

The Graduate Nurse Education Project: An Innovative Approach to Increase the Pipeline of Advanced Practice Registered Nurses

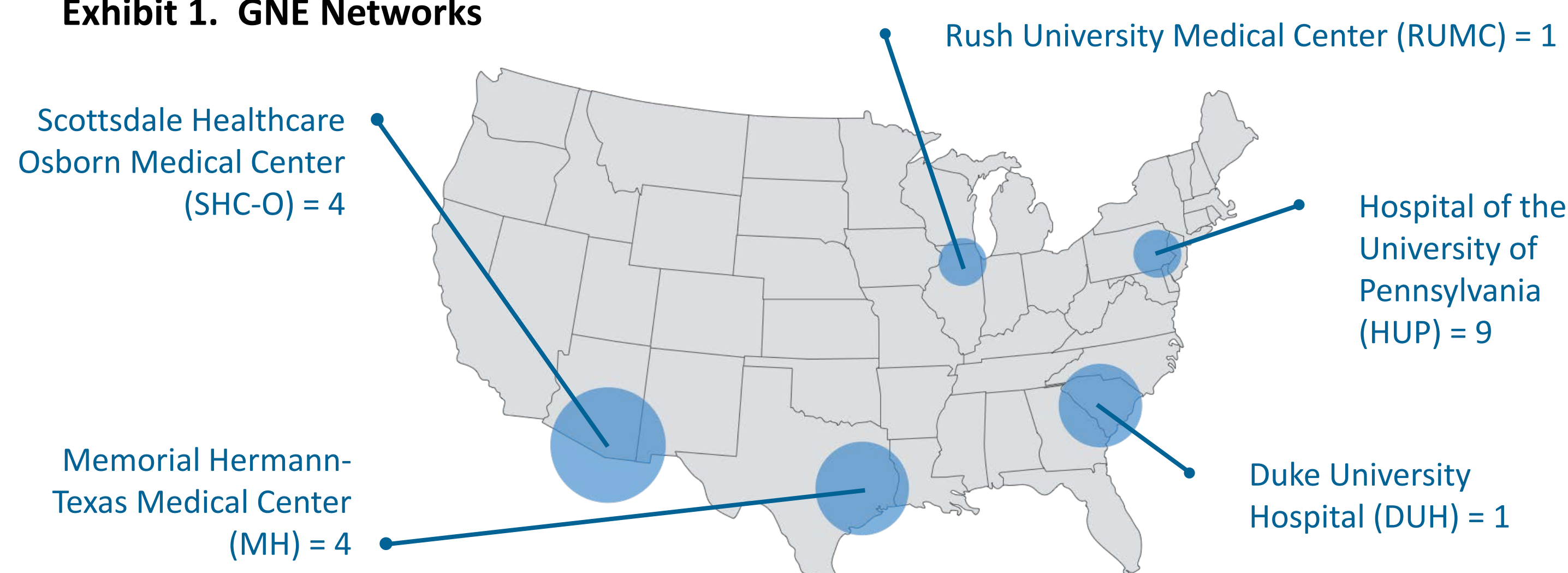
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BACKGROUND

