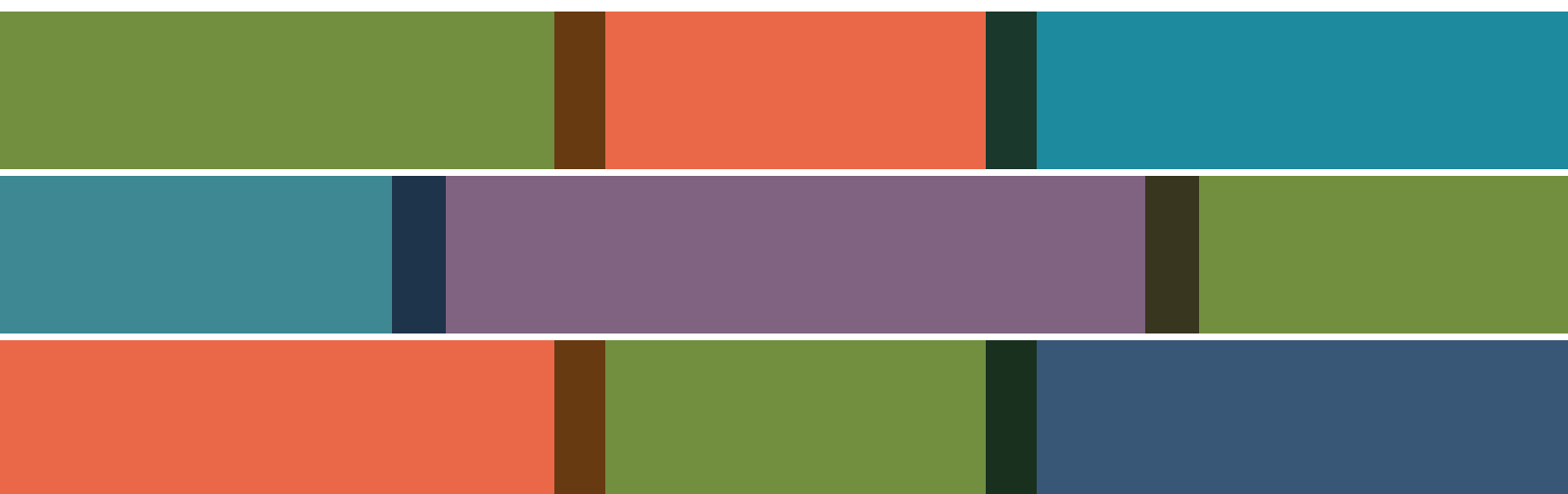


NURSING EDUCATION AND THE PATH TO POPULATION HEALTH IMPROVEMENT

MARCH 2019



FUTURE OF NURSING™
Campaign for Action
AT THE CENTER TO CHAMPION NURSING IN AMERICA


Robert Wood Johnson Foundation
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Executive Summary

INTRODUCTION

The United States outspends every country on health care, yet its residents have shorter lives and poorer health (IOM, 2013; Sawyer and Gonzalez, 2017; Commonwealth Fund, 2015).

Further investigation of this phenomenon demonstrates that it is related, in large part, to a lack of universal access to care and a lack of attention to the social determinants of health—those conditions affecting health where people live, learn, work, and play (WHO, 2008). The Robert Wood Johnson Foundation (RWJF) recognized this and began to address it with its Culture of Health Action Framework, to move the nation toward health, equity, and well-being (RWJF, n.d.). The framework calls for making health a shared value, fostering cross-sector collaborations, creating healthier, more equitable communities, and strengthening integration of health services and systems, all leading to improved population health outcomes.

The nation's nurses are key players in moving the nation to a Culture of Health. Nursing is the largest and most trusted health profession, one that is historically embedded in every part of the health care system and community. Nurses are in schools, workplaces, homes, prisons, hospitals, assisted living facilities, and other community spaces. They practice where people live, work, and learn and where people attain, regain, and maintain their health. They are poised to lead efforts to improve the health and well-being of individuals, families, communities, and the population now and in the 21st century.

In 2017, RWJF brought together a group of thought leaders to explore the key roles that nurses play in improving the health of the U.S. population. These explorations resulted in the report *Catalysts for Change: Harnessing the Power of Nurses to Build Population Health in the 21st Century* (Storjfell et al., 2017). The *Catalysts* report recommended that nursing and health care move beyond the individualistic, downstream focus of traditional medical care, and rather view individuals and families in the context of their environment to assess “how their community affects them.”

Using the report as a springboard, RWJF commissioned a two-phase project, Population Health in Nursing, or PHIN, to explore promising models of nursing education and practice related to improving population health. The goal of the first phase, PHIN 1, was to describe promising educational models to prepare nurses, across all levels of professional practice, for population health practice and leadership. The second phase, PHIN 2, will describe current and emerging nursing roles in population health practice and how nurses should be prepared for these roles.

PHIN 1 has been completed. A brief synthesis of the methods, findings and implications follow. Detailed information on PHIN 1 methods, findings and implications are included in the full report. PHIN 2, describing current and emerging nursing roles in population health practice and how nurses should be prepared for these roles, will begin in February 2019.

POPULATION HEALTH IN NURSING (PHIN): PHASE 1

PHIN 1 utilized several methods to identify promising educational models to prepare nurses across all levels of professional practice, for population health practice and leadership. These included: 1) an online survey (26 questions) of a convenience sample of faculty and leaders in nursing, public health and social work education; 2) in-depth telephone interviews with 26 nursing and public health leaders recommended in the survey results; and 3) site visits to six nursing education programs with promising educational models in population health, as identified by survey respondents and interviewees.

FINDINGS

In the survey and interviews, respondents were asked to identify core content and competencies, teaching methods, and benefits and challenges of including population health content in the curriculum. These areas were also explored at the site visits. Although many nursing programs identified population health content in their curriculum, few incorporated substantial content areas or used the teaching methods that had been identified as important.

Core Content and Competencies: Population health content should be required for all students, threaded throughout the curriculum so that students are able to build on their knowledge and apply it across settings of care. In addition to competence in the basic concepts of population health, respondents emphasized the importance of developing skills in assessing the social determinants of health early in the education progression and infusing it at all levels. In addition to leadership skills, respondents specifically recommended these seven areas:

- Policy and its impact on health outcomes.

- Epidemiology/biostatistics.
- A basic understanding of the social determinants of health and illness across populations and how to assess and intervene to improve health and well-being.
- Health equity as an overall goal of health care.
- Interprofessional team-building as a key mechanism to improve population health.
- Economics of health care, including an understanding of basic payment models for health care and their impact on services delivered and outcomes achieved.
- Systems thinking, including the ability to understand complex demands, develop solutions and manage change on a micro and macro system level.

Teaching Methods: Several teaching methods are used to develop student's knowledge, skills, and attitudes toward improving population health. A recurrent theme was the importance of active and experiential learning with opportunities for partnering with nontraditional agencies to look at health promotion and disease prevention where people live, work and play. Many schools use:

- Case studies and simulation as important mechanisms to practice problem-solving.
- Intentional and structured academic-practice partnerships with communities and practice sites that are mutually beneficial to the sites as well as the students.
- Interprofessional education (IPE) experiences with other health professionals and social service providers.
- Service learning, defined as the integration of community service with instruction and reflection, which can help create long-standing intentional partnerships and meaningful experiential learning opportunities.

Benefits and Challenges: While there are many benefits (to students, organizations, and the health of the population) to including population health in

nursing education curricula, there are also significant challenges. Faculty practice and student clinical models that are embedded in the community have the potential to benefit both students and the population. However, there is little experience in measuring student learning outcomes. In addition, little work has been done measuring the impact of student and faculty efforts on population health outcomes. Also, many faculty members are not prepared in population health (practice and/or education), so they are not able to conceptualize population health and then integrate it into curricula.

CONCLUSIONS

Respondents to the survey and interviews with leadership and faculty at the site visits all recommended that population health be threaded through all levels of nursing education. While several schools are using creative teaching methods, integration of population health into nursing curricula cannot be accomplished without intentional, structured, mutually beneficial academic-practice partnerships; significant faculty development in population health practice and education; and the development of metrics to assess student competence in population health and their impact on population health outcomes. Enhancing students' competence in population health is an important first step in strengthening the capacity of the nursing workforce to build a Culture of Health.

NEXT STEPS

To build on PHIN 1 findings, next steps include

- Discussing with professional nursing education organizations ways to encourage curricular change.
- Exploring measures of population health competency that can be used across all nursing programs, based on level of nursing education.

- Continuing to explore successful IPE models as they relate to population health competencies.
- Identifying PHIN 1 lessons learned to inform PHIN 2 goals and methods.
- Bringing together thought leaders in nursing and health professional practice and education to 1) reflect on PHIN 1 findings and implications for nursing education; 2) advise on goals, methods, and key informants for PHIN 2 focus on nursing practice in population health; and 3) discuss strategies for preparing all health professionals to improve population health and thus build a vibrant Culture of Health in America.

