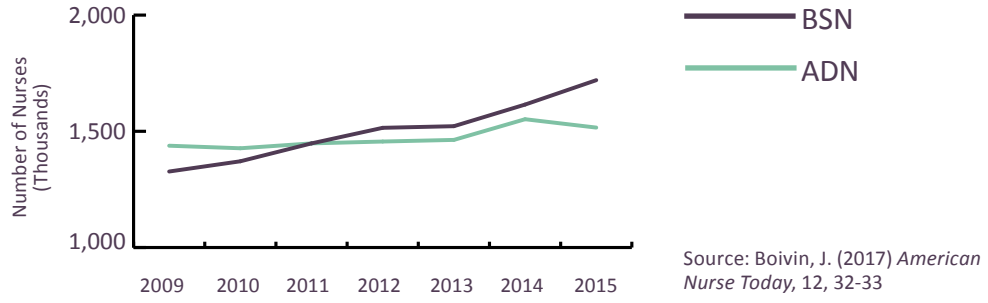
Table 4 | Highest Educational Attainment for RNs

	2012	2014	2016
Less than ADN	6%	5%	5%
ADN	46%	43%	41%
BSN	44%	45%	48%
Master's or Higher	4%	6%	6%

Source: OHA, Public Use Nursing Workforce Data File, 2016

National trends are similar. Recently, Boivin (2017) reported that between 2009 and 2015 the number of RNs with a BSN grew by about four percent per year. However, growth in the number of ADN-educated RNs grew by less than one percent a year over the same period. They argue that while the percent growth across the two groups may seem small, the change is more significant as about three million RNs are licensed across the country. As can be seen in Figure 5, since 2009 the number of BSN educated RNs grew by nearly 400,000, while ADN educated RNs only grew by 78,000.

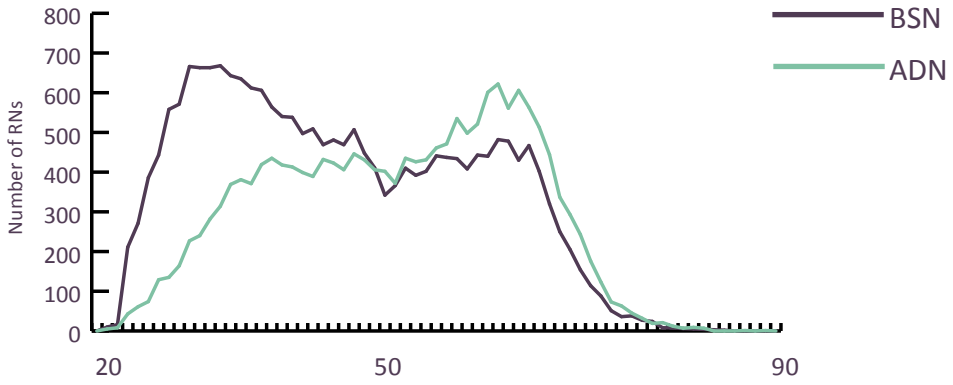
Figure 5 | Number of Employed RNs by Education



Source: Boivin, J. (2017) *American Nurse Today,* 12, 32-33

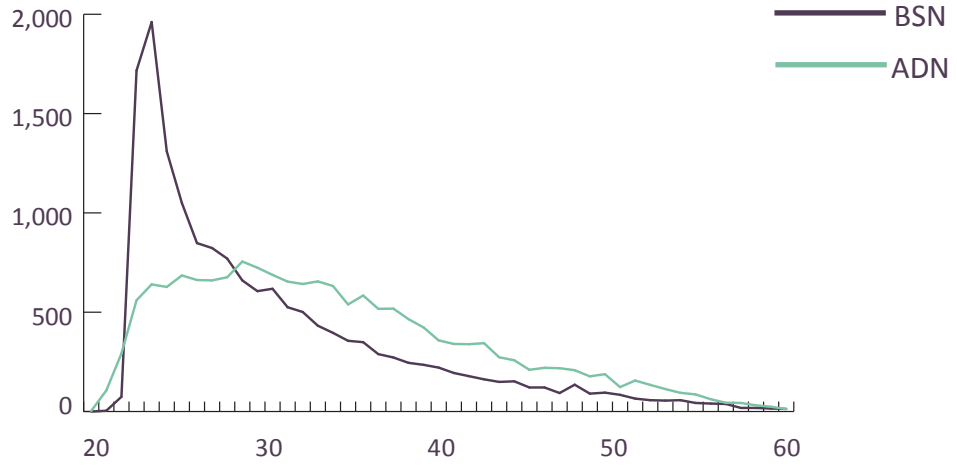
One question raised by the examination of these data is, if the number of BSN educated nurses is growing so fast, why do less than half of licensed RNs hold a BSN. One possible explanation for why the proportion of BSN-educated nurses has not grown as fast as the number of BSN educated nurses is that RNs with an ADN are not retiring and staying in the workforce longer than expected. This can be shown in two ways: 1) RNs with an ADN tend to be older than RNs with a BSN, and 2) RNs with an ADN delay retirement plans, relative to RNs with a BSN. The idea that ADN-educated RNs tend to be older than RNs with a BSN is supported by the licensure data, and is illustrated in Figure 6.

