

Health Policy Engagement Among Graduate Nursing Students in the United States

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This is the peer reviewed version of the following article:

De Cordova, P., Steck, M. B., Vermeesch, A., Pierre, N., Ohlendorf, J., Rankin, A., Lawrence, S., & Derouin, A. (2018). Health Policy Engagement Among Graduate Nursing Students in the United States. *Nursing Forum*, 1-6. doi: 10.1111/nuf.12295

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Abstract:

Aim The aim was to understand how health policy education is currently being delivered in the United States' graduate nursing programs.

Methods This exploratory cross-sectional design used an anonymous online survey to target graduate nursing students attending American Association of College of Nursing (AACN) member institutions.

Results Over 75% of the sample (n = 140) reported taking a dedicated health policy course and 71.5% (n = 131) of the sample responded that a health policy course was required and an equal distribution among master's and doctoral students. There was no significant difference between type of graduate degree sought and the requirement to take a health policy course (P = 0.37). For students involved in health policy, there was a greater proportion of master's students involved at the state level, than doctorate of nursing practice (DNP) or PhD students (P = 0.04).

Conclusions Health policy and advocacy education are important aspects of graduate nursing curriculum and have been integrated into curricula. Graduate nursing students at all levels reported that health policy AACN Essential competencies are being included in their program, either as stand-alone health policy courses or integrated health policy learning activities during matriculation.

Keywords: health policy | graduate nursing students | nursing programs | American Association of College of Nursing | AACN

Article:

1 BACKGROUND AND SIGNIFICANCE

Knowledge and application of health policy concepts and advocacy skills are critical among nurses in the United States' (US) dynamic and rapidly evolving health systems. Nurses have historically valued their ability to influence healthcare. The current political and healthcare climates demand that nurses, be knowledgeable and skilled in their ability to shape health policy at the local, state, national, and international levels. Health policy analysis and advocacy are invaluable skills, especially among graduate nurses, who are in healthcare delivery roles as clinical providers, educators, and researchers.

Health policy provisions consist of the decisions, plans, and actions undertaken to achieve specific healthcare goals within a society.¹ Historically, Sojourner Truth, Lillian Wald, and Margaret Sanger were nurses who challenged and changed health policy. In today's environment, nurses must possess a highly developed understanding of how health policies can affect patients and their families. Nurses must lead the way to develop new health policy; to help implement and disseminate new and existing health policy.²

Traditionally, nurses have been educated on how to communicate with patients and their families. In the present nursing paradigm, nurses learn how to translate current nursing research findings to the patient's bedside. This translation not only affects patients and their families, but a need exists that these findings are also translated to policymakers at all levels.² Nurses must view health policy as something they can shape, rather than something that happens to them.³ Therefore, there is a need to describe how nurses at the graduate level are currently being educated to analyze existing health policy as well as advocate for future health policy.

Recommendations from professional nursing organizations, including the American Association of Colleges of Nursing (AACN), have provided guidance on how to engage nurses in health policy endeavors. In 1996, AACN's *The Essentials of Master's Education in Nursing* (updated in 2011) established that health policy education be integrated into all master's nursing programs.⁴ In 2006, *The Essentials of Doctoral Education of Advanced Nursing Practice* was established. These essentials currently serve as a health policy education templates for both master's and doctoral nursing programs in the United States.^{5, 6}

In *The Essentials of Master's Education*, Essential VI delineates competencies for health policy engagement, defined as knowledge and skills which "shape healthcare systems, influence social determinants of health, and therefore determines accessibility, accountability, and affordability of health care."⁴(p. 21) Additionally, master's-prepared nurses should "actively analyze healthcare policies, participate in the development and examine the effect of policy implications that impact both nurses and patients."⁶ Consequently, the graduate nurse should be able to demonstrate the skills needed to influence development of new health policy or provide alternatives to existing health policy in the healthcare arena. Despite recommendations that current health policy essentials be integrated into existing master's and doctoral nursing programs, there is little empirical evidence to demonstrate that these essential competencies are being integrated into graduate nursing education.

