Washington State Registered Nurse Supply and Demand Projections: 2011-2031

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Background and Methods

Maintaining an adequate registered nurse (RN) workforce will be a challenge as Washington's population grows and ages, chronic disease rates increase, and previously uninsured residents gain access to health insurance through the federal Patient Protection and Affordable Care Act (PPACA). At the same time, the aging RN workforce is beginning to retire, and economic downturn is threatening Washington nursing education programs.

This report describes trends in RN supply and demand for Washington State from 2011 through 2031. To provide a planning tool for decision-making, we estimated baseline supply and demand in 2011 as well as rates of change over time, and projected supply and demand to 2031 for licensed and practicing RNs using data from a variety of state and national sources. Our workforce projection model estimates annual entrants and exits to licensed RN supply (as shown on the next page) across two decades and subtracts the fraction estimated to not be employed in nursing to obtain an estimate of the number of practicing RNs for each year. Practice status must be estimated because it is not available from license records. These numbers are compared with annual estimates of RN demand in the state and to the number of licensed RNs per 100,000 state population in 2011.
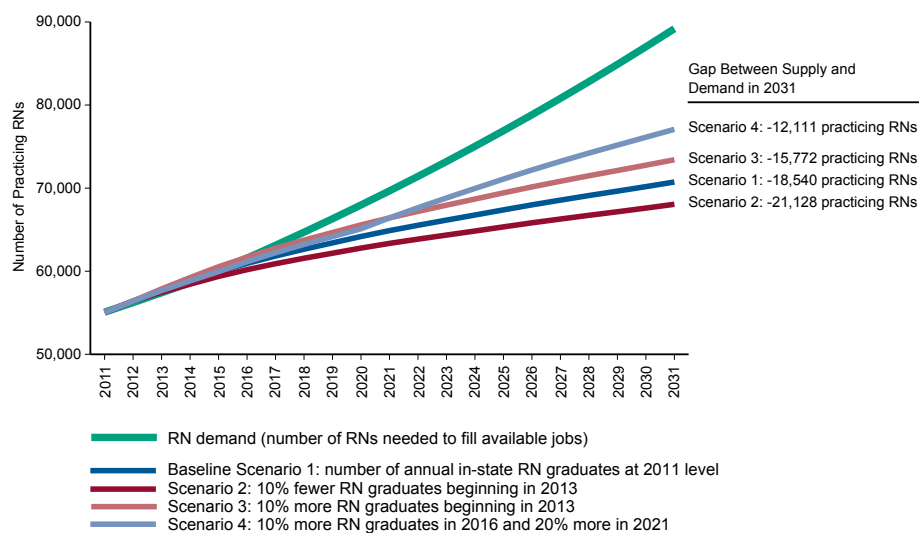
Major Findings

Projected demand for practicing RNs begins at 55,070 in 2011 and reaches 89,186 in 2031. The four scenarios used to project RN supply each start in 2011 with 55,044 practicing RNs and alter the RN education capacity from nursing schools in the state (see figure below).

■ Scenario 1: if the baseline rate of RN graduates from in-state schools who work in Washington remains at the 2011 level, there will be 70,736 practicing RNs in 2031.

■ Scenario 2: if the RN graduation rate decreases by 10%, there will be 68,059 practicing RNs in 2031.

■ Scenario 3: if the RN graduation rate increases by 10%, there will be 73,414 practicing RNs in 2031.

■ Scenario 4: if the RN graduation rate increases by 10% beginning in 2016 and by 20% beginning in 2021, there will be 77,075 practicing RNs in Washington in 2031.

All four RN supply scenarios meet or exceed the number of licensed RNs needed to maintain the 2011 per capita benchmark over the next two decades, indicating RN supply will keep pace with population growth. But RN demand is projected to increase faster than population growth, due to the added health care needs of more elderly, chronically ill, and insured individuals. All of the scenarios presented in this report, even those that increase education output, project RN supply to fall short of demand by 2017 or earlier.

Estimated Washington State RN Supply and Demand: 2011-2031

Gap Between Supply and Demand in 2031
- Scenario 4: -12,111 practicing RNs
- Scenario 3: -15,772 practicing RNs
- Scenario 1: -18,540 practicing RNs
- Scenario 2: -21,128 practicing RNs

— RN demand (number of RNs needed to fill available jobs)
— Baseline Scenario 1: number of annual in-state RN graduates at 2011 level
— Scenario 2: 10% fewer RN graduates beginning in 2013
— Scenario 3: 10% more RN graduates beginning in 2013
— Scenario 4: 10% more RN graduates in 2016 and 20% more in 2021

Discussion and Policy Implications

From these different but realistic views of possible changes in the size of Washington's RN supply over time, two important messages surface:

■ Short-term (five-year) RN supply appears to align with demand, but demand is estimated to begin to outpace supply in Washington over the next decade as RNs begin to retire and demand for health care escalates.

■ Unless demand adapts to the available workforce supply—or educational capacity is increased—RN supply appears likely to fall far short of demand in 20 years. The gap between RN practicing supply and demand will be more than 12,000 RNs in 2031, even under our most optimistic scenario.

As with any forecast, reliability is greater in the short term and uncertainty increases over time. But it appears clear that RN shortages will soon appear and strategies are needed—such as increasing education capacity and identifying new models of care that emphasize prevention and optimize use of resources—that will bring RN supply into better alignment with the increasing need for health care among the state's population.

Better data resources are needed to track workforce trends in Washington, including identifying how many health professionals are practicing, where, and in what specialties. Such data would increase the accuracy of future projections. Many states collect these data when professionals are licensed and at renewal.

Strategies to avert future RN shortages will be supported by an innovative nursing education environment in Washington that has demonstrated commitment to producing nurses with the knowledge and skills to teach, monitor, and manage care across health care settings and who can update that knowledge over the course of their careers.

All of the scenarios presented in this report, even those that increase education output, project RN supply to fall short of demand by 2017 or earlier.

Conceptual Model of Factors Affecting State RN Supply in One Year

Graduates from WA nursing schools → NCLEX pass rate → Number of licensed RNs in previous year → Actively Licensed RNs

New foreign-educated RNs

In-migration from other states

Re-activation of license after expiration

→ Entrants
--▶ Exits

Deaths

Out-migration to other states

License expiration due to age-related retirement and leaving practice

Adjustment: percent of licensed RNs who are working

RNs Working in Nursing (Supply of Practicing RNs)