Figure 6 | Age of RNs by Highest Education – ADN vs BSN



As seen in Figure 6, Oregon RNs over 50 are more likely to hold an ADN, while those younger than 50 tend to hold a BSN. Thus, ADN-educated RNs tend to be older, supporting the idea that ADN-educated RNs may be staying in the workforce longer. However, Peter Buerhaus and his associates argue that ADN educated nurses are older than nurses holding a BSN because they are receiving their college degrees later in life than their BSN educated counterparts (Auerbach, Buerhaus, & Staiger, 2000). The data also support the hypothesis that ADN-educated RNs are planning to retire later than their BSN trained counterparts. Data from 1995 show that the average age at graduation for an ADN and a BSN student is around 33 years-of-age and 28 years-of-age, respectively. They argue that the rapid rise of ADN programs during the 1980's and 1990's make it possible to go back to school later in life. They further note that these two-year programs are more popular with older students. Data from the Oregon nurse licensure data shows that BSN-educated RNs are younger when originally licensed than ADN-educated RNs (Figure 7). The median age for RNs holding a BSN was 27 while the median age for an ADN educated RN was 33.

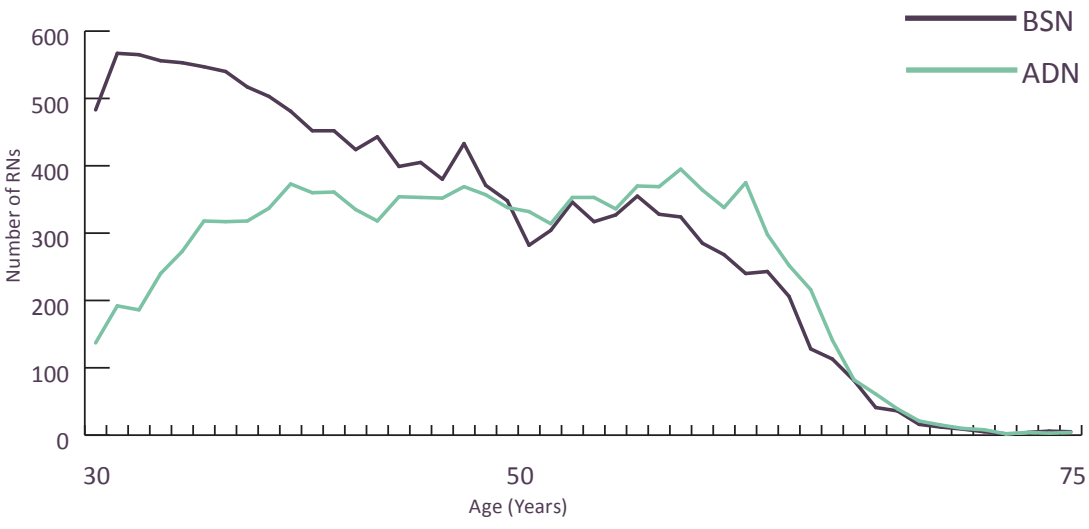
Figure 7 | Age of Original Licensure by Education



The data presented above strongly shows that ADN-educated RNs are older when first obtaining their Oregon license, and are likely entering the workforce older than are BSN-educated RNs, consistent with the work of Buerhaus and his colleagues.

Figure 8 shows retirement plans for ADN and BSN-educated RNs. These data show older ADN-educated RNs are more likely to delay retirement for more than five years compared to BSN-educated RNs at comparable ages. These data show that for nurses in their 50's and early to mid-60's, more ADN-educated RNs are delaying retirement for five or more years. Taken together, these two lines of converging evidence suggests that ADN-educated RNs are staying in the workforce longer, and are, to some degree, masking the increase in the percent of RNs with a BSN.