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Nursing Education and the Path to Population Health Improvement

INTRODUCTION

The United States outspends every country on health care, yet its residents have shorter lives and poorer health (IOM, 2013; Sawyer and Gonzalez, 2017; Commonwealth Fund, 2015).

Further investigation of this phenomenon demonstrates that it is related, in large part, to a lack of universal access to care and a lack of attention to the social determinants of health—those conditions that have an impact on people’s health where they live, work, and play (WHO, 2008). The Robert Wood Johnson Foundation (RWJF) recognized this and began to address it with its Culture of Health Action Framework, to move the nation toward health equity and well-being (RWJF, n.d.). This framework calls for making health a shared value; fostering cross-sector collaboration; creating healthier, more equitable communities; and strengthening integration of health services and systems, all leading to improved population health, well-being, and equity.

Key players in moving America to a Culture of Health will be the nation’s nurses. Nursing is the largest and most trusted health profession, one that is historically embedded in every part of the health care system and community. Nurses are in schools, workplaces, homes, prisons, hospitals, assisted living facilities, and other community spaces. They practice where people live, work, and play; where people attain, regain, and maintain their health. They are where the needs are greatest for a population-focused system of health and wellness.

In response to the need to improve the health of our nation by creating a Culture of Health, and reflecting the importance of nursing in the health care system and in community health, the Robert Wood Johnson Foundation produced the paper *Catalysts for Change: Harnessing the Power of Nurses to Build Population Health in the 21st Century*. That 2017 report (Storfjell et al., 2017) asked: How can nurses best help our nation reverse course on the declining health of its residents and promote the health of the U.S. population in the 21st century?

The *Catalysts* paper contended that nursing must move beyond the individualistic, downstream approach of traditional medical care, to rather view individuals and families in the context of their environment and assess “how their community affects them.” Using the *Catalysts* report as a springboard, RWJF commissioned a study to identify best practices in educating nurses in basic population health knowledge and skills across levels of professional practice, to prepare them to be key players in creating a Culture of Health. The study is called Population Health in Nursing (PHIN).

METHODS

The first phase of the PHIN study, PHIN 1, was conducted using the following methods. The first method was a survey of a convenience sample of practice leaders and faculty in nursing, public health, and social work. The second method included in-depth interviews with 26 nursing and public health leaders recommended in the survey results. The third method consisted of site visits to

six schools of nursing with exemplary educational programs in population health, as identified by survey respondents and interviewees.

1: THE SURVEY

In April 2018, AARP Research conducted an online quantitative survey to explore the inclusion of population health components in nursing curricula. Participants were asked questions designed by the PHIN study team to help define the key components of successful educational models that offer the potential to prepare nurses for practice, education, and leadership in population health.

The survey was designed to address the following questions:

- What are the core concepts and skills in public and population health (e.g., epidemiology basics) for nursing across levels of practice and education?
- What are the most effective methods for teaching population health knowledge and skills to nurses?
- What are the most significant benefits and challenges to teaching population health concepts and skills to nurses?
- What are measures for assessing nursing competency in population health?

The survey was designed by the PHIN study team and implemented by AARP Research. The resulting instrument contained 26 questions and was estimated to take approximately 15 minutes to complete (Appendix A). The convenience sample to be surveyed, representing leaders in practice in public health, medicine, nursing, and allied health professions, as well as nursing educators, was developed by the study team with input from AARP and RWJF leadership. Requests to participate were sent to 113 people, with an invitation email from Susan B. Hassmiller, PhD, RN, FAAN, senior

adviser for nursing at RWJF and Susan C. Reinhard, PhD, RN, FAAN, senior vice president and director, AARP Public Policy Institute and chief strategist, Center to Champion Nursing in America. The survey was sent on April 10, 2018, and three reminders were sent to non-respondents. The survey closed on April 30, 2018, with 66 respondents, for a response rate of 58 percent.

2: IN-DEPTH INTERVIEWS

Based on survey recommendations and responses, the PHIN study team selected 26 leaders in nursing and public and population health for in-depth interviews to further explore the core content and skills, measures of educational outcomes, and challenges and benefits to including population health in nursing education. In May 2018, AARP, working in partnership with RWJF, engaged Alan Newman Research to conduct a qualitative study to explore the inclusion of population health components in nursing curricula.

The interview guide was developed by Alan Newman Research in collaboration with the PHIN study team (Appendix B). Interviews were designed to be conducted by phone and take approximately 60 minutes. Interviewees were selected from a list of 31 leaders and educators developed by the PHIN study team, and included survey respondents who were particularly knowledgeable, as well as others recommended by survey respondents or leaders at AARP and RWJF. Potential participants were sent an email from Reinhard and Hassmiller, with follow-up phone calls and emails to schedule the interview. If those contacted were unavailable and recommended another potential participant, those names were sent to the PHIN study team for approval. Each interviewee received \$200 as an

incentive for their participation. Interviews were conducted between May 17 and June 1, 2018. Afterward, Alan Newman Research provided transcripts, a summary, and an analysis to the PHIN study team.

The interviews were tailored to solicit perspectives of educators and health care leaders on what nurses needed to know in population health and how it could best be taught. The interviews addressed the following content areas:

- Level(s) of students to include in an ideal program (associate degree—ADN; baccalaureate degree—BSN; master’s degree—MSN; clinical doctorate in nursing practice—DNP; advanced public health nursing—APHN; advanced practice registered nurse—APRN).
- Intended goals or outcomes of population health education.
- Benefits of population health education, i.e., ways in which it would contribute to improved health outcomes, as well as benefits to nursing students and to the school.
- Key content and areas of focus, specific subject matter, skills, and core courses to include.
- Teaching methods, clinical experiences and learning activities, interactions with other health professionals, and other health professions students that should be included.
- Faculty qualifications for teaching population health.
- Evaluation methods to assess nursing students’ knowledge and skills in population health.
- Educators’ satisfaction with their current population health program/content.
- Challenges and barriers to offering a population health program.
- Suggestions to enhance effectiveness in teaching population health to nursing students.
- Real-world strategies that are effective in applying population health concepts.

3: SITE VISITS

The PHIN study team selected six programs that had been identified by the nursing and population health leaders via the survey or in-depth interviews as exemplar nursing education programs in population health. The team then scheduled one-and-a-half-day site visits with each program to collect additional data on curricular initiatives, practice experiences, administrative support for the educational initiatives, as well as student perspectives on the curricula. (See Appendix C for a typical site visit schedule.) Each school was contacted with a request to participate in a site visit, and visits were scheduled between July and October 2018. Each school was visited by at least two team members.

FINDINGS

The findings from each phase in the study are presented below. Similar questions and topic areas were explored during all three phases of the study. The study was designed to increase—with each method of data collection—the depth and complexity of the responses.

The findings are divided into the following organizing themes: 1) Key content including core concepts and skills for population health; 2) teaching methods; 3) benefits and challenges to incorporating population health in nursing curricula; and 4) identification and measurement of student competencies.

1: SURVEY

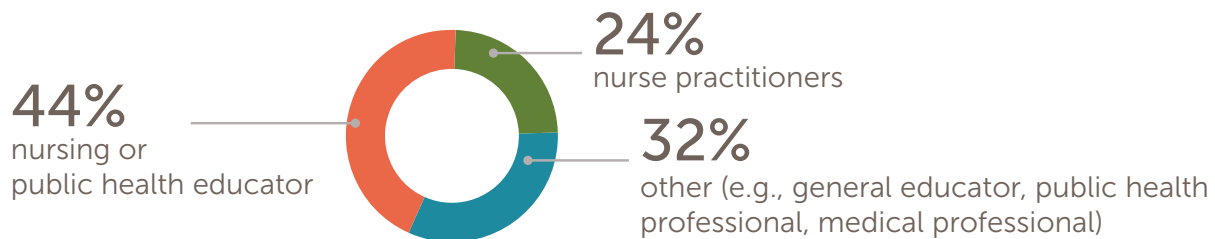
The 66 respondents provided a broad overview of current key concepts and practices in public and population health. For non-nurse respondents, the survey questions did not include details about the degrees earned and the level of nursing education.

Rather, those outside the profession were asked to identify the importance of core content in population health for a generalist professional nurse (BSN). AARP Research conducted data analysis and results were shared with the PHIN study team.

