

GRADUATE NURSE EDUCATION (GNE) DEMONSTRATION PROJECT

Final Evaluation Report Presentation



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Welcome and Introductions

Pauline Karikari-Martin

Evaluation Team



CMS Contracting Officer Representative (COR)

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CMS Evaluation Contractor Team

Brandon Hesgrove, PhD - Project Director
Daniela Zapata, PhD - Quantitative Task Lead
Clancy Bertane, MPP - Qualitative Task Lead



Purpose of this Presentation



Present final findings of the evaluation
of the GNE demonstration project

Focus on updates since the previously published reports (Vol I/Vol II/RTC) which covered 2012-2015 (Demonstration years 1-4)

<https://innovation.cms.gov/initiatives/gne/>

<https://innovation.cms.gov/Files/reports/gne-rtc.pdf>

<https://innovation.cms.gov/Files/reports/gne-rtc-vol1.pdf>

<https://innovation.cms.gov/Files/reports/gne-rtc-vol2.pdf>

Agenda

1 | Key Takeaways

2 | Background

3 | Evaluation Findings

Quantitative Impact Analysis
Cost Analysis
Qualitative Analysis
APRN Alumni Case Study

4 | Limitations and Summary

Key Takeaways

- The GNE demonstration project resulted in
 - Increasing advanced practice registered nurse (APRN) student enrollment in GNE schools of nursing (SONs) by 54% and graduations by 67% on average, relative to their pre-demonstration average
 - Enhancing clinical placement processes including hiring and retaining clinical faculty and clinical placement staff
 - Increasing awareness of APRN skillset among non-APRN preceptors

Background

Brandon Hesgrove

Background

- Ongoing shortages of primary care physicians and rising costs pose challenges for the Medicare program
- APRNs can contribute to a solution to these challenges
 - Can serve as alternative or complementary providers to physicians

Challenges Facing Schools of Nursing to Increasing Number of APRNs

- SONs face challenges filling the primary care gap due to
 - Barriers to identification and coordination of
 - Clinical education sites
 - Preceptors who supervise clinical training of APRNs
 - Limited number of SON faculty and clinical education sites available to oversee clinical preceptors and precept students' clinical training

GNE Demonstration Project Overview

- Both clinical and didactic education are required for Advanced Practice Registered Nurse (APRN) students to graduate
- The GNE Demonstration Project, mandated by the 2010 Patient Protection and Affordable Care Act focused on just the clinical education of APRN students

GNE Demonstration Project Overview

- CMS reimbursed 5 hospital awardees and their partners (“GNE networks”) for the reasonable and allowable costs to support the clinical education of additional APRN students
 - Hospitals partnered with SONs and clinical education sites such as community-based care settings and other hospitals
- Eligible APRN specialties: Nurse practitioners (NPs), certified nurse anesthetists (CRNAs), certified nurse midwives (CNMs), clinical nurse specialists (CNSs)

GNE Demonstration Project Timeline

Academic Calendar Year (AY)	Demonstration Year (DY)
2006-2007	BY1
2007-2008	BY2
2008-2009	BY3
2009-2010	BY4
2012-2013	DY1
2013-2014	DY2
2014-2015	DY3
2015-2016	DY4
2016-2017	DY5
2017-2018	DY6

