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# Policy Options to Improve the Retention of Nurse Practitioners in Primary Care

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**This policy analysis investigates options to improve nurse practitioner (NP) training and downstream NP primary care retention through government funding. With attention to health care costs, quality, and access, the authors consider endorsement of post-graduate training programs and modification of current NP training.**

**Keywords: Policy analysis, nurse practitioner post-graduate training, primary care workforce, nurse practitioner education.**

**Learning Outcome: After completing this educational activity, the learner will be able to discuss options for nurse practitioner (NP) education training reform to improve the retention of high-quality NP primary care providers.**

Federal, state, and private organizations have all turned to nurse practitioners (NPs) to address health care challenges the United States faces, such as an aging population, growing health disparities, and a shortage of primary care providers (Bazemore et al., 2025; Cypress, 2020; Institute of Medicine [IOM], 2011; U.S. Government Accountability Office [GAO], 2019). In particular, the nation can anticipate a substantial worsening of the primary care provider shortage over the coming decade (Association of American Medical Colleges [AAMC], 2024). NPs, however, are poised to meet this need because the profession has shown exponential growth (Hande & Jackson, 2025). Additionally, many studies support NPs' high-quality and cost-effective care (Barnett et al., 2022; Horton et al., 2025; Liu et al., 2020; Razavi et al., 2021), and previous studies have successfully mobilized NPs to increase access to care, lower health care costs, and improve health equity in vulnerable populations (National Academies of Sciences, Engineering, and Medicine [NASEM], 2021).

Unfortunately, despite these promising findings, primary care NPs experience high burnout and attrition (Abraham et al., 2021). Some groups endorsed the DNP degree as a potential means to address these concerns (American Association of Colleges of Nursing [AACN], 2024a; Martsolf et al., 2023); however, it is unclear if this has specifically helped improve NPs' preparedness to remain in demanding primary care positions (Elvidge et al., 2024; Martsolf et al., 2021; Martsolf et al., 2023; McCauley et al., 2020). What policy reform to NP education training can improve the retention of high-quality NP primary care providers? With the problem now identified, this policy analysis

will follow the format outlined by Teitelbaum and Wilensky (2023).

## Background

Estimates project a shortage of 20,200 to 40,400 primary care physicians in the United States by 2036 (AAMC, 2024). However, growth of the NP workforce has helped fill this gap. For example, projections over the next 10 years predict NP job growth at 46%, while estimates for physician growth are only 3% (Hooker & Christian, 2023). Furthermore, over 88% of NPs in the United States train in primary care programs (American Association of Nurse Practitioners [AANP], 2022). These figures may become even more profound given physician specialization (Bendix, 2023) and the robust growth of primary care NP graduations and certifications (AANP, 2022). Additionally, widening disparities and a maldistribution of primary care providers exist between U.S. rural and urban areas; thus, demand for primary care NPs should increase for underserved, rural populations (Zhang et al., 2020).

Many studies demonstrate that NPs provide cost-effective, high-quality care (Barnett et al., 2022; Horton et al., 2025; Liu et al., 2020; Razavi et al., 2021). Despite concerns about their reduced educational requirements (Melby et al., 2024), NPs routinely achieve quality of care and patient satisfaction ratings at least equal to that of physicians, particularly in primary care settings (Barnett et al., 2022). Moreover, NP education emphasizes patient-centered, well-coordinated care, which aligns with the holistic goals of many innovative, team-based primary care delivery models (NASEM, 2021).

Regardless of the favorable climate for NP demand in primary care and their positive implications on health care delivery, most NPs do not work or remain in primary care positions (Kesten & El-Banna, 2021; O'Reilly-Jacob et al., 2023). Although a vast majority of NPs are trained in primary care (Kesten & El-Banna, 2021), only an estimated 31% to 45% practice in that setting (O'Reilly-Jacob et al., 2023; Zhan et al., 2024). This suggests an increasing trend of NP specialization like physicians (Taylor, 2024; Jabbarour et al., 2024). Additionally, NPs leave positions at a rate twice that of physicians, with recent NP turnover estimated at 15% annually (Strobehn et al., 2024) compared to an estimated physician turnover rate of 7.6% annually (Bond et al., 2023). The turnover rate for early career NPs is even more concerning at 25% (Hyman et al., 2025). What is driving such low retention, particularly for early career NPs?