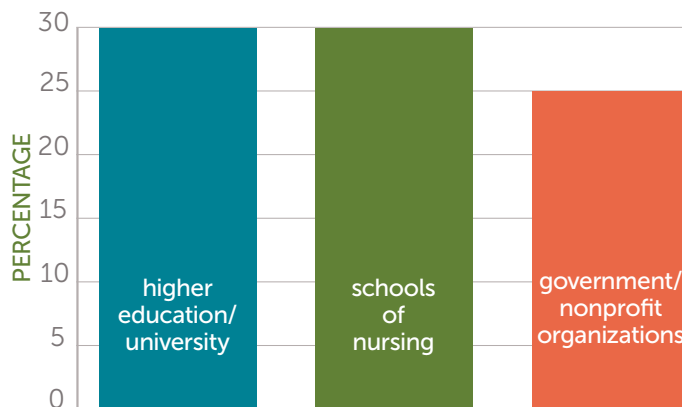
Respondent Characteristics



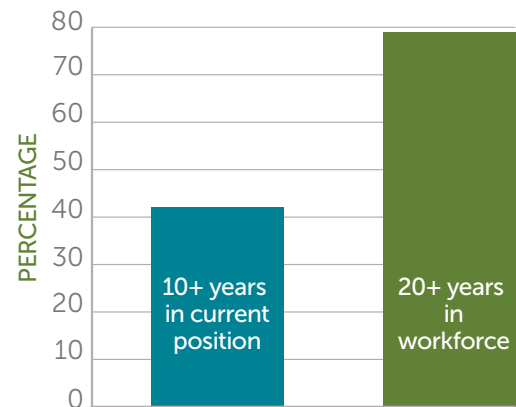
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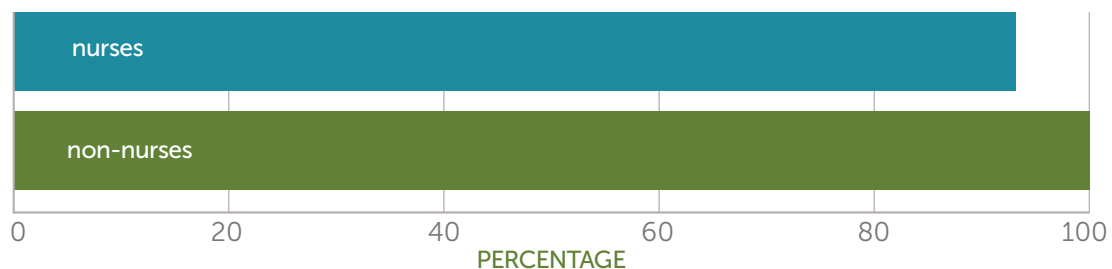
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Key Content

Each of the respondents was surveyed about content areas in population health that were important to nurses using the rating of 1 to 3, with 1 being not important at all, 2 being moderately important, and 3 being very important. Table 1 provides the nurse respondents' perspectives on the importance of content topics for nurses across varying levels of education.

The content areas thought to be less important for associate degree nurses (ADN) were epidemiology,

biostatistics, economics of health care, advocacy, and broad community assessment skills.

The respondents rated the importance of each content area higher for each degree level, culminating in a “very important” rating for all content areas for a DNP, especially for those with an advanced public health nursing (APHN)/public/population health focus.

TABLE 1: IMPORTANCE OF SPECIFIC CONTENT IN NURSING CURRICULUM ACROSS LEVELS OF EDUCATION: NURSE RESPONDENTS (1-3: LOW TO HIGH IMPORTANCE)

CONTENT	ADN	BSN	MSN	DNP/APRN	DNP/APHN
Epidemiology basics (ability to use basic terms to describe health and illness across a population)	1.98	2.6	2.88	2.91	3.00
Biostatistics (understand use of rates and appropriate comparisons across populations)	1.55	2.36	2.81	2.88	3.00
Ability to use evidence-supported methods to engage with clients	2.51	2.91	2.93	2.93	3.00
Ability to use evidence-supported methods to engage with communities/populations	2.0	2.74	2.88	2.86	2.95
Assess individuals/families for social determinants of health (SDOH)	2.59	2.86	2.95	2.95	2.98
Refer/intervene to address SDOH with significant health impacts for individuals and families	2.44	2.84	2.88	2.95	3.00
Identify and use evidence-based health promotion/disease prevention interventions for individuals and families	2.41	2.91	2.93	2.98	2.95
Assess individuals/families' health literacy level	2.54	2.93	2.95	2.98	2.93
Assess communities/population for health literacy level	1.97	2.65	2.81	2.81	3.00
Use evidence-based practice to modify interventions for individuals/families to be appropriate to health literacy levels	2.23	2.81	2.93	2.98	2.98

CONTENT	ADN	BSN	MSN	DNP/APRN	DNP/APHN
Develop population-focused health promotion/disease prevention interventions based on current evidence and targeted to relevant health literacy levels and cultural factors	1.76	2.44	2.81	2.81	3.00
Basic understanding of public health system functions	2.36	2.79	2.86	2.93	3.00
Describe cost effectiveness for interventions	1.67	2.16	2.76	2.90	3.00
Conduct capacity-building assistance for population interventions	1.16	1.74	2.45	2.60	3.00
Understand the impact of health policy on nursing practice and health outcomes	2.08	2.67	2.91	2.95	3.00
Identify avenues for policy activism to impact nursing practice or health outcomes	1.79	2.42	2.81	2.91	3.00
Develop a program budget for a health promotion intervention at the population level	1.11	1.81	2.56	2.63	3.00

Other concepts respondents named include: demonstrate public health nursing competence in practice; Identify gaps in evidence for successful programs; Institute of Medicine occupational and environmental health competencies for nursing; networking/social skills; partner with communities/populations to improve health; see themselves as leaders in population health; understand precepts of building a Culture of Health; understand the impact of health system financing; utilize community-based participatory methods for assessment, implementation, and evaluation

Table 2 presents survey findings from the perspective of non-nurses on the importance of specific content topics for nursing education. Non-nurse respondents were asked their views on

population health knowledge and skills of most importance for nursing practice at the level of the generalist professional nurse (BSN).

TABLE 2: IMPORTANCE OF SPECIFIC CONTENT IN NURSING CURRICULUM AT BSN LEVEL: NON-NURSE RESPONDENTS (1–3: LOW TO HIGH IMPORTANCE)

CONTENT	NON-NURSES
Refer/intervene to address social determinants of health (SDOH) with significant health impacts for individuals and families	3.00
Understand the impact of health policy on nursing practice and health outcomes	3.00
Ability to use evidence supported methods to engage with communities/populations	3.00
Assess individuals/families for SDOH	2.95

CONTENT	NON-NURSES
Ability to use evidence-supported methods to engage with clients	2.95
Use evidence-based practice to modify interventions for individuals/families to be appropriate to health literacy levels	2.90
Identify and use evidence-based health promotion/disease prevention interventions for individuals and families	2.90
Assess individuals'/families' health literacy level	2.90
Develop population-focused health promotion/disease prevention interventions based on current evidence and targeted to relevant health literacy levels and cultural factors	2.86
Epidemiology basics (ability to use basic terms to describe health and illness across a population)	2.81
Basic understanding of public health system functions	2.71
Assess communities/population for health literacy level	2.67
Identify avenues for policy activism to impact nursing practice or health outcomes	2.67
Describe cost effectiveness for interventions	2.52
Biostatistics (understand use of rates and appropriate comparisons across populations)	2.48
Conduct capacity-building assistance for population interventions	2.25
Develop a program budget for a health promotion intervention at the population level	2.19

Other concepts respondents named include: ability to collaborate and communicate with other professions and disciplines; lead collaborative community partnerships; participate in community health needs assessments; impact of primary care on population health outcomes; understand public health nurse (PHN) competencies

Teaching Methods

Survey respondents shared their top three recommended methods for teaching population health to nursing students (Table 3). The overwhelming top choice of 85.9 percent of respondents was innovative community clinical

experiences. Interprofessional education experiences was chosen by 51.6 percent. Case studies (46.9 percent) and academic practice partnerships (45.3 percent) were the third and fourth choices as top methods for teaching population health concepts.

TABLE 3: TOP THREE METHODS FOR TEACHING POPULATION HEALTH

METHOD	PERCENTAGE OF RESPONDENTS
Innovative community clinical experiences	85.9 percent
Interprofessional education experiences	51.6 percent
Case studies	46.9 percent
Academic-practice partnerships	45.3 percent
Simulation	23.4 percent
Expert presentations	18.8 percent
Role-playing exercises	14.1 percent
Web-based exercises	7.8 percent

Other concepts respondents named include: academic health departments; experiential project focused learning; Interactive Projects in the community/using data sets of population health; service learning in home communities

Benefits and Challenges

Table 4 documents respondents' perspectives on the top three benefits to teaching nursing students about population health. The key benefit was identified as meeting the health care system requirements (95.3 percent). The relevance to job opportunities

for graduates was identified as important by 60.9 percent of respondents. Additional benefits were identified as helping to focus efforts on health rather than illness care and staying ahead of the changes in health care.