Baseline Period: BY1-BY4

Demonstration Period: DY1-DY6

Demonstration Extension Period: DY5-DY6

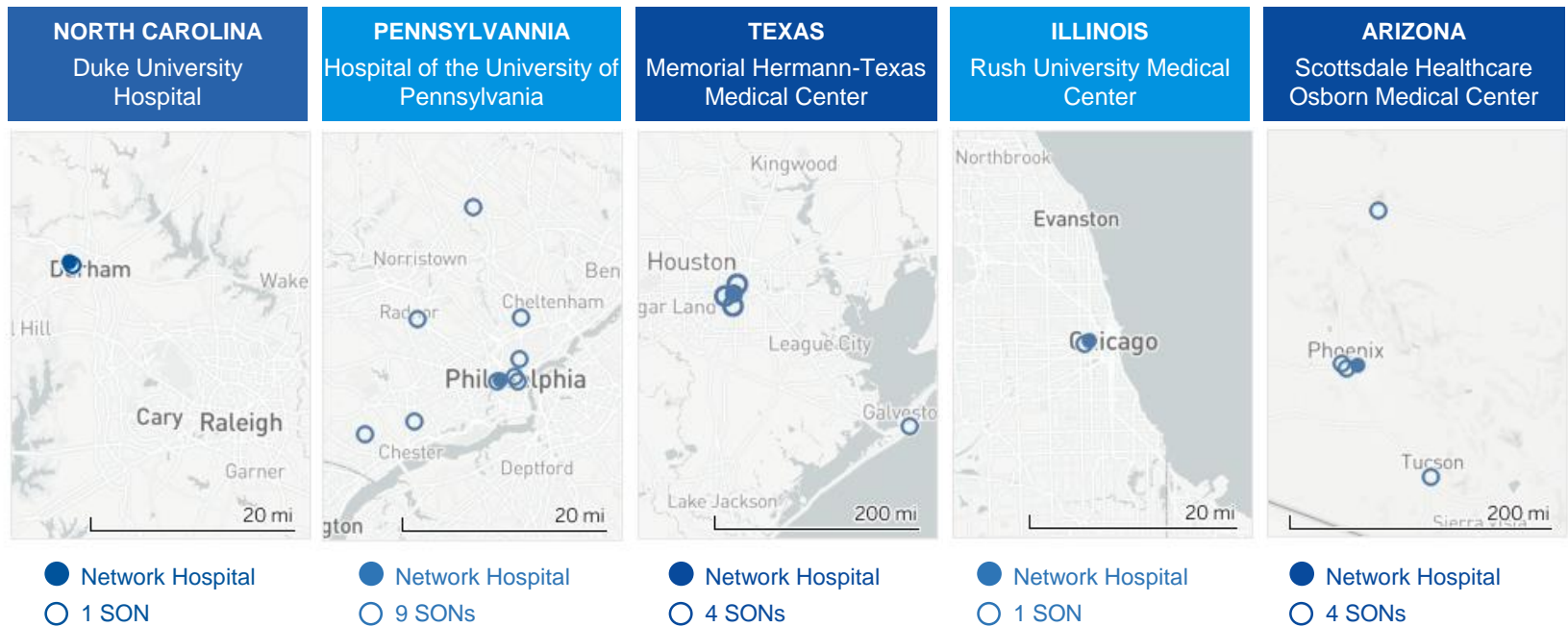
DY1 – DY4

Hospital awardees reimbursed for newly enrolled additional APRN students

DY5 – DY6

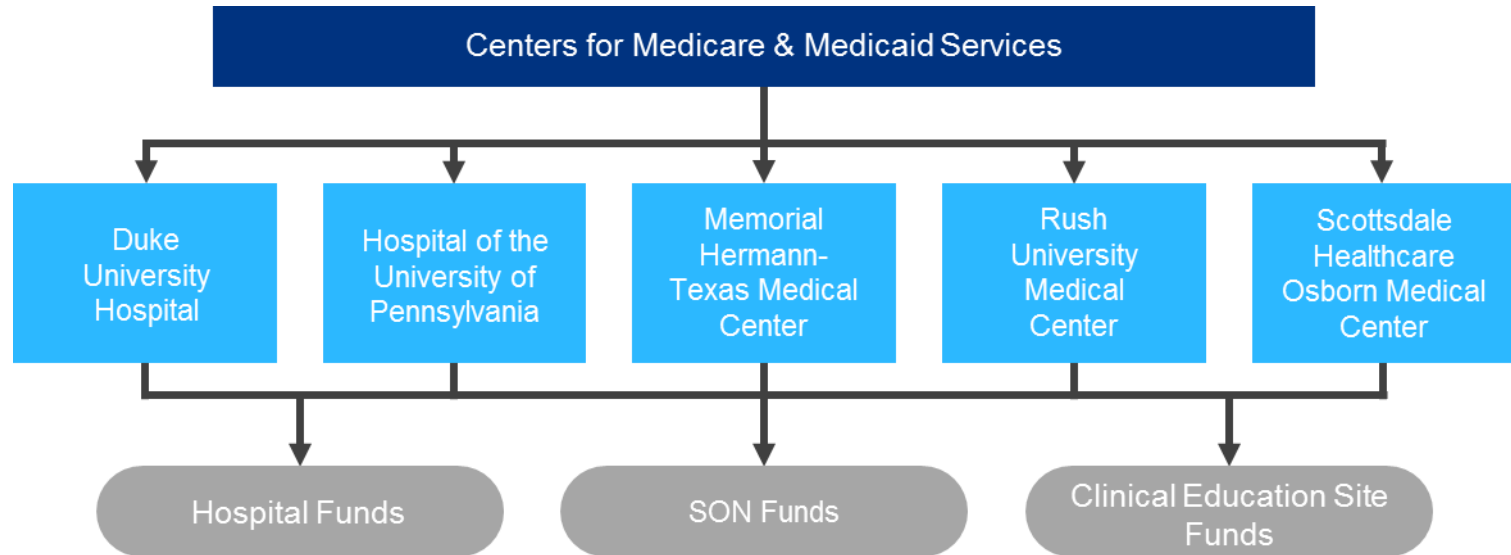
Hospital awardees reimbursed for clinical education required of additional APRN students enrolled in DY1-DY4

Location, Size, and Scope of GNE Networks



Note: Clinical education site partners (community-care based settings and other hospitals) are not shown on the maps

Funding Process



Evaluation Components

- Mixed-methods evaluation
 - Quantitative Impact Analysis
 - Cost Analysis
 - Qualitative Analysis
- Additional activity
 - APRN Alumni Case Study

Evaluation Findings

1. Quantitative Impact Analysis
2. Cost Analysis
3. Qualitative Analysis
4. APRN Alumni Case Study

Quantitative Impact Analysis

Evaluation Findings

Daniela Zapata

Data Sources and Elements

American Association of Colleges of Nursing (AACN) Annual Survey

Outcomes

- SON-reported enrollments
