Investing in the Future of Nurse Faculty: A State-Level Program Evaluation

EXECUTIVE SUMMARY

- The academic environment is complex and the financial requirements of obtaining the advanced degrees required for nurse faculty positions is one factor that negatively affects recruitment and retention.
- The Nurse Support Program II (NSP II) is a multi-pronged plan to address the nursing and faculty shortage and includes a New Nurse Faculty Fellowship (NNFF) program to recruit and retain new nurse faculty.
- Maryland nursing programs recruited, retained, and developed 245 new nurse faculty over an 8-year period with the great majority continuing in fulltime roles.
- In a retrospective review of these 245 new nurse faculty, the retention rate was 87.76% representing 215 nurse faculty and approximately \$4.1 million in financial investment.
- Investments in nurse faculty pay dividends for the public good across the continuum from the individual nursing professionals to the patients touched by nurses to the healthcare institutions employing the nurses.

HE NURSE FACULTY shortage exacerbates the nursing shortage. Ten years ago, the State of Maryland concluded a "Commission on the Crisis in Nursing" after developing a multi-pronged approach to nursing and nursing faculty shortages under the Nurse Support Program II (NSP II). This program is funded by the Maryland Health Services Cost Review Commission (HSCRC) and supported by an annual percentage of Maryland hospitals' patient revenue.

NSP II is administered by the Maryland Higher Education Commission under the NSP II Statute in Education Article, Section 11-405. A comprehensive program evaluation was completed in 2015 at the conclusion of the initial 10-year funding period for NSP II. The successful nursing outcomes combined with a projected shortage of nurses in Maryland by 2025 (U.S. Department of Health and

Human Services, 2014) convinced the HSCRC board and directors to continue the NSP II funding for an additional 5 years. The 2015 program evaluation results of one of the faculty-focused strategies, the New Nurse Faculty Fellowship (NNFF), are presented here.

Background

According to the American Association of Colleges of Nursing (AACN, 2015), 68,938 qualified applicants were not admitted to undergraduate and graduate nursing programs in 2014. Two-thirds of the survey respondents cited faculty shortages as a reason for turning students away from baccalaureate programs (AACN, 2015). Li, Stauffer, and Fang (2016) cited a 9.6% fulltime nursing faculty vacancy rate with AACN member school respondents (N=651, 82.6%). The nurse faculty shortage has been further exacerbated by ongoing shortages of

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doctorally prepared nurses to serve as faculty and greater competition with advanced practice roles.

Earlier faculty shortage concerns over the past decade were well founded. Of the approximately 32,000 nurse educators in the nation in 2008, 16,000 were expected to retire in 2015 and 27,000 by 2023 (Buerhaus, Staiger & Auerbach, 2009). The Robert Wood Johnson Foundation (RWJF) referenced the 2013 National Council of State Boards of Nursing and National Forum of State Nursing Workforce Centers nursing workforce survey completed every 2 years in an open call to recognize and respond to the survey findings. The report noted that while 72% of full-time nurse faculty are over 50 years old, only 14% of nurses in academia are younger than 40 years (Budden, Zhong, Moulton, & Cimiotti, 2013). Beyond an aging faculty, the level of faculty respondents' educational preparation prompted a call to action as a result of finding only 10% of respondents had a PhD in nursing, and 3% had a doctor of nursing practice (DNP). Of further concern is the rate (43%) of faculty with a master's degree in nursing as their highest degree, the minimal educational qualification for a nurse faculty position. With the standard to gain practice experience prior to proceeding to advanced degrees, U.S. nurses lag behind other professions in earning doctorates by 13 years, completing terminal degrees at an average age of 46 (RWJF, 2013a). Even with the encouraging national trends for younger entry-level nurses, especially in the South and Midwest (Buerhaus, Auerbach, Staiger, & Muench, 2013), the 2013 survey reports an aging faculty and more of younger nurses with less than the requisite educational background; thereby prompting the call to nursing to recruit additional younger, highly educated nurses to faculty careers.