TABLE 4: TOP 3 BENEFITS TO NURSING EDUCATION IN POPULATION HEALTH

BENEFIT	PERCENTAGE OF RESPONDENTS
Meeting health care system requirements	95.3 percent
Relevant job opportunities	60.9 percent

BENEFIT	PERCENTAGE OF RESPONDENTS
Student interest	29.7 percent
Accreditation requirements	18.8 percent
Licensure expectations	10.9 percent

Other concepts respondents named include: develop change agents, empower nurses to improve communities, create a Culture of Health; help focus efforts on health rather than illness care; improve patient/population health outcomes; answer need to address health disparities and SDOH; once students understand population health concepts and skills, they apply this lens to the care they provide wherever they work, to the benefit of patients; promote impact of primary intervention on health care outcomes; relevant to quality of care; stay ahead of the changes in health care

Table 5 documents respondents’ perspectives on the top challenges to teaching nursing students about population health. The top challenge identified by 65.6 percent of respondents was faculty expertise. Respondents also named as challenges the availability of appropriate clinical experiences (50 percent) and

support of current faculty (42.2 percent). Additional challenges that individual respondents identified were lack of resources; lack of clear outcomes; burdensome institutional standards; and lack of National Council Licensure Examination-RN (NCLEX) content.

TABLE 5: THREE TOP CHALLENGES TO EDUCATION IN POPULATION HEALTH

CHALLENGES	PERCENTAGE OF RESPONDENTS
Faculty expertise	65.6 percent
Availability of appropriate clinical experiences	50 percent
Faculty support	42.2 percent
Licensure expectations	29.7 percent
Lack of time	25 percent
Student interest	17.2 percent
Relevant job opportunities	12.5 percent
Accreditation requirements	10.9 percent
There are no challenges	3.1 percent

Other concepts respondents named include: available resources; lack of clear outcomes; curriculum is already too “stuffed”; faculty experience; increased need for institutional requirements beyond the standard fingerprints, immunizations, etc., for students; lack of accreditation requirements; lack of support for and interest in population health across the curriculum (not seen as important); NCLEX; nursing culture (in practice and in academic settings) values acute care and specialization over public health; prioritizing medical model over health for all; APRNs with limited vision; social and cultural divisions between nurse students and relevant communities

Student Competencies

Respondents were asked to identify ways to measure nursing student competency/knowledge in population health, on a scale of 1 to 5. The results are outlined in Table 6. Note: For this, the lower the number, the *higher* the importance of the measure (1 is “very important”). The most important measure of student competency was “valid and

reliable end-of-program population health competency assessment.” Case studies with multiple choice or essay responses; course grades in relevant courses; and clinical preceptor evaluation of student performance were identified as slightly less important. Skills checklist was identified as the least important measure.

TABLE 6: IMPORTANCE OF SUGGESTED MEASURES OF NURSING COMPETENCY IN POPULATION HEALTH (1–5: HIGH-TO-LOW IMPORTANCE)

SUGGESTED MEASURES	IMPORTANCE
Valid and reliable end of program population health competency assessment	1.66
Valid and reliable population health case studies—multiple choice or essay responses	2.51
Course grades in relevant courses (e.g., epidemiology, biostatistics, public health nursing, health policy, etc.)	2.83
Clinical preceptor evaluation of student performance	2.98
NCLEX completion	3.00
Role playing with observational assessment	3.24
Employer assessment	3.83
Skills checklist	3.84

Other concepts respondents named include: faculty evaluation of population health clinical projects; if hospitals and health systems integrated SDOH screening and intervention by nursing, nursing colleges/schools would teach those concepts; population health included in NCLEX; portfolio of community and population change projects

2: IN-DEPTH INTERVIEWS

The in-depth interviews focused on gaining more information on the same topics included in the survey from respondents with more knowledge in population health. The findings from these interviews are provided using the same four organizing themes described in the survey findings above.

Respondent Characteristics

Interviewees included 15 leaders (six nursing, four public health, two population health, one medicine, and two public health nursing) and 11 nurse educators. They represented a variety of organizations—including national nursing associations and councils; large health care systems; the Centers for

Disease Control and Prevention; a national accreditation board; universities; and medical schools.

Key Content

Interviewees agreed that population health content and related skills should be taught at both the graduate and undergraduate levels. Participants also agreed that nursing curricula related to population health would contribute to improved health outcomes for both the community at large and for individual patients, and be beneficial to schools and their nursing students.

Key content areas identified by respondents in teaching population health included the social determinants of health; systems thinking; data competency; development of interventions to address population problems; and collaboration and partnership across interdisciplinary health care teams and with community partners. Within these broad areas of focus, participants identified a long list of specific topics and skills.

The extent and depth of educators' population health programs varied by school and by degree/level of student. At all schools, population health content was interwoven throughout the curriculum. A number of schools, particularly those with graduate level programs, also offered specific courses related to population health (e.g., population health, epidemiology, leadership).

In an ideal population health nursing program, faculty would have a population health mindset and approach, as well as real-world experience with community health, population health, public health, or working in some way with the social determinants of health. They would also have leadership skills, "boundary-spanning ability," and strong data analytic skills.

Teaching Methods

According to participants, both classroom and experiential/community-based learning should be used to teach population health concepts. Even in the classroom, learning should be active rather than passive and students should be actively engaged through small group discussion, role-playing, tabletop exercises, case studies, etc. Experiential learning is a critically important component of a population health program. Students learn by doing, and must go into the community to apply the population health concepts they learn in the classroom to real-life situations. Participants emphasized that it is necessary to be flexible and creative when identifying appropriate sites for clinical experiences, and they suggested a variety of types of sites and community settings, beyond hospitals.

Ideally, nursing students would have the opportunity to interact regularly with other health care professionals, as well as non-health care professionals whose roles or occupations relate to population health or the SDOH (e.g., policymakers, lawyers, clergy, educators, health insurers). Interprofessional education, in which nursing students regularly interact with other health professions students, was also considered desirable and valuable.

Benefits and Challenges

Educators were at least fairly satisfied with their school's population health program and/or content. Some cited as reasons for satisfaction strong faculty and leadership and positive student learning outcomes. Others described their program as "a work in progress" or, in the case of community colleges, wished that they had more room in their crowded curriculum for additional population health content.

According to participants, there are a number of potential challenges related to offering a population health nursing program. In general, perceived challenges related to an overall lack of awareness, understanding, and prioritization of population health in general—as well as to the logistics of offering a population health program. Specifically, participants mentioned:

- Difficulty changing the status quo as it relates to teaching nursing (i.e., the focus on acute setting and individual patient care).
- Competing priorities and lack of awareness, understanding, and prioritization of population health content by administrators, faculty, and students.
- Lack of qualified faculty to teach population health and requirement that nursing faculty be nurses themselves.
- Difficulty finding appropriate sites for clinical placements and restrictive related rules and licensing requirements.
- Already crowded nursing curricula.
- Lack of/limited inclusion of population health content on the NCLEX (which contributes to de-prioritization).
- Logistical challenges related to interprofessional education.

Participants offered a number of suggestions to overcome these challenges and enhance effectiveness in teaching population health to nursing students:

- Provide professional development to existing faculty—webinars, expert presentations, roundtable discussions.
- Develop resources, materials, and a toolkit to help educators develop or expand their population health curriculum—include suggested curriculum and core content; ways to embed content in existing courses; specific assignments; examples of clinical sites; best practices and advice.
- Offer online forums, bulletin boards, or other convenient means to interact with nurse faculty

or administrators teaching population health across the country.

- Broaden the definition of approved sites for clinical rotations and what counts as clinical hours.
- Add or expand population health-related questions on the NCLEX.
- Provide population health-related professional development opportunities and additional schooling to licensed, practicing nurses.
- Ensure nurses at all levels, including ADN, are exposed to population health content.
- Begin teaching population health concepts early in the nursing curriculum, addressing basic population health concepts and skills.
- Expand opportunities for experiential learning and interprofessional education and interaction.
- Develop communications initiatives regarding the importance and relevance of population health, targeted to faculty and administrators of nursing schools, students, and employers.
- Create expanded national awareness of the key role of nurses (not just physicians) in population health.
- Offer grants, monetary incentives, or start-up money to nursing schools that offer a graduate program in population health.
- Provide grants to students studying population health to help offset tuition costs.

Leaders identified some real-world strategies that are effective in the application of population health concepts.

- Technology-related strategies include use of electronic health records in various ways to identify populations and communicate with them; text reminders to patients; wearable health monitors; telehealth; e-visits with physicians and pharmacists; and geomapping and use of other data sets.
- Participants currently work in partnership with a variety of community organizations to address a number of issues. Examples include public health departments; local government; business organizations; nonprofits; citizen coalitions; law enforcement; churches; and insurers.

- Community resources that are utilized include websites and searchable databases to find community partners and resources for patients as well as grant money for interventions and studies.

