

Advanced Nursing Education Workforce Program Evaluation

Academic Years 2017-2022

The Health Resources and Services Administration (HRSA) is the primary federal agency for improving health care for people who are geographically isolated or economically or medically underserved. HRSA programs help those in need of high-quality primary health care by supporting the training of health professionals – focusing in particular on the geographical distribution of providers to areas where they are needed most.

The purpose of the Advanced Nursing Education Workforce Program (ANEW) is to prepare primary care advanced practice registered nursing (APRN) students to practice in rural and medically underserved communities to increase access to primary care in these communities. Through the development of partnerships with clinical sites, ANEW supports a subset of APRN students in longitudinal (three to six months) traineeships in rural and medically underserved communities. This report summarizes the results of a retrospective outcome evaluation on the ANEW program and its clinical traineeship from Academic Year (AY) 2017 through 2022.

Key Findings

- During AY 2017-2022, 6,906 APRNs graduated from their ANEW-supported degree programs and entered the workforce, including 4,282 APRNs who completed ANEW clinical traineeships in rural and medically underserved communities.
- Training in rural areas, primary care settings, and medically underserved communities was significantly associated with working in those settings one-year after graduation:
 - Graduates that trained in rural areas were nearly five times more likely to work in rural areas than graduates that did not train in rural areas.
 - Graduates that trained in primary care settings were 3.6 times more likely to work in primary care settings than graduates that did not train in primary care settings.
 - Graduates that trained in medically underserved communities were 2.5 times more likely to work in medically underserved communities than graduates that did not train in medically underserved communities.
- In total, 53% of ANEW clinical graduates with follow-up data reported working in a primary care setting; 51% reported working in a medically underserved community; and 27% reported working in a rural area one year after graduation.
- Partnerships with health care delivery sites in medically underserved, primary care, and rural settings led to graduates being employed in these settings after graduation. Thirty-one percent of ANEW clinical graduates that reported follow-up employment data reported being hired by a partner organization within one year after graduation.

How many students and graduates participated in ANEW?

From AY 2017-2022, between 3,658 and 4,817 APRN students were enrolled in ANEW-supported degree programs per year. During this time period, a total of 6,906 nurses graduated from their APRN degree programs.

The percentage of ANEW APRN students participating in longitudinal clinical traineeships in rural and medically underserved communities ranged from 30% to 45% per year. The remainder of the report focuses on these students, hereafter referred to as ANEW clinical trainees.

Who participated in ANEW clinical traineeships and where did they train?

The ANEW program placed 5,561 clinical trainees in a traineeship located in a rural and/or medically underserved community between AY 2017-2022.

ANEW clinical trainees specialized in a variety of primary care specialties (Table 1). Each year of the evaluation, over 70% of ANEW clinical trainees specialized in family practice. The percentage of ANEW clinical trainees specializing in psychiatric and/or mental health more than doubled from 7% in AY 2017-2018 to 17% in AY 2021-2022.

Table 1. ANEW Clinical Trainees by Program Specialty, AY 2017-2022

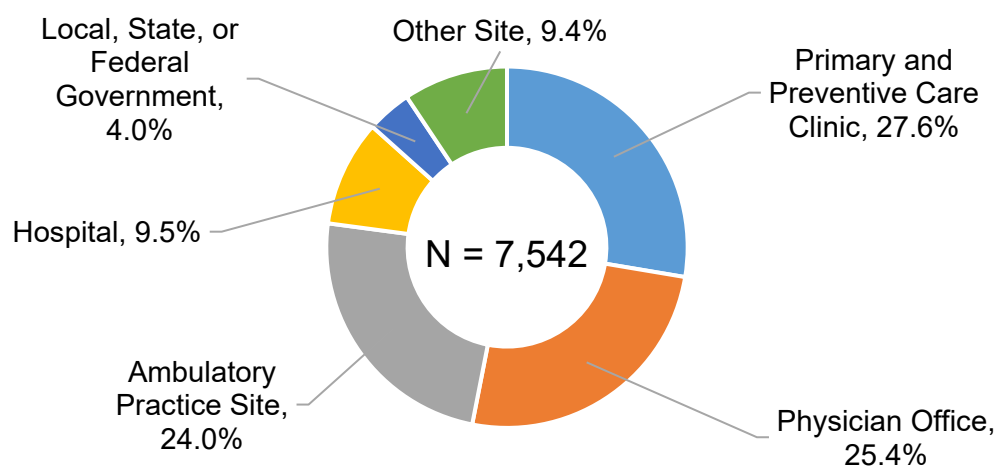
Specialty	AY 2017-2018 (N=1,119)	AY 2018-2019 (N=1,640)	AY 2019-2020 (N=1,906)	AY 2020-2021 (N=1,627)	AY 2021-2022 (N=1,495)
Family	824 (73.6%)	1,186 (72.3%)	1,362 (71.5%)	1,245 (76.5%)	1,082 (72.4%)
Gerontology	112 (10.0%)	119 (7.3%)	88 (4.6%)	98 (6.0%)	87 (5.8%)
Psychiatric / Mental Health	83 (7.4%)	120 (7.3%)	209 (11.0%)	204 (12.5%)	246 (16.5%)
Pediatrics	57 (5.1%)	56 (3.4%)	31 (1.6%)	31 (1.9%)	38 (2.5%)
Nurse Midwife / Women's Health	40 (3.6%)	128 (7.8%)	206 (10.8%)	31 (1.9%)	25 (1.7%)
Other Advanced Nurse Specialists	3 (0.3%)	31 (1.9%)	10 (0.5%)	18 (1.1%)	17 (1.1%)