There continues to be a lack of information on predicting why nurses choose the nurse educator role or who is best suited to become an educator (Abou Samra, McGrath, & Estes, 2013). Targeting highachieving nursing students early with faculty mentors offers an inside glimpse of the advantages of becoming a nurse educator. A longrange approach to recruiting younger new faculty members may be through the promotion of positive nonmonetary attributes of a faculty position such as academic freedom, flexible time, global practice and consultation opportunities, and improvement of lives through teaching and research (RWJF, 2013b). Weaving career mentoring into the thread of faculty culture is critical since the majority of new nursing faculty will enter the unique setting of academia and intricacies of faculty culture unprepared for their changing role (McDermid, Peters, Jackson, & Daly, 2012). Academic service partnerships through shared clinical faculty (Bowman et al., 2011; Mills, Hickman, & Warren, 2014), and clinical faculty mentoring exemplars in the literature demonstrate the dual importance of academic and clinical faculty (Reid, Hinderer, Jarosinski, Mister & Seldomridge, 2013; Roberts, Chrisman, & Flowers,

Strategies to recruit and retain clinical faculty include offering innovative teaching environments such as simulation laboratories and giving a choice of a broad variety of clinical sites and nontraditional clinical placements (Wyte-Lake, Tran, Bowman, Needleman, & Dobalian, 2013). Strategies to retain existing faculty (Duvall & Andrews, 2010) have included personal retirement decisions based on health status, insurance coverage, job satisfaction, financial security, workplace conditions, and removing mandatory retirement ages. Recruitment of expert clinicians (McDermid, et al., 2012; Reid et al., 2013), mentoring new faculty in a spirit of cooperation (Cottingham, Dibartolo, Battistoni, & Brown, 2012; Reid et al., 2013), and addressing factors for retention of experienced faculty (Evans, 2013; Falk, 2014) are recognized as strategies to develop and retain talented educators. Discussions continue on whether DNP programs have greater promise and potential for future faculty or advanced practice nurses (Danzey et al., 2011; Minnick, Norman, & Donaghey, 2013).

The concepts of cost analysis and investment in human capital are difficult to capture in a figure that is easily understood. Using surrogate indicators for return on investment often involves starting with the findings and working back to the original program purpose. No research has been identified that "provides a direct or indirect relationship between a state's investment in nursing faculty or nurses and the cost or outcomes of the state's health care system" (Kowalski & Kelley, 2013, p. 73). Clearly, nursing faculty resources are at the top of the essential supply and distribution chain for new nurses, primary care professionals, and nurse educators (Cottingham et al., 2012; McDermid et al., 2012) but policymakers need clear and compelling evidence of the connection between nurse faculty shortages and population health (Gerolamo & Roemer, 2011; Kowalski & Kelley, 2013).

The New Nurse Faculty Fellowship (NNFF) Program

The NNFF program was structured on a root cause analysis of the reasons for faculty shortages. It was structured to provide a financial approach to address several of those causes through a sustainable funding source. The program is designed to provide funding to faculty newly hired to expand Maryland's nursing programs. All of Maryland's institutions (public and private) with nursing degree programs may nominate an unlimited number of newly hired fulltime, tenured or tenure-track faculty members for fellowships. Individuals who are offered a fulltime, long-term contract to serve as clinical-track nursing faculty also may be eligible. The maxi-

Table 1.

New Nurse Faculty Fellowship Recruitment and Retention FY 2007-FY 2015

Fiscal Year	NNFF Recipients	Funding	Number Lost in Cohort	Retention Rate (%)
2007	5	\$50,000	1	80.0
2008	20	\$220,000	1	95.0
2009	32	\$430,000	2	93.75
2010	21	\$440,000	0	100.00
2011	14	\$360,000	4	71.43
2012	35	\$520,000	0	100.00
2013	40	\$615,000	7	82.50
2014	44	\$770,000	5	88.63
2015	34	\$705,000	2	94.11
Total	245	\$4,110,000	30	87.76

NNFF = New Nurse Faculty Fellowship

mum amount of the fellowship award is \$20,000 per person, with \$10,000 distributed the first year and \$5,000 distributed in each of the next 2 years, assuming continuous employment as faculty in good standing and the availability of funding. The awards may be used to assist new nursing faculty with relevant expenses, such as professional development, student loan repayment, and graduate education. These funds are salary supplements and must not replace any portion of the nursing faculty fellow's regular salary. The funds are provided through the HSCRC, supported by a 0.1% pool of the prior fiscal year's hospital patient revenue for all Maryland hospitals combined.