Student Competencies

Nursing knowledge in population health is evaluated in a number of ways, depending on the course objectives and level of students. Measurement of student outcomes and competencies was identified as a particularly challenging task. Regardless of the specific method used, students’ ability to understand and apply the concepts must be assessed.

3: SITE VISITS

A data summary table for all site visits categorized by the organizing themes is provided below (Tables 7–10). In addition, a brief summary of the most notable findings from each site visit is included.

Key Content

The key content and courses, including core concepts and skills for population health identified in the site visits are outlined in Table 7 below. The findings at the site visits reinforced the importance

Sites Chosen

Based on the responses from the surveys and in-depth interviews, six nursing educational programs were selected for site visits, to provide the opportunity to look at teaching content and methods currently being implemented, discuss challenges and lessons learned, and see how students respond to curricula in population health. Schools selected included:

- Oregon Health & Science University
- Rush University
- Rutgers University
- Thomas Jefferson University
- University of North Carolina
- University of Washington

of the content areas of epidemiology, population health, and SDOH and illustrated different strategies for incorporating this content.

TABLE 7: KEY CONTENT AREAS/COURSES AT SITE VISIT PROGRAMS

SCHOOL	KEY CONTENT AREAS, TOOLS	KEY COURSES
Oregon Health & Science University	<ul style="list-style-type: none"> ■ Population health ■ SDOH ■ Epidemiology ■ Mentorship ■ Resource management ■ Quality improvement ■ One of 10 competencies 	Population health is threaded throughout as one of the key competencies in the entire curriculum.

SCHOOL	KEY CONTENT AREAS, TOOLS	KEY COURSES
Rush	Public health <ul style="list-style-type: none"> ■ Population health ■ Viewing public health system as one mechanism to achieve population health ■ Clinical academic partnerships 	<ul style="list-style-type: none"> ■ Epidemiology, biostatistics ■ Health promotion ■ SDOH ■ Cultural competence is threaded throughout
Rutgers	<ul style="list-style-type: none"> ■ County health rankings ■ Mapping ■ Primary care task force ■ Human capital 	<ul style="list-style-type: none"> ■ Epidemiology ■ Population health ■ Simulation threaded throughout courses with unfolding case studies
Thomas Jefferson	<ul style="list-style-type: none"> ■ Concept-based ■ Health promotion ■ SDOH ■ Ethics ■ Cultural awareness ■ Epidemiology ■ Care coordination ■ Quality and safety ■ Civic and social responsibility ■ Cooperative practice ■ Big data ■ Care models ■ Wraparound services Four themes in prelicensure program: <ul style="list-style-type: none"> ■ Population health ■ Interprofessional collaboration ■ Innovation ■ Practice excellence 	<ol style="list-style-type: none"> 1. health promotion 2. population health 3. social determinants of health, serve the underserved BSN level (each has 14 experiential hours attached): <ul style="list-style-type: none"> ■ care coordination and care transitions; ■ population health and health disparities. MSN level: <ul style="list-style-type: none"> ■ Epidemiology for health professions DNP level: <ul style="list-style-type: none"> ■ Clinical prevention and population health (40 hours practicum)
UNC Chapel Hill	Interprofessional education (IPE) course medicine, nursing, dentistry, pharmacy, physical therapy, occupational therapy, social work, public health, Rural Inter-Professional Health Initiative	Curriculum did not have population health written in explicitly, but students were able to describe IPE and population health integration in courses

SCHOOL	KEY CONTENT AREAS, TOOLS	KEY COURSES
University of Washington	<p>Core content all tracks includes</p> <ul style="list-style-type: none"> ■ Policy and SDOH ■ Healthy equity ■ Social justice ■ Diversity ■ Community assessment (MSN) ■ Program planning (MSN) ■ SDOH ■ Communication ■ Lifespan approach (Seattle BSN program) ■ SDOH ■ Healthy aging ■ Global to local nursing ■ Diversity ■ Equity and inclusion <p>Mandatory clinical in ambulatory/community/public health.</p> <p>DNP in UW Seattle: track in population health slight revisions on their APHN track; still working on population health across all DNP tracks.</p>	<ul style="list-style-type: none"> ■ Diversity and health equity course ■ Community assessment (MSN) ■ Program planning and Evaluation (MSN) <p>UW Seattle has dual degree DNP in population health and MPH program-focus on global health</p>

Teaching Methods

Table 8 documents teaching methods described in each site visit. IPE opportunities were identified as essential to teaching population health effectively. The most common teaching methods identified

were experiential sites, expert faculty to coordinate and oversee community clinical, IPE, and community partnerships.

TABLE 8: TEACHING METHODS FOR POPULATION HEALTH AT SITE VISITS TO SCHOOLS

SCHOOL	EXPERIENTIAL SITES	IPE OPPORTUNITIES
Oregon Health & Science University	Rural-focused experiences, simulation center shared across disciplines.	University-wide IPE experiences mandatory for all professions. It was difficult to ascertain during the site visit the actual numbers of undergraduate students directly involved in these IPE experiences.

SCHOOL	EXPERIENTIAL SITES	IPE OPPORTUNITIES
Rush	School-based programs integrated into the fabric of the school and throughout Chicago. The school's office of community engagement coordinates across health professions with focus on more evidence-based services. Goal is to provide what communities need and evaluate whether the need is met.	No substantial opportunities.
Rutgers	School nurses in the community, mental health literacy focus, faculty and student support of an onsite federally qualified health center, mayor's health directive, primary care settings, population-based practice sites health systems quality assurance, long-term care, rehab VNA, simulation courses.	Challenge collaborating with medicine, behavioral health included social work, and pharmacy, care coordination pharmacy and dental, behavioral health.
Thomas Jefferson	Large variety of service to the community through clinical experiences. This included such sites as soup kitchens, homeless shelters, community screening sites, and long-term care sites. These were presented as separate experiences and lacked a coordinating framework within the curriculum.	Strong IPE initiative that serves all professions but less integrated with nursing than anticipated. A multitude of IPE options, mostly volunteer, structured through IPE office on campus, include hotspotting.
UNC Chapel Hill	Home-based care, long-term care, school nurses, acute care, emergency room, dental clinic.	Extensive aspect of IPE and a clear commitment from the university from the provost down including the five main schools – medicine, dentistry, nursing, pharmacy and social work.
University of Washington	Work with variety of community partners. Includes the required 100 clinical hours for RN-to-BSN program (state requirement) into community/population clinical. Student help with community health needs assessment process; data collection; screening; key informant interviews; pulling together final report with data; implementing small grant projects (boots for children to play outdoors to increase physical activity).	Little discussion of IPE; university-wide initiative in population health still rolling out.

Benefits and Challenges

The benefits and challenges of incorporating population health in nursing curricula are outlined below in Table 9 for each site. The main benefit identified was that the community realizes positive impact when the faculty practice model supports

student activities. The main challenges were faculty expertise, changing from an illness model, and differentiating public health models from population health models.

TABLE 9: BENEFITS AND CHALLENGES TO TEACHING POPULATION HEALTH TO NURSES AS IDENTIFIED BY SITE VISITS TO SCHOOLS

SCHOOL NAME	BENEFITS	CHALLENGES
Oregon Health & Science University	Communities reap economic benefit from faculty practice model and student involvement.	Keeping focus, measuring outcomes, improving based on data. Students continue to accept acute care jobs as their first job in 90 percent of cases.
Rush	Students were impressive in their thinking and application of key concepts, seldom mentioned population health as a theme but clearly understood public health and community.	Strong public health component and faculty is both a strength and a potential weakness when defining new terms and differentiating the concepts.
Rutgers	Importance of strong academic practice partnerships, students empowered to look to the next step.	Recent merger accelerated work that needed to be done, IPE and college of medicine positioned for better collaboration although not yet.
Thomas Jefferson	Anecdotal evidence of students in new positions and meeting employers' needs more readily. Students know the themes of population health and identify it as a strength. Students see importance of transitions of care and SDOH.	Though population health seems to be ingrained into the culture of the university and is clearly supported by administration, the acquisition of more hospitals and universities into the system is changing the mission and may create a challenge. Although the concepts are in the culture, each profession seems to have implemented its curricula separately without full integration and faculty development.
UNC Chapel Hill	Learning roles and perspectives from other students, "walking a mile in their shoes," students with working careers were learning to implement principles of IPE in their day jobs.	Faculty engagement in nursing, one class in population health across disciplines, may not have been threaded throughout entire curriculum.
University of Washington	Students saw the importance of keeping people from falling through the cracks of the system; looking at systems inequalities; reasons for health inequities; partnerships; SDOH and understanding where patients came from before entering the clinical system and where they will go on discharge. For faculty, use of Boyer's model of scholarship and application is recognized for promotion and tenure.	Challenges include: need for faculty investment to help students process experiences; shared technology; leadership changes at community level; locations of sites for students. Students also expressed powerlessness in the face of complex systems and discouragement with working as staff nurse due to not being heard.

