



Recent Changes in the Number of Nurses Graduating from Undergraduate and Graduate Programs

EXECUTIVE SUMMARY

- ▶ Since the 1970s, a number of initiatives have attempted to increase the proportion of nursing graduates with a baccalaureate degree, but with little national effect.
- ▶ Now market forces, health reforms, and an Institute of Medicine report (2011) have combined to transform the educational composition of the nursing workforce.
- ▶ Today, there are considerably more graduates of baccalaureate nursing programs than associate degree programs.
- ▶ The educational transformation of the nursing workforce is not limited to baccalaureate education but includes the rapidly increasing numbers of registered nurses who have earned graduate degrees.
- ▶ These changes in nursing education are increasing the readiness of nursing professionals to capitalize on new opportunities, overcome challenges, and take on new roles and responsibilities as the nation's health care delivery and payments systems evolve in coming years.

the number of associate and baccalaureate graduates increased from nearly 77,000 in 2002 to 184,000 in 2012; (b) the growth was broad based, as it occurred among both associate and baccalaureate programs and included people from all racial and ethnic backgrounds; (c) growth occurred in all types of public, private not-for-profit, and proprietary institutions; and (d) growth among nurses with master or doctoral degrees tripled, increasing from approximately 10,000 in 2002 to 30,000 in 2012.

Subsequently, Auerbach, Buerhaus, and Staiger (2015) examined whether registered nurses (RNs) prepared with an associate degree (ADN) fared differently in the labor market from baccalaureate-degree prepared RNs (BSNs) – particularly in light of the Institute of Medicine (IOM, 2011) recommendation that 80% of the nursing workforce be educated at the baccalaureate level by 2020 and because hospitals had begun to place explicit hiring preferences for BSNs. This examination found a striking decrease in the proportion of associate-degree prepared RNs working in hospitals in recent years.

This finding raises the possibility that the preference for BSNs may have led to a shift away from ADN education and toward BSN education. At the time the above referenced 2014 study of nursing graduates was published, the most recent IPEDs data available were through 2012. With the release of new data through 2014, this *Data Watch* re-examines graduation trends by degree to determine if there has been a decrease in the production of new ADN graduates. Further, this analysis is supplemented with data from the National Council of State Boards of Nursing on nursing students from associated and baccalaureate programs who have taken the NCLEX exam, the required entry exam to become licensed as an RN. For details of the IPEDs data and the methods used to analyze these data, see Buerhaus and colleagues (2014).

Growth Continues for BSN, Not ADN Graduates

The total number of graduates with a baccalaureate or associate degree in nursing declined from 100,000 in 1996 to 77,000 by 2002, but then increased sharply, reaching approximately 184,000 in 2012 (see Figure 1). The addition of the two most recent years of IPEDs data shows this increase continued through 2014, when the number of undergraduate degrees awarded reached just over 200,000.

The overall trend shown in Figure 1 was decomposed according to degree type. As seen in Figure 2,



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IN 2014, Buerhaus, Auerbach, and Staiger reported on trends in the number of nursing graduates in the United States over the period 1984-2012. Data from the Integrated Post-secondary Education Data System (IPEDS) were examined to assess the growth of nursing graduates by level of education (associate, baccalaureate, and graduate), type of nursing education

program (public, private not-for-profit, and private for-profit), and by the state where new graduates were prepared. This examination revealed the growth in the number of RN undergraduates accelerated substantially over the past 10 years. Findings showed: (a)

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Figure 1.
Total Number of Baccalaureate and Associate Degrees in Nursing Awarded, 1984-2014