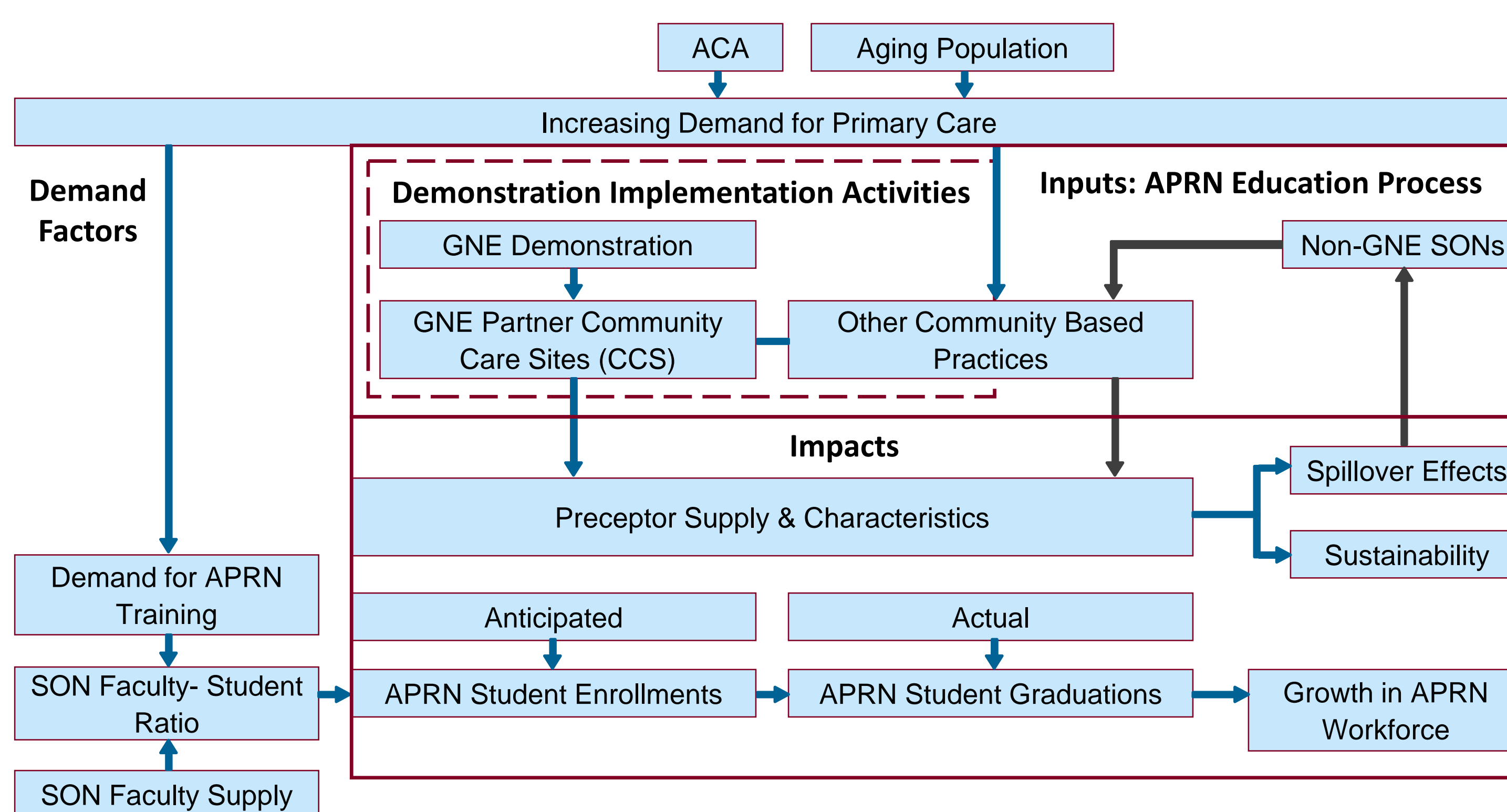
Mandated under Section 5509 of the Affordable Care Act of 2010, CMS selected five hospitals to participate of the Graduate Nurse Education (GNE) project. Each participant hospital formed a network partnership composed of other hospitals, schools of nursing (SONs), and community based care settings (CCSs), and received payments from CMS for the reasonable costs to provide qualified clinical training to APRN students.

Exhibit 1. GNE Networks



The GNE project tested the feasibility of expanding the pipeline of the APRN workforce by increasing the enrollment and graduation of APRN students through innovative partnerships between hospitals, SONs, and CCSs.