- SON-reported graduations

Baseline characteristics for comparison group creation

- Programs and degrees offered
- Number of applications
- Number of graduates
- Number of faculty
- Affiliations with health centers and hospitals

Integrated Postsecondary Educational Data System Annual Survey

Baseline characteristics for comparison group creation

- Status: Public or private
- Location: Urban, suburban, city, rural area

Other Data

Baseline characteristics for comparison group creation

- US News ranking

Time varying covariate

- Receipt of HRSA grants for advanced nursing education

Methodology

- Multivariate Difference-in-Differences (DID) model using an entropy-weighted comparison group of non-GNE SONs
- Criteria used to select the comparison group
 - The GNE group and the comparison group should have similar observable characteristics
 - Comparison group should have parallel outcome trends during the baseline period

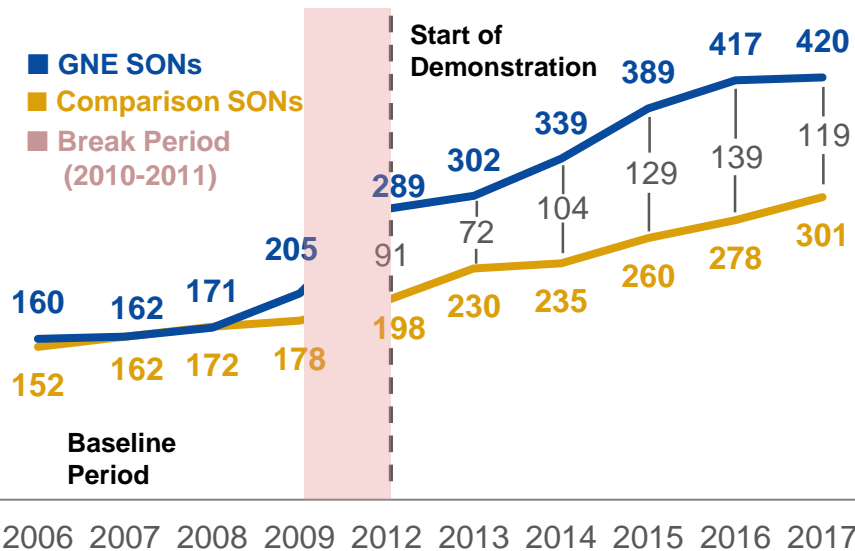
Comparison Group: Covariate Balance for Sample Variables After Entropy Weighting