Identification and nominations of qualified candidates are made by the employing dean or director of nursing at the college or university. Nominees generally must have a master's degree in nursing or be approved by the Maryland Board of Nursing and work in a full-time clinical or tenure-track nursing faculty position, as certified by the dean or director. Nominees having received an award in a prior year or while working as faculty for a previous Maryland college or univer-

sity are ineligible for nomination. However, exceptions may be made if the new faculty member is transferring or relocating to another Maryland nursing program and nurse leaders from both the former and current program agree to the nomination.

A selection panel of nurse educators and the NSP II nurse program coordinator reviews all nominations that are submitted. Eligibility is based on a one-page guideline in conjunction with the nursing dean or director's nomination of a new faculty hired at any nursing program within the state. The items reviewed for each nominee include date of employment, credentials, letter of recommendation, professional vitae, active nursing license, and job description. Although the number of nominations is unlimited, the nurse leader completing the nomination is asked to rank the nominees in their priority order for funding. The number of awards is dependent upon the number of nominations and availability of funding. Use of fellowship funds for newly hired full-time faculty members can be individualized at disbursement through the institution where they are employed.

Program Evaluation

There were two areas of focus for this retrospective program review and evaluation. The first area was based on the value of the investment on recruiting, retaining, and developing faculty for Maryland's nursing programs. The second review focused on findings within a voluntary faculty survey distributed in 2014 to all current faculty participants in the NNFF program.

Financial review. The retrospective program evaluation included a review of documents, files, and funding allowances between August 31, 2006 and December 31, 2014. Table 1 includes details on the number of faculty awards, attrition per cohort, and final funding over the 8 years of program data evaluated in 2015. By the conclusion of fiscal 2015, over \$4.1 million was expended to support 245 new nurse faculty members.

Faculty review. As part of the overall program evaluation process, a survey tool with 20 questions was sent by SurveyMonkey® to the 215 nurses completing the NNFF program. The survey included sociodemographic questions to assist in identification of the broad composi-

tion of faculty benefiting from the fellowships. Questions included gender, ethnicity, birth generation, highest level of education, length of career nursing experience, employment status, employer type and region, years expected to work as faculty, current salary range, and difficulty securing a nursing faculty position. Between August 6, 2014 and October 31, 2014, 70 individuals (32.5%) responded through SurveyMonkey® with implied consent by their participation (see Table 2).

Results

To date, 12 public and private universities as well as seven community colleges have accessed these funds to recruit and retain new nursing faculty. Over 8 years, 245 new nurse faculty members were awarded over \$4.1 million. The nurse faculty retention rate is 87.76% as measured by continued employment of the new nurse faculty fellow at 3 years. Longitudinal data provides opportunities for retrospective review of workforce interventions. The relationshipbased mentoring that accompanied these fellowship awards established a foundation for the majority to continue teaching with a Maryland school.

Of special note, results showed a high proportion of minorities (40%, n=28) were represented in the NNFF group. The smallest NNFF group were those born after 1982 and the largest group (38%, n=26) were those nurses expecting to work less than 10 years. Participants responded that the most compelling strategies for recruitment and retention of new nurse faculty would include scholarships for tuition and fees (71.4%, n=50), student loan forgiveness (60%, n=42), mentorship (55.7%,n=39), and faculty development and salary supplement (54.3%, n=38) (see Table 2).

In an interim snapshot, Maryland had 602 full-time nursing faculty members as reported by deans and directors at 27 nursing pro-

grams in 2012. Of those, 127 faculty members received new nurse faculty fellowships (21%) over the initial period of 2007-2012. The impact on diversity varied across schools. Overall, 44% (n=108) were from underrepresented groups in nursing. These groups included ethnic and racial minorities, men in nursing, geographically disadvantaged, and younger-aged nurses completing doctoral degrees and embarking on faculty career paths. The deans and directors who participated in the program unequivocally stated this was an effective tool that helped them recruit and retain nurse faculty. It demonstrated a tangible interest and investment in the new faculty member's professional development, assisting them in furthering their education and providing financial support to move into new career paths. The retention of these faculty and annual follow-up with their employers indicate that almost 9 out of 10 remain in the positions at least 3 years. The majority were tenure-track faculty members while some of the clinical full-time faculty completed higher degrees to move into tenure track openings in academia.