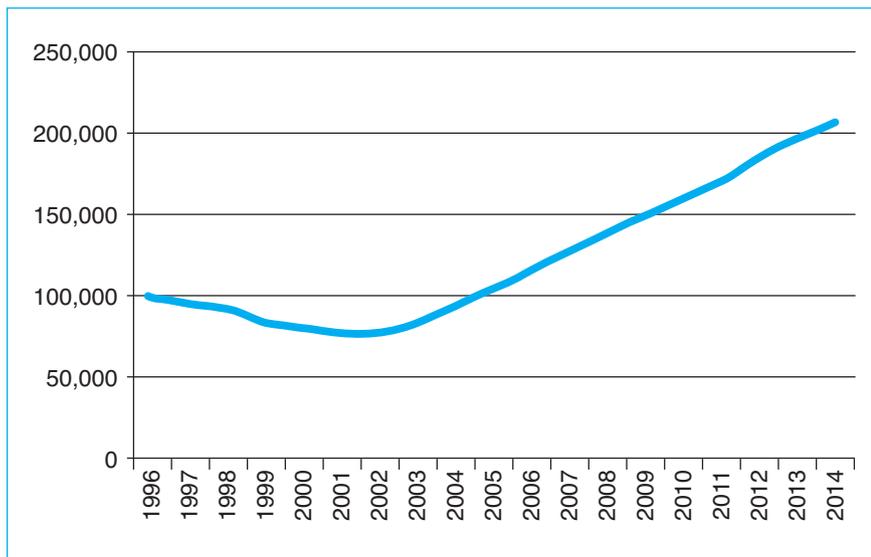
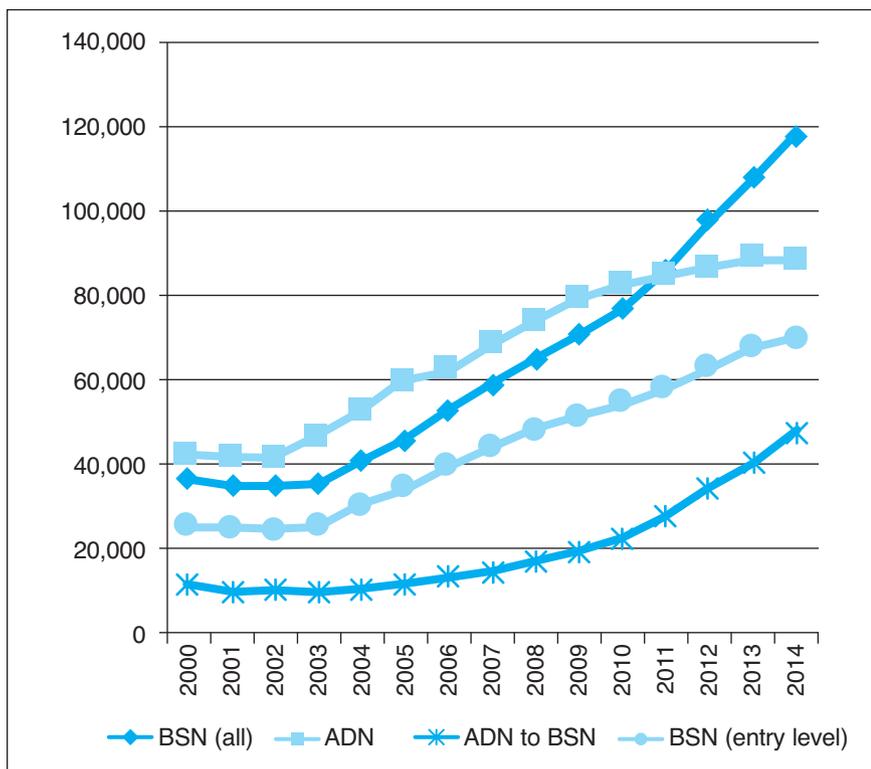


Figure 2.
Number of Undergraduate Nursing Degrees Awarded, by Type of Degree, 2000-2014



NOTE: Data on domestic first-time test-takers are from the NCLEX examination statistics series.

associate degrees have represented the majority of degrees awarded (this trend extends back into the early 1980s) until only very recently, when, in 2011, the number of baccalaureate degrees awarded exceeded the number of ADNs for the first time. The updated IPEDs data reveal the number of BSNs awarded have continued to accelerate while ADNs have leveled off such that by 2014, BSN graduates exceeded ADN graduates by one-third. Much of this trend is due to very strong and recent growth in graduates from ADN-to-BSN (i.e., RN-to-BSN) “completion” programs, in which associate-degree educated RNs enroll in 12-18 month programs to obtain a BSN. A large portion of this growth is likely a response to hospitals’ hiring preferences for BSNs and a perception of the reduced future marketability of the ADN degree.