Variable	GNE Group Mean	Comparison Group Mean
Indicator for master's CNS program	0.53	0.53
Indicator for master's CNM program	0.05	0.05
Indicator for DNP NP program	0.26	0.26
Indicator for DNP CRNA program	0.05	0.05
Number of applications	151.63	151.54
Number of qualified applicants not admitted	15.47	15.46
Total APRN graduates in 2008	52.32	52.29
Number of faculty	44.68	44.68
Indicator for health center	0.47	0.47
Indicator for public institution	0.42	0.42
Indicator for a city location	0.74	0.74

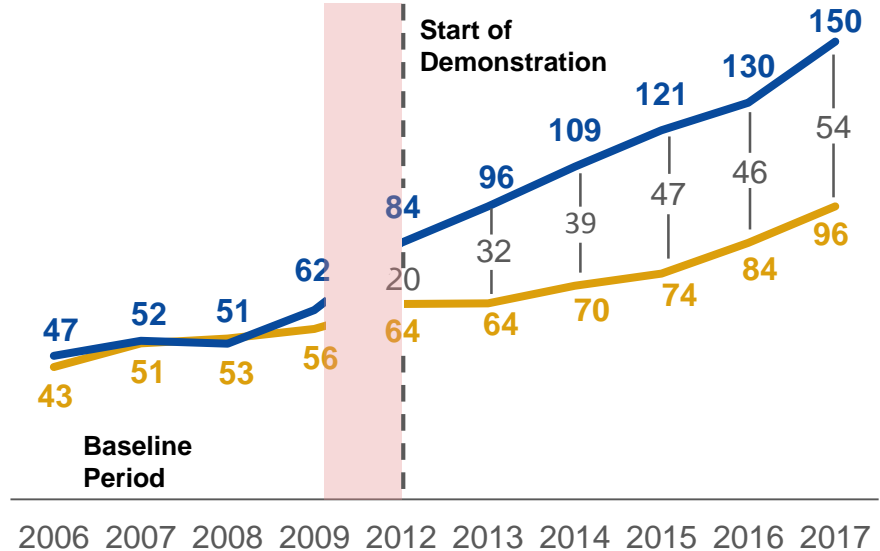
Notes: GNE Group is composed of 19 SONs, Comparison Group is composed of 218 weighted comparison SONs.

Descriptive Enrollment and Graduation Trends (Averages Per SON)

Enrollment



Graduations



LEGEND

Baseline Period: 2006-2009

Break in Reporting Period: 2010-2011

Demonstration Period: 2012-2017

Weighted Difference-in-Difference Results

Results	Total APRN Enrollment	Total APRN Graduations
Average Impact Estimate	93.47***	35.37**
P-value	[0.02]	[0.04]
Number of SON-Year Observations	2,314	2,323
Baseline Mean for GNE SONs	174.3	52.97
Average Impact Estimate as a Percentage of the GNE Group Baseline Mean	54%	67%

Notes: Standard errors, clustered at the SON level, are in parentheses. *** indicates statistically significant at the 1% level; ** at the 5% level.