Return on Investment

The reality is that we have sparse information about the return on investment (ROI) for nurse faculty recruitment or turnover costs. This is not surprising, since we know very little about quantifying turnover and retention in terms of quality of care and patient safety or the economic benefits of nurse retention.

More recently, Kowalski and Kelley (2013) estimated cost of clinical nurse turnover averages 125% of a nurse's annual salary. This includes advertising, recruiting, vacancy replacement, orientation, training, temporary staff, and closed bed deferrals. They view this in terms of nursing faculty in Colorado and estimate that every \$1.00 invested in nursing faculty saves \$3.50 in recruiting cost of healthcare organizations in the

state for an ROI of 350%. Although ROI for the NNFF program was not quantifiable, the above formula would indicate ROI for \$4.1 million awarded to new faculty may provide approximately a \$14 million reduction in recruiting costs for the state's healthcare organizations. Since this program is funded by pooled hospital revenue sources and provided to ensure a sufficient supply of nurses, the benefits are clear. Although ROI may be evident to nurses, solutions to the nurse faculty shortage go beyond existing faculty and new faculty to include academic administrators, policymakers, and community and health system leaders. Working together, the environment and infrastructure around faculty must change (Kowalski & Kelley, 2013).

Future Considerations

Even with the NNFF, an effective faculty recruitment and retention program, the average age of Maryland nurse faculty across all nursing programs in 2012 was 50 years old. Fewer than 30% of current faculty respondents have completed terminal degrees at the doctoral level, while approximately 52% of Maryland nurse faculty intended to retire within the next 10 years (Maryland Higher Education Commission, 2014). The funding has not been capped, so all eligible nominees have been awarded. At the very least, Maryland has a mechanism in place to assist new faculty in joining the faculty culture, funding terminal degree completion, and resolving outstanding student loan debt from prior degrees. There is still unrealized opportunity to recruit younger faculty and assist them to complete terminal degrees at an earlier stage in their careers. There is no funding support for the growing group of adjunct professors and part-time clinical nursing instructors. This group comprised younger, more racially and ethnically diverse nurses with higher percentages of men (Maryland Higher Education Commission, 2014).

Understanding the lived expe-

Table 2.
New Nurse Faculty Fellowship (NNFF) Survey Respondents

Nurse Support Program II Project Director Role 4.3% n=3 Other 7.1% n=5					> 40 5.7% n=4			
Maryland Community College Simulation User Network 12.9%					36-40 10% <i>n</i> =7			
Nurse Educator Certificate Options/ Teaching Certificate 4.3%		American Indian 0 <i>n</i> =0		PhD (non- nursing) 10% n=7	31-35 10% <i>n</i> =7		Long-term care 1.43% <i>n</i> =1	
Certified Nurse Educator Preparation 7.1% n=5		Other 1.43% <i>n</i> =1		DNP 11.43% <i>n</i> =8	26-30 18.57% <i>n</i> =13		Community center 1.43% <i>n</i> =1	Outside Maryland 0 n=0
Eastern Shore Faculty and Mentor Initiative 7.1% n=5		White 58.57% <i>n</i> =41		PhD (nursing) 11.43% n=8	21-25 10% <i>n</i> =7	Retired 0 <i>n</i> =0	Hospital 11.43% <i>n</i> =8	Capitol (DC) region 20% n=14
Maryland Faculty Academy (Simulation Training) 8.6%		Indian-Eastern 2.86% <i>n</i> =2	1982-2000 2.86% <i>n</i> =2	Post MS teaching certificate 7.14% n=5	16-20 15.75 <i>n</i> =11	Student 5.71% <i>n</i> =4	Historically Black university 14.29% n=10	Western 11.4% <i>n</i> =8
Nurse Educator Doctoral Grants 5.7% n=4		Hispanic 4.29% <i>n</i> =3	1961-1981 58.57% <i>n</i> =41	MS (non- nursing) 8.57% <i>n</i> =6	11-15 14.29% <i>n</i> =11	Adjunct/Clinical 12.9% <i>n</i> =9	Private university 7.14% <i>n</i> =5	Southern 2.9% n=2
NNFF 100% <i>n</i> =70	Male 7.15% <i>n</i> =5	Black 28.57% <i>n</i> =20	1943-1960 38.57% n=27	MSN 60% <i>n</i> =42	6-10 15.71% <i>n</i> =11	Part-time nursing faculty 5.71% n=4	Public university 38.57% n=27	Central 45.7% <i>n</i> =32
Hal and Jo Cohen Graduate Nursing Faculty Scholarship 22.9 % n=16	Female 92.86% <i>n</i> =65	Asian 4.29% <i>n</i> =3	1925-1942 0 <i>n</i> =0	BSN 4.29% <i>n</i> =3	1-5 0 <i>n</i> =0	Full-time nursing faculty 91.43% n=64	Associate degree college 37.14% n=26	Eastern Shore 17.1% <i>n</i> =12
Which NSP II program enhanced your education or professional faculty development?	What is your gender?	Population subgroup	Generation (birth years)	Highest level of education	Career nursing experience (years)	Employment status	Employer type	Employer region (State of Maryland)