Student Competencies

The final variable of interest was identification and measurement of student competencies. The findings in Table 10 show measurement of student outcomes that are not unique to population health. However, interprofessional education collaborative and quality and safety education for nurses frameworks were

helpful to some programs as they measured outcomes and determined competencies. Faculty, students and administrators noted the particularly challenging aspect of identifying unique core competencies and strategies to measure student competencies.

TABLE 10: MEASURING STUDENT OUTCOMES/COMPETENCIES IN POPULATION HEALTH AS IDENTIFIED BY SITE VISITS

SCHOOL NAME	OUTCOME MEASURES
Oregon Health & Science University	OHSU's measurement of the impact of its clinical model (described below) on community health is impressive.
Rush	Individual students must show outcomes in their projects but no aggregation of these outcomes yet. Chicago Public School system require data to assess student impact but this is not available to individual universities.
Rutgers	Population health simulation, cultural competency, self-report of meeting goals, critical thinking, and knowledge; two published articles.
Thomas Jefferson	Student outcomes and clinical experiences evaluated individually but hard to see there is aggregate outcomes evaluation except at the university level. Uses Interprofessional Education Collaborative (IPEC), Quality and Safety Education for Nurses, (QSEN), etc. for outcome assessment; challenge trying to refine to core outcomes; extensive process and outcome measures; outcomes related to population health theme are all related to SDOH and cultural sensitivity and advocacy. NCLEX rates have stayed stable; no outcome data yet on graduate employment choices or employer satisfaction survey.
UNC Chapel Hill	Biggest challenges are measuring population health and IPE outcomes. These are goals of the new IPE office.
University of Washington	Poster session; community-based outcomes. Students write final essay about their work and provide evidence of meeting the core program objectives (categories: diversity, communication, nursing therapeutics, critical thinking). Using Quad Council competencies at MSN level, and Tier 2 competencies at DNP level in Seattle.

Summary of Key Findings at Each Site

Oregon Health & Science University (OHSU):

OHSU, the only academic health center in Oregon, is known for its statewide nursing curriculum in partnership with 12 community college associate degree programs. All nursing students study population health, as it was considered a competency in the original Oregon Consortium for Nursing Education curriculum in 2004. One of OHSU's innovative clinical models, the Interprofessional Care Access Network (I-CAN), is housed at the School of Nursing, providing care coordination under supervision of a nurse faculty-in-residence for 12 months, serving in a community faculty practice role when the university is in session. Through I-CAN, more than 1,000 nursing, medicine, dentistry, public health, and the college of pharmacy students learn while serving communities. Outcomes since 2013 show a positive impact on at least three critical indicators: reduced emergency department visits, EMS calls, and hospitalizations.

Rush University, Chicago: The University has a strong focus on public health. Population health content is infused throughout all programs, including all graduate-level courses and the pre-licensure master's entry program. Faculty members describe the public health system, at the national and local levels, as one mechanism to achieve population health. Rush sees clinical academic partnerships as key, and uses a variety of social service and health sites for pre-licensure and doctoral-level clinical experiences. One of Rush's largest partners is the Chicago Public Schools, with whom it has three school-based health centers; at two other schools, pre-licensure students teach sex

education twice yearly. The Rush University Medical Center's Office of Community Engagement coordinates across health professions with a focus on evidence-based services. The goal is to provide what the community needs and evaluate if the need is met.

Rutgers, The State University of New Jersey:

Population health content is threaded through the curriculum, from the upper-division undergraduate nursing courses to the PhD program. At the undergraduate level, population health is taught through case studies and based on what Rutgers calls a "flipped classroom model," in which lessons are delivered largely outside of class using online platforms, then the lessons reinforced in class. For example, students watch videos that depict hypothetical case studies of patients and their families. Afterward, in class, the health situation is re-enacted through simulations that might include role-playing. Within the graduate program, one particularly creative model is a federally qualified health center run by Rutgers School of Nursing, which provides primary care nurse practitioner experiences in a clinic with guidance by faculty members. All doctor of nursing practice programs include epidemiology and social determinants of health courses, followed by a focus on population health projects.

Thomas Jefferson University, Philadelphia:

Strong clinical partnerships are enhanced by a university-wide clinical site database. The database helps make effective use of clinical sites across academic programs, thus improving learning experiences and better helping the community. The university also has a School of Population Health,

which provides ongoing access to population health leaders and scholars. There is also a strong interprofessional component, with the university organizing volunteer opportunities for students across disciplines.

University of North Carolina, Chapel Hill: The Rural Interprofessional Population Health Initiative, a joint effort of the health professions schools at UNC, works to ensure rural interprofessional health for the state of North Carolina. This true interprofessional learning model consists of six modules presenting papers, didactic content, and videos. The students discuss teaching and evaluation methods that not only engage their peers but also assess knowledge, attitude and skills changes in interprofessional population health management. Students from nursing, pharmacy, medicine, social work and public health (nutrition and health behavior) participate in independent study coordinated by faculty representatives from nursing, social work, public health, medicine, and dentistry.

University of Washington: This program has strong clinical partnerships at the bachelor's, master's, and doctoral levels at all three campuses. For example, nursing students worked with community health departments, child care centers, senior wellness centers, and managed care organizations. It helps that deans and directors of schools and programs of nursing across the state had made a commitment to enhancing nursing education in population health. Indeed, the University of Washington has made a commitment to include population health education across *all* programs and majors in the university system. This

support from the state and university system strengthens all curricular efforts in nursing, and other disciplines, now and in the future.

SUMMARY OF FINDINGS

KEY CONTENT

Population health can be a core course required for all students; however, it needs to be threaded throughout the curriculum, so that students are able to build on their knowledge and apply it across settings of care. In addition to leadership skills, relevant content to be addressed includes:

- **Policy:** How health policy in this country affects health care and health outcomes.
- **Epidemiology/biostatistics:** Basic understanding of the distribution and determinants of health and illness across populations.
- **Social determinants of health:** Identification of SDOH, and understanding of interventions and referrals needed to address them.
- **Health equity:** Using the social determinants of health as a framework, health equity—as a focus of health care—should be discussed throughout the curriculum.
- **Interprofessional team-building and skills:** Students need to understand the role of health and social service professionals in working together with individuals, families, and communities to improve health.
- **Economics of health care:** Students need to understand basic payment models for health care and how they affect services delivered and outcomes achieved.
- **Systems thinking:** Students need to have the ability to understand complex demands, on a large scale, and to develop solutions. They need to know systems theory and systemwide development strategy, and have the skills to manage change.

TEACHING METHODS

- **Active learning strategies:** A recurrent theme was the importance of active learning and experiential learning for students—with opportunities for partnering with nontraditional agencies to look at health promotion and disease prevention where people live, work, and play.
- **Case studies:** These were mentioned as an important mechanism for helping students practice problem-solving.
- **Simulation:** Identified as another mechanism for practicing problem-solving and looking at nontraditional partnerships to promote health.
- **Intentional academic-practice partnerships:** Findings reflected the importance of meaningful partnerships with communities and practice sites so that students learned and partner sites benefited as well. This requires intentional partnering with goal-setting to create a partnership of mutual benefit to all partners.
- **Integration of population health across care settings:** While the focus is often on nontraditional settings for experiential learning, findings also supported looking at ways to integrate population health knowledge and skills across the health care system, from acute care to community health.
- **IPE experiences:** Partnering with other health professionals and social service providers was discussed as an important learning activity for students.
- **Service learning:** Service learning is one mechanism for creating intentional partnerships and meaningful experiential learning opportunities.

BENEFITS AND CHALLENGES

- **Metrics for populations:** Programs should establish measurements to determine whether the population's needs are being met, in conjunction with student learning activities.
- **Faculty development:** Faculty must receive education and support to instill concepts

systemwide, across all programs and throughout the institution.

- **Population benefits:** The faculty practice models and student clinical models most sustainable—those that last longest and become a part of the community—are those that benefit both the students and the populations served in measurable ways.

STUDENT COMPETENCIES

- **Social determinants of health:** The skill of assessing the social determinants of health should be introduced early in the education and infused at all levels.
- **Metrics for students:** Programs should establish valid and reliable measures to determine appropriate student learning outcomes.

Conclusions

Respondents to the survey and interviews with leadership and faculty at the site visits all recommended that population health be threaded through all levels of nursing education. While several schools are using creative teaching methods, integration of population health into nursing curricula cannot be accomplished without intentional, structured, mutually beneficial academic-practice partnerships; significant faculty development in population health practice and education; and the development of metrics to assess student competence in population health and their impact on population health outcomes. Enhancing students' competence in population health is an important first step in strengthening the capacity of the nursing workforce to build a Culture of Health.