Seminal research by Brown and Olshansky (1997, 1998) noted new NPs' struggle with role transition in the first year of practice, and a growing body of literature corroborates these findings (Barnes et al., 2021; Faraz Covelli & Fattibene, 2025; Hande et al., 2023; Hande & Jackson, 2025; Kapu, 2025; Park et al., 2021; Powell & Thompson, 2022). Contributing factors include lack of structured learning opportunities and mentorship, role ambiguity, and unrealistic productivity expectations (Brown & Olshansky, 1998). Many NPs feel ill-prepared for the challenges of primary care regardless of the intensive coursework and clinical training they receive in school; notably, these feelings existed across both master's and doctorally prepared NPs (McCauley et al., 2020). In particular, there is wide variability in how schools address transition to practice topics, if at all (Shihabuddin et al., 2023). To compensate, many NPs have sought additional training to transition out of school and into full clinical practice (Faraz Covelli & Fattibene, 2025; Powell & Thompson, 2022). This creates an opportunity to improve NP education training, with a specific focus on the transition to practice period.

Use of government funding to strengthen post-graduate NP training or to support changes to NP education are two policy options. Post-graduate NP training programs, such as residencies or fellowships, offer additional, practical education to new NP graduates. These structured programs support novice NPs as they increase clinical competence and confidence in their early careers (Consortium for Advanced Practice Providers, 2024). They also offer opportunities to practice skills unlikely encountered in NP student clinical rotations, such as panel management, productivity expectations, and meeting quality metrics.

As another option, policymakers could utilize government funding to alter current NP education models, particularly in response to current critiques of NP education (Melby et al., 2024). Previous policy has tested financial compensation for preceptors through the Graduate Nurse Education (GNE) Demonstration Project, while current legislation aims to target the nurse faculty shortage (The Nurse Faculty Shortage Reduction Act, 2024). This analysis will examine the GNE project as one example of a proposed change to NP education, but ultimately considers any funding that enhances current NP training prior to graduation as a viable policy option.

## Stakeholders

The following stakeholder groups have an interest in NP primary care retention and ways to ameliorate it. Each will have unique concerns, opinions, and desires, which will influence policy. Thus, policymakers must consider their perspectives before forming an effective proposal.

### Nurse Practitioner Employers

Nurse practitioner employers undoubtedly have a stake in NP retention and workforce supply because health care costs increase and quality-of-care declines with provider turnover (Baris et al., 2021). Poor retention causes direct monetary loss to the employer through the high cost of repeated recruitment and the lost productivity that occurs with training new providers (Strobehn et al., 2024). Furthermore, many employers must now report quality outcomes to accountable care organizations for reimbursement. Inconsistent, dissatisfied employees will make it difficult for employers to meet these quality goals (Strobehn et al., 2024).

### Patients

As noted, quality of care suffers with high provider turnover, and this can cause poor patient outcomes. Primary care provider attrition leads to care disruption and decreased access to care, in turn causing delayed preventative services, increased emergency room visits for nonurgent issues, and increased costs (Sabety et al., 2021). Thus, patients desire a stable primary care workforce to ensure their physical, mental, and financial well-being.

### Organized Medicine

Physician groups have historically fought to limit the breadth of NP practice despite a lack of evidence that restrictive scope of practice protects the public (O'Reilly-Jacob & Perloff, 2021). They routinely cite reduced clinical hour requirements, unstandardized nursing education, and lack of required residencies as reasons to limit NP practice (Aintablian et al., 2020; Melby et al., 2024). Additionally, they oppose using Graduate Medical Education (GME) funding for NP training; they argue unstandardized nursing education and an uncapped number of NP graduates will lead to unknown training costs (Aintablian et al., 2020). Therefore, organized medicine may favor policy that enhances NP training but not if it is financed with GME funding.

### Nurse Practitioner Educators

Nurse practitioner educators have a stake in NP retention because they often serve as mentors to NPs transitioning into practice. They may be able to reduce burnout, strengthen clinical training, and ease anxiety with their students' role transition. However, educators may not be able to meet these needs with the current shortage of nursing faculty (AACN, 2024b). Additionally, some groups have questioned the effectiveness of current NP education to successfully prepare graduates for their early careers (Melby et al., 2024). Thus, NP educators may have concerns about the critique of NP education, proposed NP education reform, and the ability to meet demand for increased training and new graduate support.