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Table 2. (continued)
New Nurse Faculty Fellowship (NNFF) Survey Respondents

Other 4.3% <i>n</i> =3			Best for my family and lifestyle 15.7%			Leadership support 28.6% <i>n</i> =20
Health sciences 0 n=0			Concern for future of the profession 45.7% n=32			Encourage to pursue higher degrees 34.3% n=24
PhD 5.8% <i>n</i> =4	31-40+ 5.88% <i>n</i> =4		Funding support 7.1% n=5			Mentorship in faculty role 55.7% n=39
DNP 13% <i>n</i> =9	26-30 10.29% <i>n</i> =7	131,000+ 4.29% <i>n</i> =3	Location of job 12.9% n=9			Distance education, online 14.3% n=10 Dual clinical and academic appointments 17.1% n=12
MSN 24.6% <i>n</i> =17	21-25 11.76% n=8	111,000- 130,000 1.43% <i>n</i> =1	Work hours 15.7% <i>n</i> =11			Simulation and teaching aids 11.4%
RN-BSN 24.6% <i>n</i> =17	16-20 11.76% <i>n</i> =8	91,000-110,000 22.86% <i>n</i> =16	Personal enjoyment 37.1% n=26	7-10 years 8.7% n=6		Faculty development 54.3% n=38
BSN 37.7% <i>n</i> =26	11-15 23.53% <i>I</i> =16	71,000-90,000 25.71% <i>n</i> =18	Flexibility 27.1% n=19	4-6 years 15.9% <i>n</i> =11		Salary supplement 54.3% n=38
ADN 37.7% <i>n</i> =26	6-10 25% n=17	51,000-70,000 41.43% n=29	Career potential 21.4% n=15	1-3 years 68.1% n=47	No 2.9% n=2	Student loan forgiveness 60% n=42
LPN 8.7% <i>n</i> =6	1-5 13.24% <i>n</i> =9	30,000-50,000 7.14% <i>n</i> =5	Interest in teaching 84.4% n=59	<1 year 7.2 % n=5	Yes 97.1% n=67	Scholarships for tuition and fees 71.4% n=50
What type of degree program do you teach in?	How many more years do you expect to work as faculty?	Current salary range	Why have you chosen to become a nurse educator-academic or clinical?	How long have you been a participant with one of the NSP II funded programs?	Would you recommend the NSP II programs to another nurse?	Which strategies do you consider to be most effective in recruitment and retention of nursing faculty?

Table 2. (continued)
New Nurse Faculty Fellowship (NNFF) Survey Respondents

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				Simulation in education 27.1% n=19
				Attract younger RNs to faculty careers 30% n=21
		Other 28.2% <i>n</i> =11		Faculty Academy to prepare clinical nurses to become faculty 31.4% n=22
		Present at Legislature 5.1% n=2		Institution grants for nursing programs 32.9% n=23
		Academic lectures 15.4% n=6	Not important 11.6% n=8	Research on nursing education, faculty shortages, curriculum models 32.9% n=23
		Meetings of profession 61.5%	Somewhat important 10.1% n=7	Continuing education for faculty development 38.6%
		Posters 17.9% <i>n</i> =7	Important 13% <i>n</i> =9	Tuition support for BSN, MSN, PhD, DNP degree 52.9%
	Yes 7.14% <i>n</i> =5	Presentations 15.4% <i>n</i> =6	Moderately Important 13% n=9	Doctoral grants 60% <i>n</i> =42
	No 91.34% <i>n</i> =64	Publish in peer- reviewed journals 5.1% n=2	Extremely important 53.6% n=37	New nurse faculty fellowships 75.7% n=53
	Have you had any difficulty securing a nursing faculty position?	Choose if you have disseminated information on NSP II through any of the following.	How important was NSP II to your decision to advance your education as nursing faculty?	What areas do you recommend NSP II concentrate resources in the future? (The top 9 are listed.)