Integrating population health principles throughout the nursing school curriculum, including clinical experiences, is imperative for 21st-century nursing

education. Best practices for this integration include using active and experiential learning in interprofessional teams, and with clinical partners across the continuum of care and in nontraditional settings where people live, work and play. Critical issues identified included the need for faculty development in teaching population health; the need for measures of student competency in population health knowledge and skills; and the need for development of intentional, mutually beneficial academic practice partnerships, where student learning and population health outcomes are both enhanced. Such models provide students with a strong sense of population health needs and mechanisms for addressing them in a new and rapidly transforming health care system; enhance nursing's work with community partners and stakeholders; and most important, clearly benefit patients, communities, and the American public as a whole.

Potential Next Steps

This PHIN 1 report, comprising the first phase of the study, has provided clear direction for future work in enhancing the ability of the nursing workforce to create a Culture of Health and improve population health outcomes. Potential next steps based on PHIN 1 findings are below.

Work with leaders in nursing education to:

- Encourage and incentivize curricular change.
- Develop and support mechanisms for widespread faculty development for understanding and teaching population health to nurses across care settings.
- Expand threading of population health content

and skills throughout curricula across the levels of nursing education.

- Explore and develop measures of competency in population health that can be used across all nursing programs, based on level of nursing education.
- Continue to explore and develop successful IPE models as they relate to population health competencies.

Work with leaders in nursing practice to:

- Identify successful academic-practice partnerships across care settings.
- Promote population health experiential learning experiences in ambulatory/primary, acute, and long-term care.
- Examine elements of existing community health clinical education models for population health content.
- Further explore employability/roles for new graduates.

Build on PHIN 1 findings to conduct PHIN 2:

- Explore measures of competency in population health that can be used across all nursing programs, based on level of nursing education;
- Continue to explore successful IPE models as they relate to population health competencies;
- Identify phase one lessons learned to inform phase two goals and methods;
- Bring together thought leaders in nursing and health professional practice and education to 1) reflect on PHIN 1 findings and implications for nursing education; 2) advise on goals, methods, and key informants for PHIN 2 focus on nursing practice in population health; and 3) discuss strategies for preparing all health professionals to improve population health and thus build a vibrant Culture of Health in America.

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Appendix A: Sample Survey

3/28/2018

Qualtrics Survey Software

Default Question Block

Q1.



Thank you for your interest in participating in this important work.

The Robert Wood Johnson Foundation (RWJF), in collaboration with the Center to Champion Nursing in America (CCNA) at AARP, is working to identify and disseminate promising models that incorporate and strengthen population health into nursing curricula.

Because of your expertise in nursing, public or population health, we are asking for your help to define the key components of successful educational models with the potential to prepare nurses for practice, education, and leadership in population health. You are invited to participate in this initiative by completing this survey.

This survey should take no more than 15 minutes to complete.

Please select the "Next" button to continue. Caution, do not use your browser's "back button" which will cause the survey to terminate. If this occurs, use the survey link to access the site again and continue where you left off.

Introduction Questions

Q2. How familiar are you with the concept of public or population health?

- Very familiar
- Somewhat familiar
- Not too familiar

<https://co1.qualtrics.com/ControlPanel/Ajax.php?action=GetSurveyPrintPreview>

1/11

Not at all familiar

Q3. How important do you think it is to include a public or population health component to nursing curricula?

- Very important
- Somewhat important
- Not too important
- Not at all important

Q4. What percent of the current nursing curricula do you think incorporates public or population health content and skills?

- 0%
- 1% to 5%
- 6% to 10%
- 11% to 15%
- 16% to 20%
- 21% or more

Demographics

Q5. In this section we ask a few demographic questions to ensure you are directed to the most relevant questions.

Q6. Which is the primary discipline you most closely identify with?

- Administrator-Nursing Program
- Educator/faculty-medicine
- Educator/Faculty-nursing
- Educator/faculty-public health
- Medical Doctor
- Nurse, APRN
- Nurse, RN

- Nursing - Education
- Nursing – Higher Education
- Nursing-General Practice
- Nurse, Other advanced practice role
- Professor
- Program Manager
- Public Health Professional
- Social Worker
- Other (Specify)

Q7. Which of the following best describes the type of industry/organization you primarily work in?

- Community College
- Federal Government
- Other Government (not Federal)
- For profit/Private Sector
- Higher Education/University
- Nonprofit
- Nursing School/School of Nursing
- School of Medicine
- School of Public Health
- School of Social Work
- Other (specify)

Q8. How long have you been in your current position?

- Less than a year
- 1 to less than 3 years
- 3 to less than 5 years
- 5 to less than 10 years
- 10 to less than 20 years
- 20+ years



Appendix B: Sample Interview Guide of In-Depth Interviews



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AARP Population Health IDIs – Practitioners and Leaders
Moderator’s Guide
DRAFT 5-11-2018

I. Introduction (5 minutes)

A. Purpose: Thank you for agreeing to take part in this interview. AARP, in conjunction with the Robert Wood Johnson Foundation, (RWJF) is currently engaged in a project to explore the inclusion of population health components in nursing curricula. They have hired my company, ANR, to conduct interviews with health care professionals and education administrators about this topic. We would like your help in defining the key components of successful educational models with the potential to prepare nurses for practice, education, and leadership in population health.

Our discussion will last between 45 to 60 minutes.

B. Disclosure

- Audio recording
- Confidentiality assured

C. Ground Rules

- Be candid; moderator has no vested interest in research outcome

D. Participants

- Name
- Organizational affiliation – description, location
- Position/title and overall responsibilities
- Length of time in current role

II. Current Population Health Educational Program (30-45 minutes)

A. Were you able to review the definition of Population Health that we sent you? If not, please read:

Definition: Population Health is broadly used to describe collaborative activities for the improvement of a population’s health status. The purpose of these collaborative activities, including interventions and policies, is to reduce inequities that influence the social determinants of health

(SDOH). Accountability for outcomes is shared, since outcomes arise from the multiple upstream factors that influence the health of a group or community. Population health requires systems thinking. It means doing business differently, including clinical and community prevention and working across disciplines and sectors. Population management and population focused care are pathways to achieve population health (Storfjell, 2017).

B. I'd like you to think about what an ideal nursing program in **population health** would be like.

Please note that for today's discussion we are focusing specifically and only on programs related to population health, not the ideal nursing program in general.

- Would this ideally be at the graduate or undergraduate level or both?
- What would be its intended goals or outcomes? What would the ideal population health program be trying to accomplish?
- How could it contribute to improved health outcomes overall?

C. Detailed program description: content, skills, and courses. Now I want to discuss the content and components of the ideal population health educational program in detail. **(Reminder: we are only interested in content and components that relate to or are included in the ideal population health program, not the nursing curriculum as a whole.)**

As it relates to the ideal population health curriculum, please describe:

- Key content areas and areas of focus—Listen for content such as the following, and may probe as time permits:
 - Epidemiology – ability to use basic terms to describe health and illness across a population
 - Biostatistics – understand use of rates and appropriate comparisons across populations
 - Social determinants of health – understand, identify, refer/intervene to address SDOH
 - Evidence-Based Practice (EBP)
 - Population Health
- Key skills that should be emphasized and taught as part of the population health curriculum. Listen for skills such as the following and may probe a few, as time permits:
 - Assess individuals/families' health literacy level
 - Basic understanding of public health system functions
 - Identify and use evidence based health promotion/disease prevention interventions for individuals and families
 - Conduct Capacity Building Assistance (CBA) for population interventions
 - Develop a program budget for a health promotion intervention at the population level
 - Identify avenues for policy activism to impact nursing practice or health outcomes
 - Understand the impact of health policy on nursing practice and health outcomes
 - Describe cost effectiveness for interventions
- Core courses to include in the ideal population health program

D. Methods, clinical experiences, and interactions. **As it relates to the ideal population health nursing curriculum, please describe:**

- Any specific methods that should be used when teaching population health? (e.g., online education/classes, simulations, case studies, expert presentations, role playing exercises, flipped classroom where they learn the material on their own outside of class)

- Relevant clinical experiences that should be offered through the ideal population health program
 - a. At what types of sites should these clinical experiences offered? Hospitals/inpatient setting only or outpatient/clinics/community based practices?
 - b. What types of learning activities for students should be included in these clinical experiences?
 - Would students in the ideal community health program regularly interact with other health professionals? With what types of health professionals? In class or in clinicals? If so, please describe ideal interactions. (Examples might include Pharmacy, Social Work, Medical, Public Health, other)
 - Would students in the ideal program regularly interact with other health professions students? If so, please describe ideal interactions. Students in what other health professions? (Examples might include students in Pharmacy, Social Work, Medical, Public Health, other)
- E. Faculty. How should you select faculty to teach this program? What credentials would you look for or qualifications would you require?
- Educational background
 - Practical experience
 - Board certification
 - Other
- F. How would you measure nursing knowledge and skills in population health in this ideal program? Listen for things such as:
- Population health case studies with multiple choice or essay responses
 - Evaluation of student's performance in supervised clinical experiences
 - Competency assessment at end of program
 - Skills checklist
 - Grades in relevant courses (e.g., bio stats, epidemiology, etc.)
 - Role playing with observational assessment
 - Employer assessment
 - Successful NCLEX (National Council Licensure Examination) completion
- G. Now, taking a step back, what are the top 3 things that need to be done to enhance effectiveness in teaching population health concepts to today's nursing students and nurses?
- H. What strategies have you observed as effective in the application of population health concepts in the real world? Ask unaided first, then probe on strategies related to:
- Technology
 - Community organizations – please specify specific community organizations you have worked with on population health related endeavors
 - Community resources – please specify

III. Conclusion (5 minutes)

- A. Is there anything else you would like to share related to teaching population health knowledge and skills to nursing students and/or nurses or about the ideal population health program?
- B. Thank and dismiss participant.