Staebler et al⁷ sought to describe the faculty perspective regarding whether health policy content and skills were being integrated into nursing curricula. These researchers inquired about content delivery modalities, perceptions, and facilitators, as well as barriers, to integrating health policy into their nursing curricula. Results from that study revealed that most faculty surveyed (70%) have participated in political advocacy, although only 36% had worked in policy

development. Only 40% of the faculty in the sample were actively engaged in health policy advocacy at the time of the survey.

Previous research identified the following barriers to students' involvement in health policy activities: lack of time, lack of knowledge, and/or lack of interest in performing those activities.⁸ Faculty has also identified barriers to developing health policy experts, such as lack of desire and opportunities and insufficient financial and administrative support.⁷ This is an area of concern because there is evidence that faculty's engagement in health policy activities increases the likelihood that health policy educational content will be disseminated to their students.^{9, 10}

According to Byrd et al,¹⁰ healthcare policy development and core competencies need to be integrated into both undergraduate and graduate health policy courses to increase students' political astuteness. Political astuteness, defined as the awareness of political knowledge and the action of being politically savvy,¹¹ is important in determining nurses' level of civic policy knowledge and engagement. Des Jardin⁸ conducted a pretest and posttest survey of the level of political astuteness for undergraduate and graduate students enrolled in health policy courses. This survey assessed the students' comfort levels when performing policy assessment and development activities. The research findings revealed that, after taking a health policy course, the percentage of both undergraduate and graduate students who identified as being unaware politically decreased from 49% pretest to 1.3% posttest.

In similar research sampling graduate nursing students, Primomo¹¹ found that 20% of students who never took a policy course were unaware politically. However, at the end of the policy course, that unawareness decreased to 7%. These are promising findings; however, it is unknown whether political awareness is sufficient to prepare students who will go on to engage in health policy advocacy in their advanced practice or faculty careers.

Nursing students at the graduate level are preparing for roles where their skills in health policy advocacy and political engagement are warranted. A need exists to assess their level of political engagement before taking a health policy course. An instrument, such as the Political Astuteness Survey (PAS), is a validated instrument to evaluate students' baseline health policy knowledge and competencies before taking a health policy course.¹¹ Also, there exists a need to describe graduate nursing students' engagement while taking a health policy course. Therefore, the overall aim of this descriptive study was to assess how health policy education is being delivered to graduate students in the US' nursing programs and to determine the graduate students' level of political involvement. Specific research questions included:

1. Are US graduate nursing students taking a stand-alone policy course in their curriculum?
2. Is the PAS used to assess students at the beginning of a health policy course?
3. What is the level of graduate student involvement with health policy at the local, state, and/or federal level?

2 METHODS

This descriptive, cross-sectional study used an anonymous online survey to target graduate nursing students enrolled in AACN-member institutions. The online survey was adapted from a previous survey that assessed faculty teaching health policy content.⁷ Exempt Institutional Review Board approval was obtained from the University of Portland, Project #2017013. Participants were given the link to the online survey, which the authors created using Survey Monkey (<http://www.surveymonkey.com>) for 3 weeks in early February 2017. Participants were recruited

in various ways. The survey link was distributed via the AACN-Graduate Nursing Student Academy (GNSA) database to approximately 12 000 graduate nursing students. The survey link was also disseminated through direct emails to graduate nursing program directors and faculty/student bulletins of AACN-member institutions. During the 3 weeks, the survey was active; Deans and Directors of AACN-member schools were also sent e-mail invitations to distribute to their graduate students.

The 34-item online survey consisted of four parts: (a) Demographic data: type of graduate program by clinical specialty, type of academic program, availability, and participation of a health policy course during matriculation, if the course was a requirement, and the delivery format of the course; (b) Policy course: participants rated how they viewed the policy course in their curriculum; (c) Political astuteness: participants indicated whether they completed a validated instrument measuring this political astuteness before or during their health policy course; and (d) Prepolicy and advocacy engagement: participants identified health policy activities they engaged in such as policy analysis, advocacy, educating health policymakers during their program, and also rated their degree of confidence in becoming involved in these activities after graduation. Participants also identified barriers they encountered when engaging in health policy and advocacy activities.