Exhibit 2. Logic Model of the GNE Demonstration Project



RESEARCH OBJECTIVES

- Understand networks' implementation and operational processes, perceived outcomes, and sustainability strategies
- Evaluate the impact on APRN student enrollment and graduation overall and by APRN specialty

STUDY DESIGN

- Qualitative interviews** and focus groups with GNE network oversight team, SON administration, and preceptors and conducted focus groups with clinical faculty and APRN students
- Difference-in-difference impact estimation** using survey data from the American Association of Colleges of Nursing and other secondary data
- Entropy balancing** to rigorously construct a comparison group of more than 200 SONs

PRINCIPAL FINDINGS TO DATE

GNE Project Implementation & Operations

Networks used GNE funds to:

- Pay clinical precepted education sites
- Hire clinical placement coordinators and purchase software to coordinate placements
- Implement innovative clinical education models

Network participants reported:

- Stronger coordination and collaboration across partners
- New and more diverse clinical education opportunities

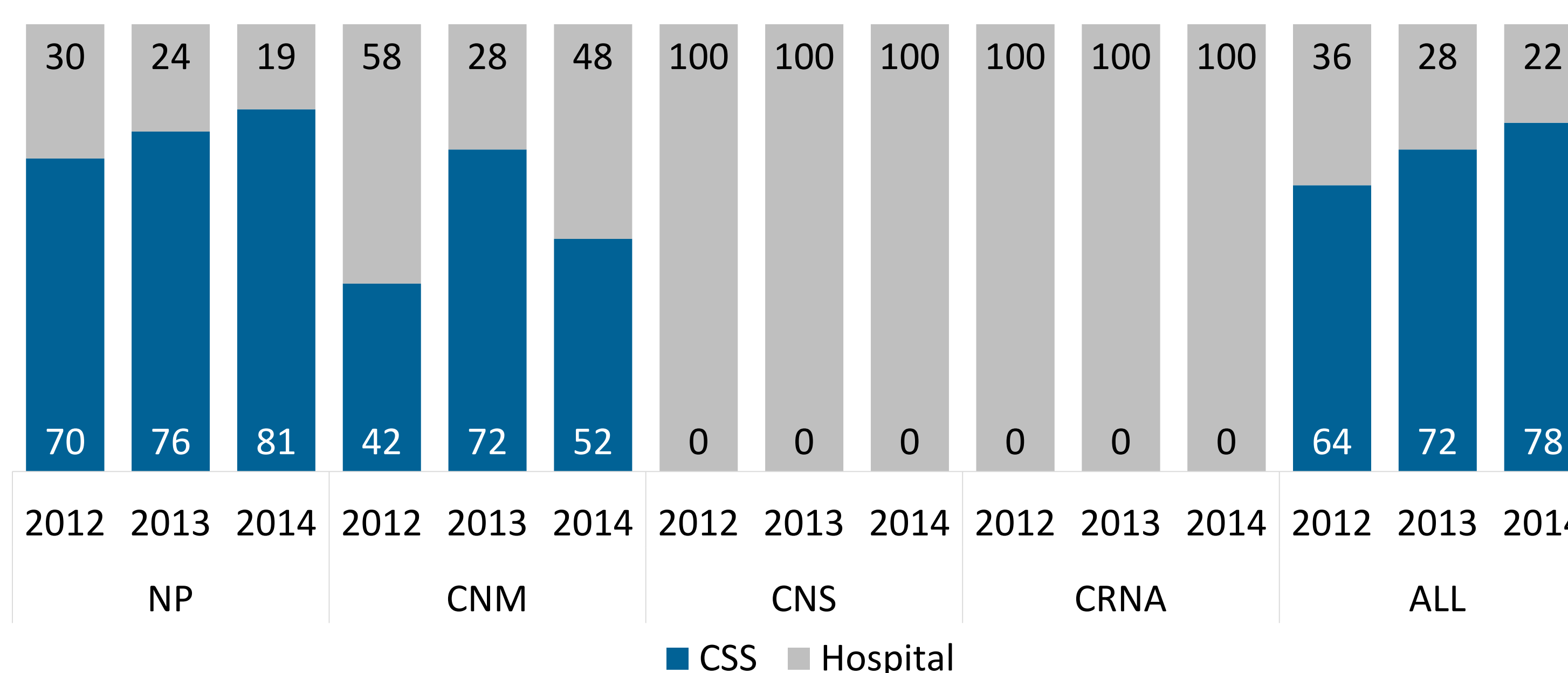
"Because of the clinical coordinator position, we have been able to expand our search for sites to areas that we've not looked at before"