### Nurse Practitioners

As noted, research demonstrates that NPs desire increased assistance as they transition into practice, and interventions that support a successful transition can positively impact retention (Hart et al., 2022; McDonough, 2024; Park et al., 2021). NPs also want to minimize the effects of burnout that ultimately lead to turnover, such as moral distress, lower productivity, and lower patient satisfaction (Abraham et al., 2021). Thus, NPs have a stake in their own transition into practice and retention because it influences their personal well-being and career stability.

## Policy Options

### Option 1: Increased Support for Post-Graduate NP Residency or Fellowship Programs

One option that could improve retention and address stakeholder interests is increased federal support of NP post-graduate training programs, such as residencies or fellowships. There is increasing demand for such programs, and their graduates report higher competence, practice autonomy, and job satisfaction with lower intent to leave (Bryant & Park, 2020; Cartwright, 2021; Faraz Covelli & Fattibene, 2025, McDonough, 2024; Park et al., 2021). These programs would also help bring NP training into alignment with physician training, thus appeasing physician groups concerned about NP preparedness (Melby et al., 2024). Additionally, the ongoing development of rigorous accreditation standards has helped legitimize NP post-graduate training (Hande et al., 2023; Kapu, 2025). Of note, the imbalance in the number of NP residencies and fellowships to NP graduates and lack of stable funding make their requirement impractical at present. Prominent NP organizations also do not endorse them as mandatory, arguing that current NP education is sufficient for safe, high-quality practice (The Nurse Practitioner Roundtable, 2019). Future reassessment may determine that mandatory NP post-graduate training is feasible.

Notably, post-graduate training programs allow NPs to practice as fully credentialed, licensed clinicians as they are mentored (Consortium for Advanced Practice Providers, 2024). Therefore, these programs would not delay NPs from entering practice or cause decreased access to care, thus appeasing employers of NPs in post-graduate training programs. Full credential and license status also allows NP residents to focus on new responsibilities not encountered in NP schooling, such as productivity demands, panel management and being on call with increasing independence. Promisingly, a limited study of the long-term impacts of post-graduate NP training reveals sustained primary care employment among NPs who completed post-graduate training programs (Hart et al., 2022). Thus, if policymakers target post-graduate training programs to rural, underserved locations, they may improve the problem of primary care provider maldistribution by increasing retention and access in these specific, high-need areas.

Consistent funding, however, will be a major concern. NP post-graduate training programs are relatively new; thus, policymakers may require additional research regarding their effectiveness on retention before large-scale, stable public funding is viable (Morgan et al., 2023; Park et al., 2021). Short duration Health Resources and Services Administration (HRSA) or state-based grants fund some NP residency and fellowship programs, but afterwards, programs may need to sustain themselves, and many never receive public funding (Park et al., 2021). This is in contrast to highly standardized physician residencies that receive stable, federal GME funding of $10-15 billion annually through the 1965 Medicare Act (GAO, 2019; Porat-Dahlerbruch et al., 2022). The GAO (2019) investigated expanding GME funding to non-physician primary care providers, and while the cost of training NPs is significantly less than physicians, physician groups cite the unregulated number of NP graduates and competition for funds, space, and patients as key factors in their opposition (Aintablian et al., 2020). Thus, if NP post-graduate training programs expand, they will likely need separate funding from GME or face significant political opposition from physician groups. Lastly, program accreditation is likely to be required for any federal funding, as was with recent HRSA grants (HRSA, 2023). While important to ensure high quality, the investment needed for the accreditation process may hinder some programs from applying; thus, they forfeit potential funding and the opportunity to support new NPs.