Survey responses were assessed for missing data and responses were excluded from the analysis if they had greater than 10% of missing data. Descriptive statistics were used to analyze the demographics whereas bivariate analyses (χ^2 tests using R statistics) were used to evaluate the relationships between type of graduate students and the research questions.¹² Ad hoc power analyses were performed using G*Power software, version 3.1 (Statistical Power Analyses for Windows, Heinrich-Heine_University Dusseldorf, Germany),¹³ for the planned χ^2 analyses with 2-degrees-of-freedom, a moderate effect size = 0.3%, and 95% power, resulting in a required sample size of 172.

3 RESULTS

Two hundred and fifty-one (2.4% response rate) graduate nursing students completed the survey. Approximately 53% (n = 134) of the survey's participants attended a doctoral research university according to the Carnegie Classification of Institutions of Higher Education. More than a half (53.0%) of the survey participants were enrolled as full-time students. Most of the sample's participants, 53.4%, were pursuing their master's degree, while 37.1% indicated they were pursuing their Doctor of Nursing Practice (DNP) degree and 9.6% were enrolled in a Doctor of Philosophy (PhD) program (Table 1).

Over 75% of the sample (n = 140) reported taking a dedicated health policy course and 71.5% (n = 131) of the sample responded that the course was required during their graduate studies. Among these 131 students, there was an equal distribution as to whether the study participant was enrolled either as a master's or a DNP student. When study participants were asked what health policy-related activities they have engaged with or experienced in the health policy course, the most common activity noted was "analyze health policy proposals, health policies, and related issues from the perspectives of consumers, nursing, other health professionals, and additional stakeholders." The frequency of the participants' responses was similar in all types of graduate education. An overwhelming majority of study participants reported not being engaged in legislative advocacy efforts (91% for master's, 85% for DNP, and 82% for PhD; Table 2).

Table 1. Student characteristics

	<i>N</i> = 251	%
Carnegie classification		
Baccalaureate colleges: All divisions	3	1.2
Master: Large program ^a	48	18.3
Master: Medium program	26	10.4
Master: Small program	9	3.6
Research: Very high activity	16	6.4
Doctoral/research universities ^b	134	53.4
Other (medical schools/medical centers/health professionals/specialized institutions)	15	6.0
Status type		
Full time	133	53.0
Part time	118	47.0
Program type		
Master's	134	53.4
DNP	93	37.1
PhD	24	9.6
Program instruction		
Mix of traditional classroom and online instruction	141	56.6
Online instruction	78	31.3
Traditional classroom setting	32	12.9

Abbreviations: DNP, Doctor of Nursing Practice; PhD, Doctor of Philosophy.

a Institutions that award at least 50 master's degrees and fewer than 20 doctoral degrees during the year.

b Institutions that award at least 20 research/scholarship doctoral degrees during the year.

Table 2. Characteristics of health policy courses by student type

	<i>N</i> = 143				%	
Has taken	140				76.5	
Has not taken	43				23.5	
Type of course						
Required, stand alone	131				71.6	
Integrated in multiple courses	36				19.7	
An elective	9				4.9	
Not taught or offered	7				3.8	
If course was required, level of student	Master's		DNP		PhD	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Type of health policy activities	59	46.1	60	46.9	12	9.4
Analyze health policy issues	61	22.3	49	22.4	14	23.3
Lead the development of health policy (any level)	24	8.8	20	9.1	7	11.7
Influence policymakers regarding nursing issues	31	11.3	23	10.5	8	13.3
Educate others regarding nursing issues	40	14.6	34	15.5	8	13.3
Advocate for the nursing profession	49	17.9	38	17.4	12	20.0
Develop, evaluate, and lead health policy initiatives	30	11.0	26	11.9	4	6.7
Advocate for social justice, equity, and ethical policies	39	14.2	29	13.2	7	11.7
Student policy engagement						
Currently engaged in legislative advocacy efforts	7	9.0	10	14.9	4	18.2
Not engaged in legislative advocacy efforts	71	91.0	57	85.1	18	81.8

Abbreviations: DNP, Doctor of Nursing Practice; PhD, Doctor of Philosophy.