Weighted Difference-in-Differences Results: Per-Year Effects

Results	Total APRN Enrollment	Total APRN Graduations
DY1 Impact Estimate	82.54***	18.33
DY2 Impact Estimate	65.72**	30.97**
DY3 Impact Estimate	97.20**	36.89**
DY4 Impact Estimate	114.97**	39.86**
DY5 Impact Estimate	105.64*	40.06**
DY6 Impact Estimate	96.17	46.91
Number of Observations	2,314	2,323

Notes: *** indicates statistically significant at the 1% level; ** at the 5% level; * at the 10% level. Results are relative to the baseline period.

Results by Specialty and Degree

Impact on average number of enrollments by:

- **Specialty:** 89 additional NPs per year per SON
- **Degree:** 73 additional Master-level APRNs per year per SON

Impact on average number of graduations by:

- **Specialty:** 35 additional NPs per year per SON
- **Degree:** 29 additional Master-level APRNs per year per SON

Cost Analysis

Evaluation Findings

Brandon Hesgrove

Cost Data Sources

GNE Audit Summary Reports

Auditor-validated allowable costs incurred by the GNE networks and counts of additional APRN students per year

Network Budget Reports

Network-submitted annual reports to CMS with projected costs and counts of additional APRN students

Allowable Costs

- Allowable costs include only those clinical education costs not covered by other revenue sources
- Costs associated with didactic education, certification, and licensure were not eligible for reimbursement under the demonstration project

Methodology

- Average cost to CMS, under the demonstration, of supporting the clinical education of an additional APRN student to graduation
 - Numerator
 - Total cost to CMS of the demonstration
 - Denominator
 - Total number of additional APRN graduates due to the demonstration using impact estimates

Cost Results

- The total cost to CMS was **\$176,377,494**

Data Source	GNE & non-GNE SONs AACN Survey Data
Estimated Number of Additional APRN Student Graduates Due to the Demonstration	3,739
Estimated Average Cost to CMS, under the Demonstration, of Supporting the Clinical Education of an Additional APRN Student to Graduation	\$47,172

Qualitative Analysis

Evaluation Findings

Clancy Bertane

Data Collection and Analysis

Data Sources

156 Interviews and Focus Groups

10 Site Visits - Fall 2014 & 2015



127 Check-In Calls

Spring 2015 to 2019



9 APRN Alumni Phone Interviews

Fall 2018



● = 10 Units

Data Preparation & Analysis



Cleaned Data



Identified common themes, successes and challenges using NVivo, a qualitative data analysis software system

Interviews and Focus Groups Breakdown

GNE Stakeholder	DUH	HUP	MH	RUMC	SHC	Total
Focus Groups						
Student Focus Group	3	3	3	3	3	15
Faculty Focus Groups	3	2	3	2	3	13
Semi-Structured Interviews						
Clinical Placement Coordinators/Recruiters	2	1	5	3	4	15
Oversight Teams	9	8	10	7	10	44
Preceptors	10	6	7	7	9	39
SON Administrators	5	69	27	9	31	141
Other (i.e., financial analysts, etc.)	2	1	2	7	4	16
APRN Alumni	2	0	0	4	3	9
Total	36	90	57	42	67	292

Qualitative Analysis Results — Perceived Successes

- Improved collaboration and partnerships
- Enhanced clinical placement processes
- Increased APRN enrollment capacity through hiring clinical faculty
- Increased dialogue and greater awareness about the role and value of APRNs in providing care

“We really come together in terms of sharing best practices and forming relationships with each other. We hope to maintain that and keep that communication ongoing.”
-SON Administrator

“One of our greatest victories from this project is that, particularly with the clinical placement coordinator, we made the case for the need for this role within our college.”
-SON Administrator

Qualitative Analysis Results — Perceived Challenges

- During the extension years, competition for clinical education sites among SONs began to increase to pre-demonstration project levels
- Clinical education sites began to expect precepting payment from SONs in order to precept their APRN students

“We all have the same database of preceptors, so we will all be contacting the same preceptors asking for clinical placements for our students. As a result, there will be more competition than collaboration.”
-SON Administrator

“The idea that [preceptors] are going to be paid to have students is sticking around.”
-SON Administrator

