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Retrospective Evaluation of the Advanced Nursing Education Expansion Program

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ABSTRACT

Several interrelated workforce and population trends have intensified the need to increase the number of nurse practitioners (NPs) in primary care. The Advanced Nursing Education Expansion (ANEE) program was created to address health workforce needs by increasing the number of students enrolled full-time in NP and nurse-midwifery programs. Using data from ANEE grant performance measures, we found that nearly 65% of ANEE-supported graduates practice in primary care and 44.8% work in medically underserved communities. Results from this study demonstrate that even short-term federal investments have an impact on the expansion of the primary care health workforce.

Keywords: Affordable Care Act, family nurse practitioner, nurse-midwife, primary care, workforce

Published by Elsevier Inc.

In 2016, the Health Resources and Services Administration (HRSA) National Center for Health Workforce Analysis examined the outputs and outcomes of the Advanced Nursing Education Expansion (ANEE) program. The ANEE program, authorized and appropriated through the Affordable Care Act (ACA), is a $30 million grant program designed to increase the number of students enrolled full-time in accredited primary care nurse practitioner (NP) and nurse midwifery programs, and also accelerate the graduation of part-time students in such programs by encouraging full-time enrollment, thus increasing the production of primary care advanced practice nurses. The program provided support to master's and post—master's degree students so they could complete their education through funding stipends, educational expenses, or other reasonable living expenses at $22,000 per student per year, for a maximum of 2 years per student.

BACKGROUND

According to the Institute of Medicine (IOM),[1] primary care is the "provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community."[1(p1)] The ANEE program was developed in response to several interrelated primary care workforce and population trends. First, there has been a decline in the nation's supply of primary care providers and decreasing interest among medical residents in pursuing careers in primary care.[2,3] Studies have also shown that these workforce trends will result in an estimated shortfall in the supply of primary care physicians of approximately 23,640 full-time equivalents by 2025[4] and 44,340 by 2035.[5] These findings are largely consistent with recent projections developed by the Association of American Medical Colleges, which suggest that primary care provider shortfalls may range from 14,900 to 35,600 physicians by 2025.[6] Second, the implementation of the ACA was also a contributing factor in the need to increase the national supply of advanced practice NPs.[7,8] The Congressional Budget Office estimated that 32 million Americans would be newly insured under the ACA by 2017,[9] thus increasing the need for strengthening access to primary care providers. Last, the ANEE program aimed to increase the supply of advanced practice NPs and increase the number of providers who would administer care for a changing demographic population likely to have challenging health care needs. Demographic trends in the United States show that the proportion of older Americans is increasing. Projections by the US Census Bureau estimate that

> 20% of Americans will be > 65 years old by 2030—an increase of 54% from 2010 and a 104% increase from 1970.[10] At the same time, the number of children and adolescents is also expected to grow steadily from 74 million to 82 million between 2014 and 2060.[11] The trifecta of expanded health care coverage, a shortage of primary care providers, and an aging American population led the HRSA to focus more funding opportunities on increasing the number of primary care NPs.

Our focus in this study was on the findings from an internal evaluation by the HRSA of the ANEE program. We restricted our study to family NPs because this group represents the most widely held NP certification,[12] which ensures adequate cell sizes for tabulations. The analysis centers on addressing 3 related questions: (1) What are the characteristics of ANEE-supported nurse training programs, particularly with respect to their geographic site and training site location in underserved areas? (2) What are the characteristics of ANEE-funded trainees, particularly with respect to student demographics? Increasing the diversity of NPs is important because the diversity of the health workforce should reflect the diversity of populations they serve, and studies have shown primary care NPs to be predominantly white and female.[13] Thus, the diversity of ANEE grantees was also considered. (3) To what extent has the ANEE program increased the supply of family NPs and increased primary care providers in rural and underserved areas?

The ANEE program has successfully trained hundreds of primary care providers to support the national goal of improving accessibility and health care for low-income and minority populations.[14] The study provided a unique opportunity to detail the processes, outputs, and outcomes of a 5-year investment to increase the number of primary care NPs. The article describes how the HRSA's Bureau of Health Workforce used a retrospective design to evaluate processes and outputs associated with the ANEE program to help assess the effectiveness of this federal investment.

METHODS

A retrospective design was used for this evaluation to analyze data from 4 academic years (2012-2013, 2013-2014, and 2014-2015). It is important to note that, due to the implementation of improvements in HRSA's methods for workforce performance measure data collection in 2011, experiential training setting data are not available for the initial 2011-2012 reporting period, but are available thereafter. Thus, data on training settings from the 2012-2013, 2013-2014, and 2014-2015 performance reporting periods are only used for experiential training settings. Quantitative data were obtained from performance reports submitted electronically by 26 grantee institutions as part of their grant requirements. The annual performance data collected are performance measures specific to ANEE programmatic goals. The analysis incorporates all trainee-level data on demographics, postgraduation employment, training activities, and geographic location of grantees. Because we are using the entire population of ANEE trainees and only reporting on performance measures, no statistical tests were conducted. Descriptive analyses were conducted using R statistical software (version 3.2.3).

RESULTS

Table 1 and Figure show the distribution of ANEE grantees by state and the distribution of training settings, respectively. Of the 26 ANEE grantees distributed across the nation, Michigan had the largest number of grantees (n = 4), followed by New York (n = 2), Pennsylvania (n = 2), and Florida (n = 2). Table 1 provides a list of all grantees and current state scope-of-practice laws.[15] Figure shows that the ANEE trainees were provided with experiences over a wide range of settings. Given that the ANEE program was intended to expand the number of NPs in primary care, it was foreseeable that almost three quarters of the 1,670 training settings were in primary

Figure. Advanced Nursing Education Expansion training settings, 2012-2013 to 2014-2015 (N = 1,700).