ADN = associate degree in nursing, BSN = bachelor of science in nursing, DNP = doctor of nursing practice, LPN = licensed practical nurse, MSN = master of science in nursing, NNFF = New Nurse Faculty Fellowship, NSP = Nurse Support Program, PhD = doctor of philosophy, RN = registered nurse

riences of nursing faculty, their specific challenges and perspectives (Evans, 2013; Falk, 2014) could broaden the nursing fund of knowledge on the strategies that have been successful in realistic settings. With the need for earlier entry into faculty careers for younger nurses, preliminary research (Abou Samra et al., 2013) needs to be replicated for identifying undergraduates with indicators for academic careers.

More research is indicated on faculty workload (Gerolamo & Roemer, 2011), strategies to resolve the faculty shortage (Wyte-Lake et al., 2013), clinical academic partnerships (Bowman et al., 2011; Mills et al., 2014), impact of expert clinicians, adjunct and part-time faculty filling traditional positions (Reid et al., 2013), and the effect of DNP programs on the faculty workforce (Minnick et al., 2013). A spotlight approach through a regular feature article in a peer-reviewed journal with high impact could disseminate the most successful and cutting-edge strategies for rapid translation of solutions (McDermid et al., 2012). Nursing education leaders, nurse researchers, and nurse executives provide guidance, implementation, and evaluation of nursing faculty shortage interventions in program evaluation based on established outcomes criteria.

Conclusion

The NNFF program proven to recruit and retain new faculty. Interestingly, the two chief reasons reported for new nurse faculty members' decision to become nurse faculty were "interested in teaching" and "concerned for the future of the nursing profession" (Maryland Higher Education Commission, 2014). Perhaps, altruism outpaces financial incentives for entry into a faculty role. The importance of NNFF awards is evident in how faculty perceived support of their administration. The final impact may be best measured by how they were able to more easily advance their education and remain in a faculty career path.

Although there is agreement on the nursing faculty shortage, there is limited evidence and evaluative data to determine the best fit for faculty career paths earlier in a nurse's education trajectory or to identify which strategies are most efficient in reinforcing the individual nurse educator. Recruitment and retention efforts that focus on monetary incentives have been effective with the NNFF program, as described here. However, NNFF was developed for full-time faculty and does not address strategies to recruit and retain the growing proportion of adjunct, part-time, and non-benefited nurse faculty positions at educational institutions.

Replication of the Program Model

Several states have developed funding models. The appeal of this model is the direct link between hospitals financing a mechanism to control nursing costs through funding the educational programs and faculty to ensure a steady stream of newly licensed registered nurses. This model is not dependent on tax dollars. Instead, it is an established agreement between Marvland's HSCRC and the state's acute care hospitals. Although HSCRC is unique to Maryland, the NSP II program could easily be replicated in voluntary agreements between hospitals and appropriate agencies, such as centers for nursing, in other states. The funding allotment, method of distribution, administration, and implementation of this program is replicable. The dissemination of multiple successful prostrategies evaluated in Maryland over the last 10 years could be shared across states in a concierge approach for specific areas of program interest. Therefore, NSP II presents a multi-prong model with both institutional and faculty-focused components that are available for closer review on the Nurse Support Program website (https://nursesupport.org/).

Future Implications

Evaluation of the existing

state-based funding for nurse faculty and incorporation of the impact on patient care are recommended next steps for nurse workforce researchers. Development of evidence-based tools for early identification, recruitment, and retention of nurse faculty through program evaluation research with rapid cycle publication of findings is critical to adopting solutions supported by evaluative data. The need for nurse-led research on the nursing and nurse faculty workforce has never been greater, nor have the results of this research been more critical to nurses, patients, and healthcare systems. Additional faculty workforce research and program evaluation of effective strategies is essential to a resolution of the nursing faculty shortage. The multiple nursing grants at national and state levels are a field of opportunity for nurse leaders who are aware of the resources and clear on how to maximize ROI. \$

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