Table 3. Relationships between student type and health policy coursework and activities

Level of student	Master's	DNP	PhD	χ^2 P
Required course	64	59	16	0.37
Not required	24	13	6	
Political astuteness evaluation				
Given	19	14	3	0.66
Not given	56	56	16	
Student involvement				
Local	9	10	3	0.14
State	22	15	6	0.04
Federal	5	9	6	0.52

Abbreviations: DNP, Doctor of Nursing Practice; PhD, Doctor of Philosophy.

4 DISCUSSION

Implications from this study suggest that health policy and advocacy education courses are important to graduate education and have been integrated into graduate nursing program curricula. Graduate nursing students at all levels reported that required health policy competencies are being included in their programs, either as stand-alone health policy courses or have health policy integrated into their curricula.

Although the participants in this study indicated that health policy content is included in their graduate nursing curricula, the makeup of associated educational activities was not consistent between programs. This study also indicated low levels of student involvement in health policy activities across all program types. This low level of policy engagement may stem from the fact that faculty has identified significant barriers to engaging in policy work themselves.⁷ As was demonstrated in previous research, when faculty is engaged in health policy, it is more likely that students will have policy content included in the classroom.^{9, 10} Although this was an independent study with a sample of students, our findings relate to previous research in that one potential way to enhance students' exposure to high-quality policy content that will translate into action is to remove barriers to faculty policy engagement. This may include faculty focusing on promoting policy advocacy work to students.

Survey respondents in this study indicated that several health policy activities were included in their graduate education, implying that current graduate nursing students have gained health policy knowledge and advocacy skills. Specifically, the participants indicated that analyzing current health policy proposals and health policies, from the perspectives of consumers, nurses, and other health professional stakeholders were the most common activities undertaken in their curricula. Master's level students were more likely to indicate that they advocate at the state level compared to DNP and PhD students. Future research should explore why this difference may have occurred.

According to the study's participants, health policy courses often do not include the PAS, as a pretest to evaluate students' baseline health policy knowledge and competencies before taking a health policy course. Since the PAS has been shown to be effective in measuring health policy awareness, utilizing this instrument in graduate nursing programs may offer nurse educators the opportunity to evaluate their teaching effectiveness, particularly when disseminating health policy learning activities and research.¹⁰ The PAS may provide the needed content to begin conversations related to health policy matters among nursing students and faculty. Specifically, use of the PAS

may also provide education foundations related to engagement efforts with key lawmakers at state and national levels, thus promoting health policy awareness among students. Analyzing research using the PAS when teaching health policy may also provide faculty evidence to incorporate a baseline health policy knowledge assessment of graduate nursing students.

This sample of graduate students is reflective of the national sample of graduate nursing students. In 2017, there were approximately 3.9 million licensed registered nurses (RNs) in the United States. Of these RNs, 158 941 were enrolled in graduate nursing programs, with 45 975 of students graduating in 2016, the year of the survey.¹⁴ Of these graduate nursing students, 63.6% (n = 5120) were enrolled in master's programs, 22.1% (n = 1781) were enrolled in DNP programs, and 6.6% (n = 535) were enrolled in PhD programs.¹⁴ This enrollment of graduate nursing students reflects the positive impact and concerted efforts that national nursing organizations, such as AACN, have made to educate and equip nursing faculty with the skills, experiences, and health policy knowledge that will translate to students in their graduate nursing classrooms.

This study did reveal that the majority of the study's participants have taken a health policy course and advocacy competencies. While the low level of political involvement is concerning, exposure to policy content in a course may be a first step in recognizing the opportunities they have to influence health policy as for students transition to their practice or faculty roles. Ongoing and future promotion and growth of nurse advocacy efforts by these study participants as they become nurse educators, mentors, clinical experts, and nurse leaders are important as they integrate health policy competencies into their professional practices.