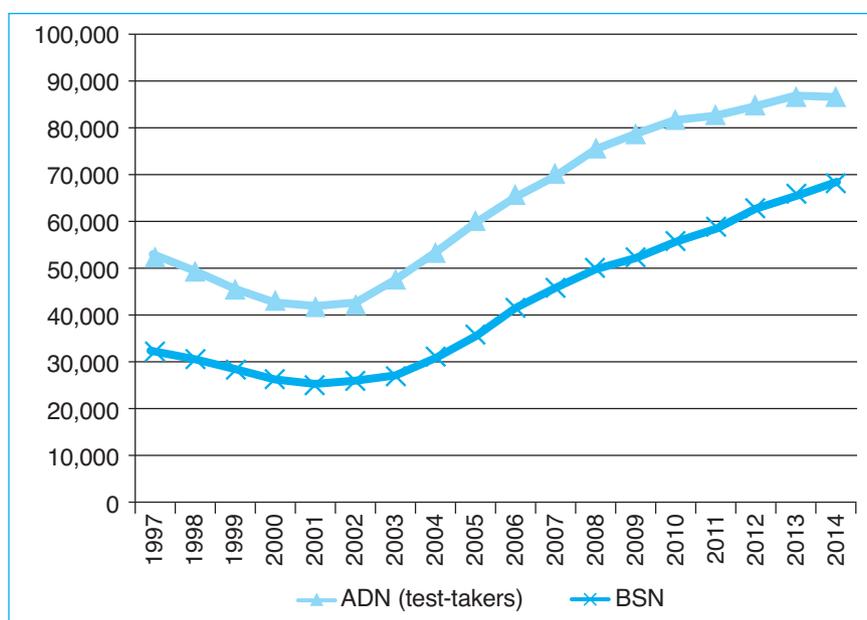
Even excluding the effect of RN-to-BSN programs, however, the number of entry-level BSN degrees obtained has continued increasing steadily since 2003, as the number of ADNs has leveled off. This trend is also apparent in the number of domestic first-time NCLEX test-takers by degree program, shown in Figure 3, which provides trends extending back to 1997.

As was seen with the IPEDS nursing data, it is apparent nursing enrollment is shifting toward the BSN. Between 2002 and 2010, the number of ADN test-takers grew by 7% annually and the number of BSN test-takers grew by 8% annually. Since 2010, however, ADN test-takers have slowed to a 1% annual growth in contrast to 5% for those obtaining BSNs.

Rapid Increase in Graduate Degrees

Prior analysis (Buerhaus et al., 2014) indicated that from the 1980s through the early 2000s, the number of RNs awarded a graduate degree grew slowly, never exceeding 10,000 in any year.

Figure 3.
NCLEX Domestic First-Time Test-Takers, by Degree, 1997-2014



After 2002, this trend changed abruptly as the number of nurses awarded graduate degrees increased rapidly, reaching 30,000 by 2012. The new IPEDs data for 2013 and 2014 show this growth has continued as approximately 38,000 RNs received graduate degrees in 2014.

Finally, while not shown in the figures, the new IPEDs data for 2013 and 2014 indicate continued growth in the number of nursing education programs. From 2002 to 2012, 300 new programs granted associate degrees (from 893 to 1,193) and 276 new programs granted baccalaureate degrees (from 667 to 993), for an average of about 30 additional programs of each type per year. In 2013 and 2014, 52 new associate programs and 85 new baccalaureate programs began granting degrees.

Discussion

Since the 1970s, a number of initiatives have attempted to increase the proportion of nursing graduates with a baccalaureate degree, but with little effect nationally. Yet, it now appears that hospitals' increasing preference for hiring BSNs that began in the mid-2000s, the 2010 IOM recommendation to expand the number of BSN-prepared RNs, and the expected growth in new roles for nurses associated with the implementation of health reforms have combined to transform the educational composition of the nursing workforce.

Today, there are considerably more graduates of BSN programs than ADN. A considerable portion of the growth in BSN graduates can be attributed to the

increase in the number of RN-to-BSN prepared RNs. Although such programs have existed for several decades, the number of RN-to-BSN graduates increased especially rapidly following the IOM (2011) report and the passage of health reform legislation. The contribution of RN-to-BSN programs over the past few years has strongly supported the educational progression of the nursing workforce.

The educational transformation of the nursing workforce is not limited to baccalaureate education but includes the rapidly increasing numbers of RNs who have earned graduate degrees. Undoubtedly, the increase of graduate degrees is associated with the development and rapid adoption of programs offering the doctor of nursing practice, the IOM (2011) report, and through initiatives to increase the number of PhD RNs, such as the Jonas Nurse Leaders Scholars Program.

Taken together, these changes in nursing education are increasing the readiness of nursing professionals to capitalize on new opportunities, overcome challenges, and take on new roles and responsibilities as the nation's health care delivery and payments systems evolve in coming years. \$

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