APRN Alumni Case Study

Evaluation Findings

Clancy Bertane

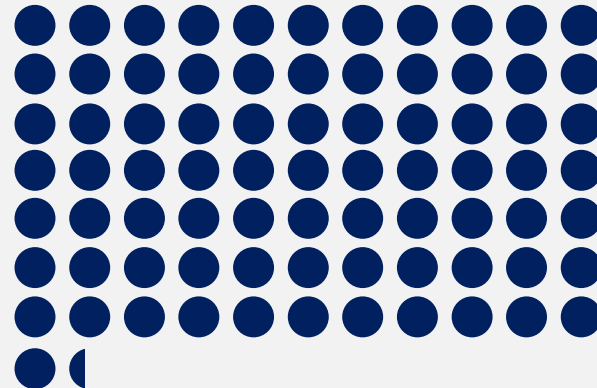
Methodology

Research Question:

Where and what type of post-graduate employment opportunities exist for recent APRN graduates, and what drives those employment choices?

Data Sources

713 SON Alumni
Records



9 APRN Alumni
Telephone Interviews



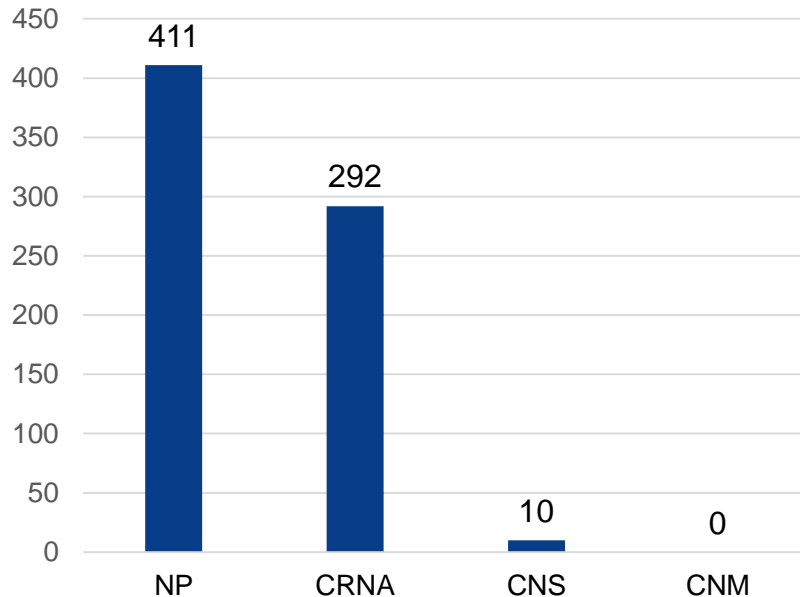
● = 10 Units

Limitations

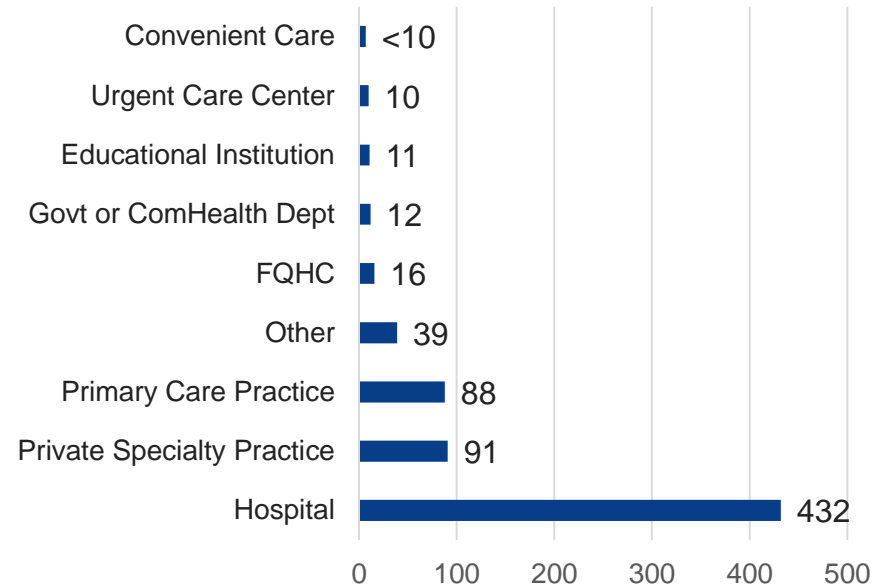
Findings for the case study are not necessarily representative of all additional APRN alumni at GNE SONs