5 IMPLICATIONS

Despite the limitations of a low survey response rate (possibly due to self-selection and no incentive offered to take the survey), implications for future research are discernible. This study was a "first look" in assessing how health policy content, a necessary curriculum element in the graduate nursing program, is being delivered. Future research may include resampling graduate nursing students in the next few years to determine if policy engagement changed, given the push for nursing schools to ensure students have opportunities for policy engagement. In the meantime, implications of this study suggest that graduate nursing faculty should evaluate their current health policy course and consider possible revisions of current program curricula to integrate more health policy engagement opportunities. Also, the faculty charged with teaching health policy could utilize a reliable and validated precourse/postcourse instrument, such as the PAS, to measure outcomes of their innovative health policy program changes.

The AACN's Essentials provide a framework when developing health policy courses at all academic levels. Although we cannot assume that simply taking a policy course would inform students about the Essentials, the framework allows faculty to model courses for maximum student engagement. At the baccalaureate level, students should possess a basic understanding of healthcare policy, discuss implications of policy on the healthcare delivery system, and be encouraged to participate in legislative efforts.¹⁵ Master's students should be expected to analyze policy at a higher level, often using different nursing perspectives to work with other healthcare professionals to develop, implement, and advocate for policy that impacts the healthcare delivery system.⁴ As future clinical practice leaders and researchers, DNP and PhD students should be expected to show the highest levels of policy understanding, being able to critically analyze health policy as well as lead, develop, and advocate for future policy initiatives.⁵

This study provides insight into the current state of advocacy education and experience in graduate nursing programs and also offer thoughts about how to evaluate the value and effectiveness of what is being taught. Future research studies evaluating current baccalaureate health policy and advocacy education would provide valuable information so that policy skill-building in graduate programs may scaffold on previous knowledge. Expanding health policy competencies and thus the confidence of the nursing workforce to advocate for their patients and their families at all levels of nursing education could significantly influence positive healthcare decisions and patient outcomes in the United States.

Avenues for current nursing faculty to encourage health policy education among graduate students include researching health policy teaching strategies, including the use of standardized evaluation instruments to assess the effectiveness of health policy education in graduate nursing curricula. Development of a different, reliable, and validated instrument to assess graduate nursing faculty and their students' health policy knowledge may be considered. Future research may include the collection of data including tallying the number of graduate nursing students who participate in "advocacy day" efforts at state and national legislatures.¹⁶ Monitoring the rate at which students attend professional health policy training sessions, nurse leadership training, or fellowship programs sponsored by professional nursing organizations are additional data points that may show evidence of integrating health policy competencies into the US nursing curriculum. The increasing number of licensed RNs who serve as state and federal legislators, public spokespersons, board members, national leaders, and professional advocates is perhaps the clearest indicator that health policy and advocacy competencies are being integrated into nursing curricula.

6 CONCLUSION

Health policy content is integrated into the US graduate nursing curricula; however, more research on how this content is delivered is needed to influence future healthcare policy and advocacy efforts. Graduate nursing faculty are encouraged to assess their teaching by administering precourse and postcourse political astuteness instruments and also enhance their course content with learning activities that promote health policy skills. With these slight changes, it is anticipated that nurses can extend their professional activities beyond the patient's bedside or clinical research arena to engage in health policy efforts at the local, state, national, and international levels. The current healthcare environment is ready for graduates to be active and involved in health policy. As more graduate nurses adopt nursing faculty roles, health policy and advocacy must continue to evolve. The call now is to build on that momentum, to continue to evaluate graduating nurses' efforts, and to deliver nursing education that ensures all nurses are not only excellent clinicians but are also equipped to effectively engage in health policy development and advocacy.

ACKNOWLEDGMENTS

The authors wish to thank Bianca Singh, Dr Suzanne Miyamoto, and personnel at American Association of Colleges of Nursing (AACN) for making the 2016 Faculty Policy Intensive (FPI) possible and to the graduate nursing students who participated in this survey. The authors would also like to thank Brook T. Russell, PhD, Assistant Professor, Department of Mathematical Sciences, at Clemson University for his willingness to assist with the statistical analysis of this project. Additionally, the authors would also like to thank Allyson Black, an undergraduate Honors nursing student at Rutgers University working under the mentorship of Dr de Cordova for her contributions of assisting with cleaning of data and gathering literature. All eight FPI fellows received funding to attend a 4-day seminar at AACN in March 2016. Additionally, Dr

de Cordova would like to acknowledge additional funding she received to complete this manuscript from the Agency for Healthcare Research and Quality (1K08HS024339-01A1) Mentored Clinical Scientist Research Career Development Award.