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AARP Population Health IDIs – Nurse Educators
Moderator’s Guide
DRAFT 5-11-2018

I. Introduction (5 minutes)

A. Purpose: Thank you for agreeing to take part in this interview. AARP, in conjunction with the Robert Wood Johnson Foundation, (RWJF) is currently engaged in a project to explore the inclusion of population health components in nursing curricula. They have hired my company, ANR, to conduct interviews with Nurse Educators like yourself, as well as healthcare professionals and education administrators, about this topic. We understand that your institution currently offers a population health program and we would like your help in defining the key components of successful educational models with the potential to prepare nurses for practice, education, and leadership in population health.

Our discussion will last between 45 to 60 minutes.

B. Disclosure

- Audio recording
- Confidentiality assured

C. Ground Rules

- Be candid; moderator has no vested interest in research outcome

D. Participants

- Name
- Educational institution – size, location
- Position/title and overall responsibilities
- Length of time in current role

II. Current Population Health Educational Program (30-45 minutes)

A. Were you able to review the definition of Population Health that we sent you? If not, please read:

Definition: Population Health is broadly used to describe collaborative activities for the improvement of a population’s health status. The purpose of these collaborative activities, including interventions and policies, is to reduce inequities that influence the social determinants of health

(SDOH). Accountability for outcomes is shared, since outcomes arise from the multiple upstream factors that influence the health of a group or community. Population health requires systems thinking. It means doing business differently, including clinical and community prevention and working across disciplines and sectors. Population management and population focused care are pathways to achieve population health (Storfjell, 2017).

B. I understand that your institution currently offers a Population Health Educational Program. First, I'd like to get some basic information about the program and then we will discuss its content and components in detail.

During this discussion, ***we will be specifically and only focusing on your population health program and curriculum, not your nursing program as a whole***

What level(s) of students are in your population health educational program? Are they:

- ADN – Associate's Degree, 2-year program
- BSN – Bachelor of Science in Nursing, 4-year program
- MSN – Master of Science in Nursing – post grad
- DNP – Doctor of Nursing Practice, after MSN
- Certificate – Certification programs for RNs or ARNPs (advanced registered nurse practitioner)
- Other – please specify

C. How long have you been offering a Population Health Educational program at your school?

D. What prompted you to begin offering this type of program? How or why did you see a need for it?

E. Describe how you/your school designed the program in terms of:

- Level of learner – how did you decide what level(s) of learners to focus on for this program?
- Expected outcomes - What were the outcomes or goals that you were you hoping to accomplish through this program?
 - What were the anticipated benefits to the school of offering this type of program? (*e.g., health care system needs, student interest, increased enrollment, etc.*)
 - What were the anticipate benefits to the nursing students themselves? (*e.g., job opportunities, licensure expectations, accreditation requirements*)
- Were there any challenges or barriers or issues that had to be overcome in order to offer a population health program? If so, what were they? Listen for things such as:
 - Limited relevant job opportunities
 - Lack of appropriate clinical experiences
 - Faculty expertise to teach
 - Limited resources (time, money, staff)
 - Lack of faculty/leadership support
 - Lack of student interest

F. Detailed program description: content, skills, and courses. Now I want to discuss the content and components of your population health educational program in detail. ***(Reminder: we are only interested in content and components that relate to or are included in your population health program, not the nursing curriculum as a whole.)***

As it relates to your population health curriculum, please describe:

- Key content areas and areas of focus – Listen for content such as the following, and may probe as time permits
 - Epidemiology – ability to use basic terms to describe health and illness across a population
 - Biostatistics – understand use of rates and appropriate comparisons across populations
 - Social determinants of health – understand, identify, refer/intervene to address SDOH
 - Evidence-Based Practice (EBP)
 - Population Health
- Key skills that are emphasized and taught as part of the population health curriculum. Listen for skills such as the following and may probe a few, as time permits:
 - Assess individuals/families' health literacy level
 - Basic understanding of public health system functions
 - Identify and use evidence based health promotion/disease prevention interventions for individuals and families
 - Conduct Capacity Building Assistance (CBA) for population interventions
 - Develop a program budget for a health promotion intervention at the population level
 - Identify avenues for policy activism to impact nursing practice or health outcomes
 - Understand the impact of health policy on nursing practice and health outcomes
 - Describe cost effectiveness for interventions
- Core courses in the population health program

G. Methods, clinical experiences, and interactions. **As it relates to your population health curriculum, please describe:**

- Any specific methods that your school uses that are key to teaching population health? (e.g., online education/classes, simulations, case studies, expert presentations, role playing exercises, flipped classroom where they learn the material on their own outside of class)
- Relevant clinical experiences offered through your population health program
- At what types of sites are these clinical experiences offered? Hospitals/inpatient setting only or outpatient/clinics/community-based practices?
- What types of learning activities for students are included in these clinical experiences?
- Do students in your program regularly interact with other health professionals? With what types of health professionals? In class or in clinicals? If so, please describe the interactions. *(Examples might include Pharmacy, Social Work, Medical, Public Health, other)*
- Do students in this program regularly interact with other health professions students? If so, please describe the interactions. Students in what other health professions? *(Examples might include students in Pharmacy, Social Work, Medical, Public Health, other)*

H. How does the core population health content relate to other nursing content in the nursing program as a whole?

- Interwoven, threaded in with other nursing content – How is the content integrated into the rest of the curriculum? Please provide examples.
- Sequential – How does the content build on previous content? Please provide examples of sequencing or sequential programs.

I. Faculty. How do you select faculty to teach this program? What credentials do you look for or qualifications do you require?

- Educational background
- Practical experience
- Board certification
- Other

J. How do you measure student knowledge and skills in population health? Listen for things such as:

- Population health case studies with multiple choice or essay responses
- Evaluation of student's performance in supervised clinical experiences
- Competency assessment at end of program
- Skills checklist
- Grades in relevant courses (e.g., biostats, epidemiology, etc.)
- Role playing with observational assessment
- Employer assessment
- Successful NCLEX (National Council Licensure Examination) completion

K. Evaluation of and satisfaction with your institution's population health program: Nurse Educators (Participant)

- Overall, how satisfied are you with your school's population health program? Do you think the program is successful in accomplishing its goals? Why?
- How do you define or measure success? What criteria or data do you use?
- What do you see as the program's specific strengths?
- What is the most significant achievement(s) of this program to date? What else are you proud of?
- In what areas do you see room for improvement or opportunities for expansion? In your mind, does your program have any weaknesses? If so, what are they?
 - a. What are the top 3 things you would do to enhance your program's effectiveness in teaching population health?

L. Student satisfaction. How satisfied or dissatisfied are **students** with the population health program? How do you know?

- Describe student feedback on the program.
- What specifically do students like about it? Why are they satisfied?

- What if anything, do students dislike about it? Are they dissatisfied with any specific aspects of it? With ones? What, if anything, do they wish that it included that it currently doesn't?
- Have you received any feedback from graduates of the community health program? What do they think about it, in retrospect?

III. Conclusion (5 minutes)

- A. Is there anything else you would like to share related to teaching population health knowledge and skills to nursing students and/or nurses or about your school's population health program?
- B. Thank and dismiss participant.

Appendix C: Typical Site Visit Schedule

POPULATION HEALTH IN NURSING SITE VISIT

AGENDA OPTION 1

DAY 1	
3:00 - 4:00pm	Welcome and Introductions
4:00 -5:00pm	Overview of Program
5:00 pm	Dinner Meeting

DAY 2	
9:00- 9:30 am	Breakfast / Welcome and Introductions
9:30- 10:30 am	Review of Curriculum
10:30-12:00 pm	Interviews with Students
12:00-1:00 pm	Lunch w/ Dean, Director and Senior Level Administrator
1:00-3:00 pm	Subject Matter Experts Review of Materials
3:00-4:00 pm	Wrap up and Review





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