Quantitative Results

Total Number of APRN Alumni by APRN Specialty

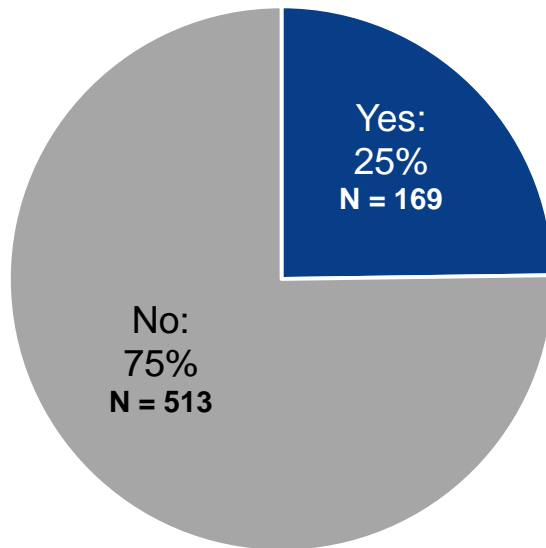


Number of APRN Alumni by Employment Setting

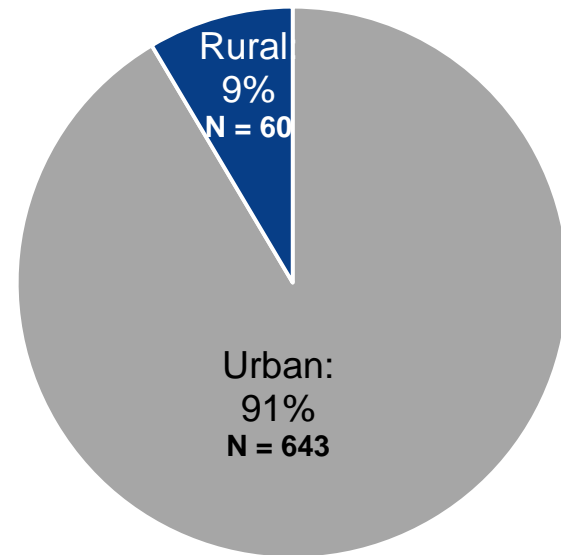


Quantitative Results

APRN Serving Medically Underserved Populations



APRN Employed in Rural and Urban Settings



Qualitative Results

- Preceptorship experiences influenced APRN employment search and decisions

“Each [preceptorship] was great. [Community-based care setting] was more of a complex experience, but it did give me exposure to a diverse population.”
-APRN Alumni

- APRN alumni reported no major difference between being precepted by an APRN vs. an MD or a PA

“I didn’t notice a difference between [Nurse Practitioner] preceptors and [Medical Doctor or Physician Assistant preceptors].”
-APRN Alumni

- APRN alumni are interested in serving as a preceptor with or without pay

“I plan to precept in the future. I love mentoring and empowering people. I also love sharing what I learned.”
-APRN Alumni

Limitations and Summary

Brandon Hesgrove

Limitations

- The GNE hospital networks are few in number (5 hospitals and 19 SONs) and have certain characteristics such as being based in urban settings
 - It is therefore not guaranteed that these results are generalizable to non-similar hospitals and SONs located in non-urban settings

Summary

Overall, the GNE demonstration project led to increases in APRN student enrollment (54%) and graduations (67%). It also led to improved systems and added clinical placement staff and clinical faculty

For more information about the GNE demonstration project and to download the evaluation report, visit <https://innovation.cms.gov/initiatives/gne/>