Where did ANEW clinical trainees participate in traineeships?

Between AY 2017-2022, 88% of ANEW clinical trainees trained in a primary care setting, 78% trained in a medically underserved community, and 49% trained in a rural area. To provide primary care longitudinal traineeships, ANEW awardees partnered with 7,542 health care delivery sites over the evaluation period.

- Twenty-eight percent of the AY 2017-2022 ANEW partner sites were primary and preventive care clinics, including Federally Qualified Health Centers or Look-Alikes, Rural Health Clinics, and community health centers; 25% were physician offices; and 24% were ambulatory practice sites (Figure 1).

Figure 1. Percentage of ANEW Partners by Site Type, AY 2017-2022



What are the characteristics of ANEW clinical graduates?

A total of 4,282 ANEW clinical trainees graduated and entered the workforce as APRNs between AY 2017-2022. Table 2 describes the types of degrees earned by ANEW clinical graduates.

- Most ANEW clinical graduates earned master's degrees at the completion of their programs, ranging between 53% and 67% of graduates per year over the evaluation period.
- The percentage of ANEW clinical graduates earning doctoral degrees ranged between 28% and 39% of all graduates between AY 2017-2022.
- ANEW clinical graduates earning post-master's certificates increased from 2% to 10% of all graduates.

Table 2. Degrees Earned by ANEW Clinical Graduates, AY 2017-2022

Degree	AY 2017-2018 (N=393)	AY 2018-2019 (N=827)	AY 2019-2020 (N=1,214)	AY 2020-2021 (N=893)	AY 2021-2022 (N=955)
Master's degree (MSN, MS)	230 (58.5%)	502 (60.7%)	813 (67.0%)	499 (55.9%)	502 (52.6%)
Post-master's certificate	9 (2.3%)	20 (2.4%)	64 (5.3%)	43 (4.8%)	96 (10.1%)
Doctoral degree (DNP/DrNP, PhD)	153 (38.9%)	293 (35.4%)	336 (27.7%)	351 (39.3%)	354 (37.1%)

Note: Seventeen graduates between AY 2017-2022 were missing degree information. Totals may not sum to 100% due to rounding. MSN=Master of Science in Nursing; MS=Master of Science; DNP/DrNP=Doctor of Nursing Practice; PhD=Doctor of Philosophy.

What are the employment outcomes for ANEW clinical graduates?

A total of 2,221 ANEW clinical graduates from AY 2016-2021 reported one-year follow-up employment data between AY 2017-2022. Training in rural areas, primary care settings, and medically underserved communities was significantly associated with working in those settings one-year after graduation:

- ANEW clinical graduates who trained in rural areas were nearly five times more likely to work in rural areas than graduates who did not train in rural areas.¹
- ANEW clinical graduates who trained in primary care settings were 3.6 times more likely to work in primary care settings than graduates who did not train in primary care settings.²
- ANEW clinical graduates who trained in medically underserved communities were 2.5 times more likely to work in medically underserved communities than graduates who did not train in medically underserved communities.³

The 2018 National Sample Survey of Registered Nurses surveyed over 50,000 registered nurses nationwide to provide national estimates of registered nurses by work environment, education, and demographics. Of the estimated 254,321 licensed and employed APRNs in the United States, approximately 43% were employed in a primary care setting. An estimated 89,092 of licensed APRNs had a primary care specialty with just over half (51%) employed in medically underserved communities and 13% employed in rural areas.⁴