### Option 2: Increased Government Funding for NP Education

Increasing government funding for NP education may influence retention in primary care jobs after graduation, and precedent exists with the GNE Project. The GNE Project aimed to improve NP clinical training in underserved community settings and increase the num-

ber of graduates by reimbursing Medicare providers for precepting NP students (Cypress, 2020; Porat-Dahlerbruch et al., 2022). Schools do not guarantee reimbursement for preceptorships; thus, schools often struggle to attract high-quality preceptors, and there is also wide variation in oversight and quality of student clinical rotations (Doherty et al., 2020). In the GNE Project, over half of the training occurred in community-based settings, and most graduates from the program were primary care NPs. Costs were also favorable when compared to physician training: the training cost of each NP student over baseline enrollment in the GNE Project was $47,172 as compared to the median yearly cost of $157,602 for a primary care physician resident (Porat-Dahlerbruch et al., 2022). Furthermore, Medicare funding for nurse training currently exists. However, Medicare only allocates this to hospital-operated nurse diploma programs because NP programs did not exist when the funds were established (Porat-Dahlerbruch et al., 2022). Thus, the GNE Project offers an example of NP training standardization through government funds and a potential way to modernize Medicare nurse education allocations.

Additionally, current legislation has proposed financial support to rectify nursing school faculty shortages (Nurse Faculty Shortage Reduction Act, 2024). An increase in nursing faculty allows for more trained nurses in the United States, thus alleviating some strain on the current health care system. Though this would have only indirect and likely marginal influence specifically on NP primary care retention, this proposed legislation demonstrates government interest and potential financial involvement in nursing education.

Regarding challenges, all nursing schools involved in the GNE Project reported problems with implementation, such as limited staff, time, and didactic resources that would need to be addressed if this policy were further pursued (Cypress, 2020; U.S. Department of Health and Human Services, 2018). Administrative burdens were also high (Cypress, 2020). Lastly, the cost to train the projected increase of NP students in coming years may prohibit expansion and sustainment of this program (Auerbach et al., 2020).

Furthermore, the GNE Project's primary focus was on improving NP supply, not necessarily retention (Centers for Medicare & Medicaid Services, 2012; Porat-Dahlerbruch et al., 2022). A policy that only targets NP training before graduation does not guarantee a solution to primary care NP attrition. Additionally, the GNE project did not explicitly address factors known to influence NP career fulfillment after graduation, such as role transition, role ambiguity, and productivity demands (Brown & Olshansky, 1998; Faraz Covelli & Fattibene, 2025). Finally, there are limited data regarding alumni of the GNE project; thus, policymakers need further research to examine where alumni work, their job satisfaction, their retention, and their long-term impact on improving access to care, if any (Hesgrove et al., 2019).

Lastly, use of government funding for NP education training may create regulations that result in changes to NP education. For example, if government involvement creates additional education requirements, this could create barriers to entry into the field, namely due to the increased costs and time to train. Policymakers should note precedent with NP organizations' attempts to universalize the DNP degree because this additional training has become cost-prohibitive for many schools and students (McCauley et al., 2020). Additionally, many DNP programs focus on non-clinical content, and early studies suggest DNP graduates are more likely to enter non-clinical positions rather than patient care (Elvidge et al., 2024). While it is too early to know the full effects of the DNP degree on the primary care workforce, this serves as a caution of how increased government involvement and regulation in NP education could harm the downstream primary care workforce and access to care.

## Recommendation

Upon review of the proposals, NP post-graduate training programs have the greatest potential for positively influencing NP primary care retention rates because policymakers can use these programs to attract and retain primary care providers. Though limited, there is

promising long-term data that demonstrate ongoing primary care employment among NPs who completed post-graduate training (Hart et al., 2022). As noted, policy must carefully consider where to introduce a potential education change to have the most meaningful impact and appeal. Post-graduate residency and fellowship programs already have strong NP support, and studies have proven their ability to increase novice NPs' competence and confidence in areas not encountered in depth in traditional NP education programs (McDonough, 2024; Park et al., 2021). Rigorous program accreditation processes also exist to ensure high-quality, standardized training (Hande et al., 2023). Furthermore, these programs do not hinder access to care because NP residents and fellows are fully licensed and credentialed (Consortium for Advanced Practice Providers, 2024). On the contrary, altering NP education prior to graduation does not guarantee primary care retention or address unique responsibilities that come with full licensure and adjustment to the practice milieu (Kapu, 2025). Changes to NP training prior to graduation may also create barriers to entering the field and negatively affect NP supply. While federal funding for post-graduate training programs could face opposition from organized medicine, such training should appease groups who are concerned about current NP education requirements.