- Concerns about sustaining increased enrollments and new relationships without funds to pay preceptors

Precepted Clinical Education in Community Care Settings

The number of clinical education hours completed by incremental APRN students in CCSs increased substantially, with more than half of the clinical education hours occurring at CCSs. This trend is consistent with the demonstration project's objective of expanding clinical education in community settings.

Exhibit 3. Percentage of Precepted Clinical Hours Completed at CSS and Hospital Settings by Incremental Students



Impact of GNE on APRN Student Enrollment and Graduation

Results suggest that the GNE project significantly increased the number of APRN student enrollments and graduations, relative to a comparison group constructed using the entropy balancing technique.

Exhibit 5. Weighted Difference-in-Differences Results: Average APRN Enrollment (DY1-DY4) and APRN Graduations (DY1-DY3) Per SON, Per Year

	Enrollment (DY1-DY4)	Graduations (DY1-DY3)
Number of SON-Year observations	1,848	1,625
DID estimate (per SON, per year)	87.077***	27.600**
P-value	[0.009]	[0.028]

Notes: Standard errors, clustered at the SON level, are in parentheses. *** indicates statistically significant at the 1% level; ** 5% level. Baseline period = BY1-BY4. The GNE_{it} variable indicates whether a SON is a GNE SON; the variable After_{it} is an indicator variable for the demonstration period.

Exhibit 4. Covariate Balance Statistics After Entropy Balancing

Variable	Mean for the GNE Group	Mean for the Weighted Comparison Group	Standardized Bias (%)
Indicator for master's NP program	1.000	1.000	0.000
Indicator for master's CNS program	0.526	0.527	-0.094
Indicator for master's CNM program	0.053	0.053	-0.020
Indicator for master's CRNA program	0.421	0.421	0.114
Indicator for DNP NP program	0.263	0.263	0.060
Indicator for DNP CNS program	0.053	0.053	-0.007
Indicator for DNP CNM program	0.053	0.053	0.046
Indicator for DNP CRNA program	0.053	0.053	0.032
Total number of applications	151.632	151.543	0.007
Total number of qualified applicants not admitted	15.474	15.456	0.043
Total APRN graduates in 2008	52.316	52.287	0.073
Total number of faculty	44.684	44.683	0.006
Indicator for health center	0.474	0.473	0.042
Indicator for public institution	0.421	0.421	-0.037
Indicator for university/college is located in a city	0.737	0.737	0.060
Indicator for university/college is located in a suburb	0.210	0.211	-0.060

Notes: Baseline comparison group: weighted comparison group with weights found using entropy balancing on means, quadratic, and cubic terms. The demonstration group consisted of 19 SONs; the comparison group, 218 SONs.

LIMITATIONS

- 19 SONs, affiliated with a large academic institution
- Proxy estimation of prior APRN certification
- CMS reimburses networks based on the number of incremental full time APRN students, whereas the impact estimates are based on total (full-and part-time) students.

CONCLUSIONS

Interim results suggest that the GNE project, an innovative approach that encourages building unique partnerships between hospitals, SONs, and clinical practice sites, is increasing APRN student enrollment and graduations.

RELEVANCE TO POLICY

Mechanisms to build partnerships between hospitals, SONs, and clinical practice sites and to reimburse clinical training for APRN students may be effective in increasing the pipeline of APRNs in the workforce.

The Evaluation Reports and Report to Congress can be found at: <https://innovation.cms.gov/initiatives/gne/>

DISCLAIMER

This poster does not necessarily represent the official views of the U.S. Department of Health and Human Services, the Center for Medicare and Medicaid Services.

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