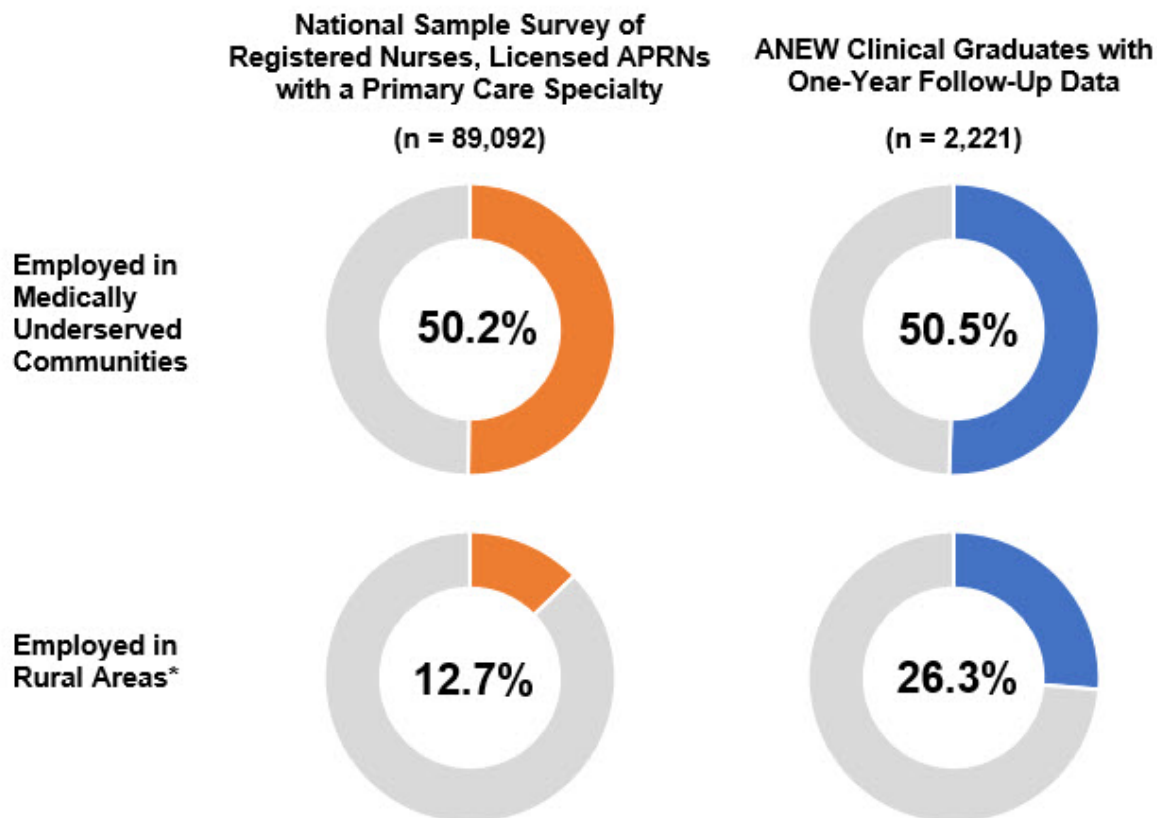
¹ OR=4.95, (95% CI: 3.90, 6.29)

² OR=3.58, (95% CI: 2.50, 5.11)

³ OR=2.48, (95% CI: 1.90, 3.23)

⁴ Adapted from the 2018 National Sample Survey of Registered Nurses Restricted Use File, by the Health Resources and Services Administration and the U.S. Census Bureau, 2023.

Figure 2. Employment Location of Primary Care APRNs from the National Sample Survey of Registered Nurses, 2018, and of ANEW Clinical Graduates at One-Year Follow-up, AY 2017-2022



Note. An APRN is considered to have a primary care specialty if they have a specialty of primary care, obstetrics, gynecology, labor and delivery, psychiatry or mental health, or gerontology. An APRN is considered to be in a medically underserved community if their primary employment location is in a zip code that is at least partially in a primary care Health Professional Shortage Area or medically underserved community. Adapted from the 2018 National Sample Survey of Registered Nurses Restricted Use File, by the Health Resources and Services Administration and the U.S. Census Bureau, 2023.