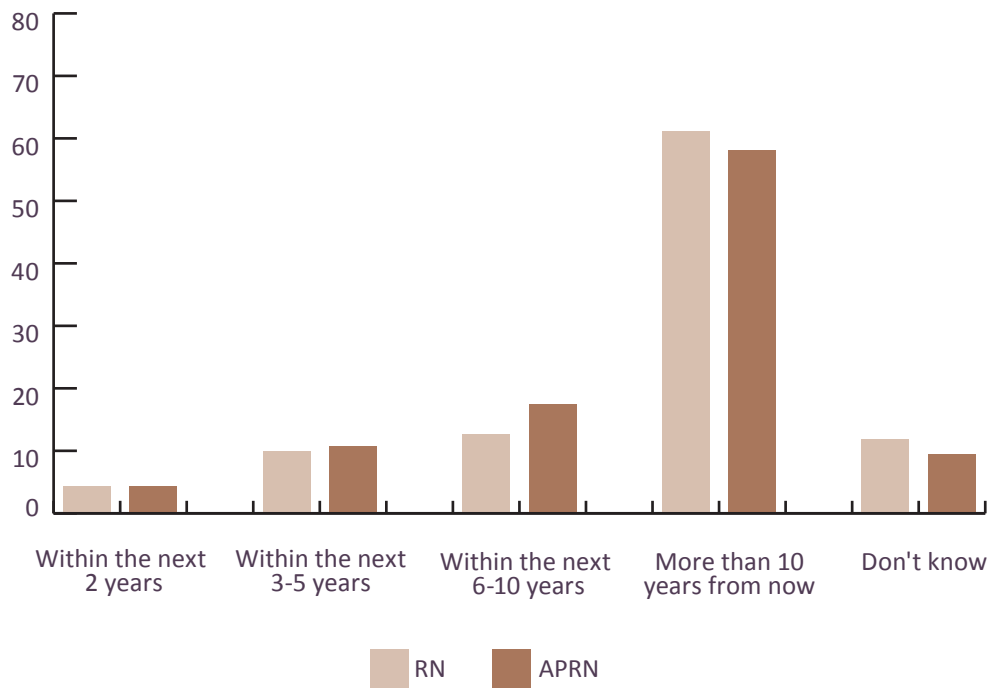
Figure 8 | Plan to Retire in >5 Years for RNs by Education and Age



RETIREMENT PLANS

With news reports about imminent nursing shortages, data concerning the retirement of the current nursing workforce is increasingly relevant to workforce planning. As illustrated in Figure 9, about four percent of the current RNs and APRNs plan to retire within the next two years. Over the next five years, about 14 percent of the RN workforce and 15 percent of the APRN workforce indicated they plan to retire. Additionally, about 61 percent of licensed RNs and 58 percent of licensed APRNs plan to retire more than 10 years from now.

Figure 9 | Future Retirement Plans for Oregon Nurses



CONCLUSION

The data presented above clearly illustrates the complexity inherent within the nursing workforce. Not only are nurses the most numerous health care workers in the Oregon, the nursing profession is also one of the most diverse in terms of scope and breadth of their practice. As such, an adequate, well-trained nursing workforce is critical to the health and safety of Oregonians.

Most research findings uncover more questions that they address. This report is not an exception. As most of the findings presented in this paper are descriptive by nature, many questions concerning the circumstances driving the change within the nursing workforce remain. For instance, much of the workforce research literature describes an aging nurse workforce (e.g., Buerhaus, Staiger, & Auerbach, 2000). However, Oregon data suggest that in 2016, the state's RN workforce is somewhat younger than in previous years (see figure 2). Further research is needed to determine whether 2016 was an anomaly in an increasingly aging workforce, or does this denote a shift towards a younger workforce.

Several other questions revealed themselves during the course of this work.

- Why is the number of licensed and practicing nurses diverging (see Table 1 and Figure 1)? Are nurses licensed in Oregon leaving the state to practice, or are they leaving the field altogether?
- What caused the sudden increase in nurses over the age of 65 (see Figure 2)? The proportion of nurses older than 65 doubled in 2016, from about six percent to a little over 12 percent.
- Are nurses delaying retirement and working longer, especially ADN-educated RNs (see Figure 8 and Figure 9)?
- Many questions arose concerning education attainment and progression; specifically questions focusing on the growth (or lack thereof) in BSN educated nurses (see Figure 7).

While these questions are interesting and important to ensure valid workplace planning, focus must also be directed to the ever-changing health care landscape. Changes at the state and federal level require health care planners to look beyond current conditions and practices to imagine what the health care workforce should entail to fit effectively into the new, dynamic health care environment.

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