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References

1. World Health Organization (2017). Health policy. Retrieved from: http://www.who.int/topics/health_policy/en/
2. Robert Wood Johnson Foundation [RWJF] (, 2014). Preparing nurses for leadership in public policy. Retrieved from: <https://www.rwjf.org/en/library/articles-and-news/2014/02/preparing-nurses-for-leadership-in-public-policy.html>

3. The National Academies of Science, Engineering, and Medicine (2010). The future of nursing: leading change, advancing health. Retrieved from: <http://www.nationalacademies.org/hmd/Reports/2010/The-Future-of-Nursing-Leading-Change-Advancing-Health.aspx>
4. American Association of Colleges of Nursing (AACN). (2011). The essentials of master's education in nursing. Retrieved from: <http://www.aacn.nche.edu/education-resources/MastersEssentials11.pdf>
5. American Association of Colleges of Nursing (AACN). (2006). The essentials of doctoral education for the advanced practice nursing. Retrieved from <http://www.aacnnursing.org/Portals/42/Publications/DNPEssentials.pdf>
6. American Association of Colleges of Nursing (AACN). (2011). Nursing fact sheet. Retrieved from: <http://www.aacn.nche.edu/media-relations/fact-sheets/nursing-fact-sheet>
7. Staebler S, Campbell J, Cornelius P, et al. Policy and political advocacy: comparison study of nursing faculty to determine current practices, perceptions and barriers to teaching health policy. *J Prof Nurs*. 2017; 33(5): 350-355. <https://doi.org/10.1016/j.profnurs.2017.04.001>
8. Des Jardin KE. Home study program: political involvement in nursing—education and empowerment. *AORN J*. 2001; 74(4): 467-471. 473-475. [https://doi.org/10.1016/S0001-2092\(06\)61679-7](https://doi.org/10.1016/S0001-2092(06)61679-7)
9. Pace A, Flowers S. Students' perception of professional advocacy following a political advocacy course. *Currents in Pharmacy Teaching & Learning*. 2012; 4(1): 34-38. <https://doi.org/10.1016/j.cptl.2011.10.005>
10. Byrd ME, Costello J, Gremel K, Schwager J, Blanchette L, Malloy TE. Political astuteness of baccalaureate nursing students following an active learning experience in health policy. *Public Health Nurs*. 2012; 29(5): 433-443. <https://doi.org/10.1111/j.1525-1446.2012.01032.x>
11. Primomo J. Changes in political astuteness after a health system and policy course. *Nurse Educ*. 2007; 32(6): 260-264. <https://doi.org/10.1097/01.NNE.0000299480.54506.44>
12. R Core Team. *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing; 2017. Retrieved from. <https://www.R-project.org/>
13. Erdfelder E, Faul F, Buchner A. GPOWER: a general power analysis program. *Behav Res Methods Instrum Comput*. 1996; 28: 1-11.
14. American Association of Colleges of Nursing (AACN) (2017). National Snapshot. Retrieved from: <http://www.aacn.nche.edu/government-affairs/US-Nursing-Education-Snapshot.pdf>
15. American Association of Colleges of Nursing (AACN). (2011). The essentials of baccalaureate education for professional nursing. Retrieved from <http://www.aacnnursing.org/Portals/42/Publications/BaccEssentials08.pdf>.
16. Primomo J, Björling EA. Changes in political astuteness following nurse legislative day. *Policy Polit Nurs Pract*. 2013; 14(2): 97-108. <https://doi.org/10.1177/1527154413485901>
17. Cohen SS, Milone-Nuzzo P. Advancing health policy in nursing education through service learning. *ANS Adv Nurs Sci*. 2001; 23(3): 28-40.