

Health Workforce Projections: Certified Nurse Anesthetists

(December 2016)

This fact sheet presents the national supply of and demand for Certified Registered Nurse Anesthetists (CRNA) for 2013 through 2025 using HRSA's Health Workforce Simulation Model (HWSM).¹ While the nuances of modeling supply and demand differ for individual health professions, the basic framework remains the same. The HWSM assumes that demand equals supply in the base year.² For supply modeling, the major components (beyond common labor-market factors like unemployment) include characteristics of the existing workforce in a given occupation; new entrants to the workforce (e.g., newly trained workers); and workforce decisions (e.g., retirement and hours worked patterns). For demand modeling, the major components include population demographics, health care use patterns (including the impact of increased insurance coverage), and demand for health care providers (translated into requirements for full-time equivalents [FTEs]).

Important limitations for these workforce projections include: an underlying model assumption that health care delivery in the future (projected until 2025) will not change substantially from the way care was delivered in the base year (2013); and current rates of workforce participation and retirement will continue similarly, as well as current patterns of health care utilization. Changes in any of these factors may significantly impact both the supply and demand projections presented in this fact sheet. These projections also do not account for the geographical distribution of providers, which may impact access to care in certain communities.

BACKGROUND

A CRNA must be a registered nurse with a graduate degree in nurse anesthesia. Nurse anesthesia education programs are accredited by the Council on Accreditation of Nurse Anesthesia Educational Programs, and CRNAs are required to pass a National Certification Examination administered by the National Board of Certification and Recertification for Nurse Anesthetists. CRNAs provide acute, chronic and interventional pain management services, as well as critical care and resuscitation services; provide anesthesia in collaboration with surgeons, anesthesiologists, dentists and other qualified health care

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The National Center for Health Workforce Analysis informs public and private-sector decision makers on health workforce issues by expanding and improving health workforce data, disseminating workforce data to the public, and improving and updating projections of the supply and demand for health workers.

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¹ This model uses a micro-simulation approach where supply is projected based on the simulation of career choices of individual health workers. Demand for health care services is simulated for a representative sample of the current and future U.S. population based on each person's demographic and socioeconomic characteristics, health-related behavior, and health risk factors that affect their health care utilization patterns. For more information on data and methods, please see [Health Workforce Supply and Demand Simulation Model](#).

² Ono T, Lafortune G, Schoenstein M. "Health workforce planning in OECD countries: a review of 26 projection models from 18 countries." *OECD Health Working Papers, No. 62*. France: OECD Publishing; 2013:8-11.

professionals; order and evaluate diagnostic tests; request consultations; and perform point-of-care testing.³

FINDINGS

The supply of CRNAs is projected to increase by 38 percent between 2013 and 2025 (Exhibit 1), reflecting growth over the past decade in the annual number of new CRNAs trained. The demand for CRNAs is projected to grow by only 16 percent. It is projected that supply will exceed demand in 2025, suggesting that the United States will have adequate numbers of CRNAs to meet future demand.

Exhibit 1. Estimated Supply and Demand for Certified Registered Nurse Anesthetists in the United States, 2013 – 2025

	Certified Registered Nurse Anesthetists (FTEs)
Supply	
Estimated supply, 2013	44,660
Estimated supply growth, 2013-2025:	17,080 (38%)
<i>New entrants</i>	29,930
<i>Attrition^a</i>	-12,283
<i>Change in average work hours^b</i>	-567
Projected supply, 2025	61,740
Demand	
Estimated demand, 2013 ^c	44,660
Estimated demand growth, 2013-2025:	7,010 (16%)
<i>Changing demographics impact</i>	6,030
<i>Insurance coverage impact^d</i>	980
Projected demand, 2025	51,670
Projected supply (minus) demand, 2025	10,070

Notes: Numbers may not sum to totals due to rounding. All estimates are rounded to the nearest 10.

^a Includes retirements and mortality.

^b This represents the change in CRNA FTEs resulting from a change in the demographic composition of the future workforce and the associated effect on average number of hours worked.

^c The model assumes that national supply and demand are in approximate equilibrium in 2013.

^d The model estimates increased insurance coverage associated with Medicaid expansion and Affordable Care Act marketplaces.

Demand for CRNAs is linked to demand for surgery. The demand for surgeries will likely increase with the aging of the population and the subsequent increase in chronic disease requiring surgery, and expanded

³ American Association of Nurse Anesthetists. 2013. Scope of Nurse Anesthesia Practice.
[American Association of Nurse Anesthetists: Scope of Nurse Anesthesia Practice](#)

insurance coverage making surgery more accessible. Both of these factors are accounted for in the HWSM. However, the demand for CRNAs may be moderated as the health care system puts greater emphasis on preventive care. The HWSM did not account for such system changes that might affect the demand for CRNAs.