* $p < .001$

A chi-square test was used to compare if more ANEW graduates ended up working in medically underserved communities and rural areas than the national estimates of APRNs with a primary care specialty (Figure 2).

- ANEW clinical graduates with one-year follow-up employment data reported working in a medically underserved community at a similar rate as licensed APRNs with a primary care specialty nationally (51% vs 50%, respectively).⁵
- ANEW clinical graduates with one-year follow-up employment data were more likely than the national estimates of licensed APRNs with a primary care specialty to work in a rural area (26% vs 13%, respectively).⁶

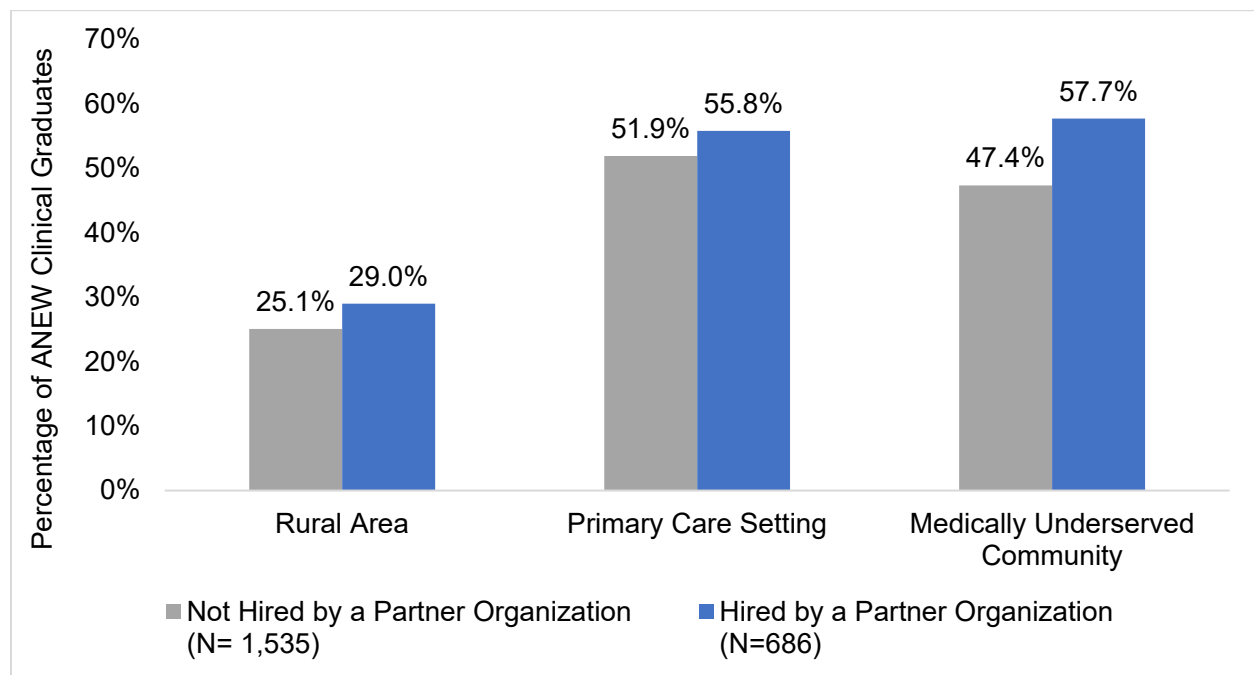
⁵ $\chi^2 = 0.10, p = 0.756$

⁶ $\chi^2 = 356.29, p < .001$

Building partnerships with health care delivery sites in medically underserved, primary care, and rural settings led to graduates being employed in these settings after graduation. Of AY 2016-2021 ANEW clinical graduates that reported follow-up employment data, 31% reported being hired by a partner organization within one year after graduation. ANEW clinical graduates hired by a partner organization were employed in a medically underserved community, primary care setting, and rural area within one year after graduation at higher percentages than those not hired by a partner organization (Figure 3).

- Fifty eight percent of those hired by a partner organization reported working in medically underserved communities, compared with 47% of graduates that were not hired by partner organizations.
- Fifty six percent of those hired by a partner organization reported working in primary care settings, compared with 52% of graduates that were not hired by partner organizations.
- Twenty-nine percent of those hired by a partner organization reported working in rural areas, compared with 25% of graduates that were not hired by partner organizations.

Figure 3. ANEW Clinical Graduate Employment Settings at One-Year Follow-Up, by Partner Organization Hiring Status, AY 2017-2022



For more information, visit the website: bhw.hrsa.gov.