Although there are potential federal funding sources, such as HRSA grants and the reallocation of GME funds, policymakers and NP post-graduate training proponents must also consider non-federal funding opportunities to support NP residency and fellowship programs. The current political landscape may threaten the future of health care education; thus, examining alternatives to federal funding sources is crucial. One option is to expand state-level funding as Massachusetts has done (Massachusetts Executive Office of Health and Human Services, n.d.). The Commonwealth of Massachusetts supports NP residency training with grant funding and specifically targets high-need patient populations by supporting programs within community health centers that serve rural and health professional shortage areas. Similar state funding is available in California (Department of Health Care Access and Information, 2023). State funding may allow for more flexibility and greater responsiveness to specific populations' needs, but it is not immune to shifts in political agendas or downturns in state revenue. Additionally, relying solely on state funding may inadvertently create health inequities because each state will have varying interest and financial capacity to support such programs.

Growing interest and need for NP post-graduate training has also garnered support from private foundations. For instance, the Atrius Health Equity Foundation (n.d.) supports primary care NP residency programs at federally qualified health centers in eastern Massachusetts through private grant funding. While private funding removes obstacles such as government oversight, it may be short term or unpredictable. Furthermore, few private entities currently offer such support, demonstrating a need for more advocacy in the private sector. Thus, this could be a viable funding source in the future, but it is currently limited.

A more practical approach may utilize private foundation and academic partnerships to support NP post-graduate training. For example, the Parkinson's Foundation (2025) has supported an NP fellowship since 2022. Started at Columbia University and the University of Florida, the foundation collaborates with academic health care centers to provide immersive training for the management of movement disorders. Promisingly, the partnership has recently expanded to Emory University. This model appears particularly attractive because it operates within the academic partner's established health care education infrastructure. Additionally, funding is diversified through the private sector and the academic partner, thus reducing financial risk. One notable limitation is that these programs tend to focus on specialized training rather than primary care. The model is still promising, however, and can be applied to the primary care setting as long as the goals and missions of the private foundation and academic partner align with primary care.

Lastly, if need and demand are strong, some organizations may find benefit in funding their own NP post-graduate training programs. Typically, these are organization-based programs associated with major hospitals, such the Boston Children's Hospital Advanced Practice Provider Fellowship (Boston Children's Hospital, 2023). While there is significant upfront investment, health care organizations can benefit from increased staff retention, a steady workforce pipeline, and replacement of locum tenens staff (Stiesmeyer, 2022). Furthermore, NP post-graduate training programs demonstrate a more favorable long-term return on investment when compared to organization-specific, short-term orientations because of their ability to successfully address role transition through ongoing mentorship (Kapu, 2025). Lastly, organization-based programs are often specialty-focused and without any government oversight, making them a key strategy for health care systems that desire tailored training along with upscaling their NP workforce. The specialty focus may differ from primary care NP post-graduate training programs, but many hospital-based organizations have a primary care affiliate workforce they may wish to strengthen.

## Conclusion

Nurse practitioners are key to addressing many of America's health care challenges, particularly a diminished primary care workforce (Bazemore et al., 2025). They deliver high-quality, cost-effective care to some of the nation's most vulnerable populations, and they have helped close primary care provider shortage gaps (Barnett et al., 2022; Horton et al., 2025; Liu et al., 2020; Razavi et al., 2021). Despite these favorable findings, the nation risks losing gains made with the NP primary care workforce due to high attrition. Legislation and organizations have acknowledged this threat and recommend policies that focus on the transitional period from school into practice in order to better support high-quality NPs and lower their turnover rates (IOM, 2011; NASEM, 2016; The Patient Protection and Affordable Care Act, 2010). Policymakers may consider targeting post-graduate training or NP education programs to improve NP job satisfaction and subsequent retention. Of these options, federal support of post-graduate training through the expansion of NP residency and fellowship programs offers a solution that has already proven effective (McDonough, 2024; Park et al., 2021; Hart et al., 2022). The option is politically feasible, can improve access to care, and has some existing potential federal and non-federal funding sources. In sum, an investment in post-graduate NP training can strengthen and sustain the future of America's primary care workforce. $

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